Preface
(Draft MS: *The Logic of Being: Heidegger, Truth, and Time*)

The aim of this book is to develop, under contemporary conditions, several interrelated problems about logic, sense, truth, and time. It does not solve or resolve these problems, but just tries to clarify their underlying and relational structure, as they give themselves to be thought today. The problems treated here are "ontological" in that they are closely related to what Martin Heidegger specified as the questions of the meaning and the truth of being, and because of this, I have centrally engaged here with Heidegger's thought and work. Nevertheless, this book is not intended primarily as a contribution to the exegetical or secondary literature on Heidegger. Rather, it is an investigation into problems that, as I will argue, already posed themselves in an original way to Plato and Aristotle and are also seen clearly, although also in a different light, in other leading philosophical discourses of the twentieth century, including especially "analytic" philosophy.

The problem most centrally taken up is that of the relationship of *thought* to *time* whereby both being and becoming are *given* to be thought and understood within the life of a being that is itself situated in time. This problem already motivated the research of the later Plato, in the *Sophist*, into the specific sense of being and non-being and led him, therein, to formulate the first logical theory of the articulate predicative unity of a sentence, which allows, against the Parmenidean strictures, change and non-being to be truly thought and said. It is renewed, under contemporary conditions, not only in Heidegger's ontological questioning, but also in the analytic tradition's investigations into the nature of language and linguistic meaning and in the problematic results of formal meta-logical investigation into the structure and limits of syntactical rules and effective procedures. In the investigations to follow, I consider the interrelationships of all three approaches and attempt to extract their implications for the basic problems of the sense of being as it is given to thought and of the phenomenon of truth in its specific relationship to time.

The problem of the ontological basis and structure of the logical form of thought is, from the beginning, intimately linked with the question of *mathematical* existence and truth. The idea of the relationship of thought and being as determined and determining with respect to number is already explicit, for instance, in the Parmenidean monism that determines being as a whole as One. Subsequently, it was developed and problematized in Plato's consideration of the specific structure of the idea as the "one over many" at the basis of unitary sense. Under the condition of his later questioning and problematizing of the relationship of the idea to its participant, witnessed in the dialectical paradoxes of the *Parmenides*, Plato finally seems to see an inherent dialectical engagement logical and structured sense with the insistent principle of the *apeiron*, which constantly threatens to overstep all bounds and disrupt all fixed structures.

Here, I argue that it is as situated in such an original and basic relationship with the structure of the infinite, as it is indicated and thought in contemporary mathematics, that the problem of the meaning

and truth of being must be, once again, taken up today.[1] The specific results of mathematical reflection are not seen, here, simply as internal to mathematics as an extant body of theory or as problems for what is only a "regional" ontology of mathematical objects or objectivities. From this perspective, in particular, the problems of the givenness of number and the counting of beings are not simply external to problems of the givenness of sense and time as they are given and determined historically. If, rather, the history that determines and is determined by this co-givenness essentially involves the problems of the givenness of number in relation to the infinite, then its contemporary condition of its culmination or fulfillment in a seemingly univocal regime of calculability and technological control itself constitutively involves the problematic and paradoxical structures of the availability of the infinite as such. This can provide the basis, as I argue here, for an investigation of the specific structures of given sense and time as infinite that also provides critical terms for the illumination of the problematic and paradoxical basis of this contemporary condition and the presumptive terms in which it is established and held in force.

The main results of this investigation are, first, that the question of being, if it is to be taken up anew today, must be understood in relation to the specific structure of the infinite and transfinite as these are also determined in contemporary logical and mathematical thought; and second, that this understanding itself motivates and demands a *realist* doctrine of given time that provides formally motivated terms for overcoming any conception of time as determined by the representational capacities or activities of a thinking subject. This realism about given time might, as I argue, also be the necessary condition for an *ontological* realism in general, and thereby for a thought of objective and natural time and the events within it that does not subject either, in anti-realist fashion, to the condition of their thinkability in finite or human forms. Nevertheless, this is also not simply the development of an objectivism about time or meaning, since what is interrogated is not time or sense as simply present phenomena but, rather, the basis and structure of their givenness as such. As I argue here, the structure of this givenness can be formally thought as indicated in a reflexive structure of ontico-ontological difference without, thereby, necessarily being thought in limitative terms as necessarily constrained by the determined or imagined forms of possible representation or finitely determined effectivity. To see it as indicated in this way is nevertheless to situate it within the inherent reflexivity that Heidegger sees as ontologically conditioning Dasein in its particular relationship with truth, and (later) provides the very structure of the more basic "clearing" in which Dasein has its original site.

That sense and time are thought in ontological relation to reflexivity in this way also means that they are essentially structurally determined in relation to the inherent real of the infinite that both determines them and that they unfold. This is not the real of the infinite-absolute (as it is thought, for instance, theologically), but rather of the structural inherence of the infinite and unlimited transfinite with the givenness of the iterative structure of number as such. If, as I argue, time has been thought, since the beginning, as co-given with the structure of number as counting or measure and also with the specific idea of the infinite that is implied in it, then the givenness of time must also, under contemporary conditions, be thought as conditioned by the paradoxical formal structure of the infinite as it is indicated by contemporary mathematical thought. Here, that time is given as infinite does not and cannot mean

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[1] An interpretation of the ontological implications of the infinite as it is unfolded and thought in contemporary mathematics is attempted, along partially similar lines, by Alain Badiou in *Being and Event*.

that it is given as the *eternal permanence* of objects, beings, or phenomena, or any selection from among them. Rather, that it is formally indicated as given in an infinite that can never, without contradiction, be gathered into the unitary form of a presence. The infinite as thought this way might then be the principle of a formally motivated overcoming of the "metaphysics of presence" that links the thought of being, in western philosophy since the Greeks, to that of presence or to the form of presence in general.

The methodological guideline followed throughout the book is that of reflection on the *consequences of formalism* in the sense that formalism and the possibility of formalization are employed both as an object of reflection and as a privileged indicative resource with respect to the structure of truth, being, and time. That formalism is both a resource and an object of investigation here does not mean that claims or expressions are analyzed in terms of one particular formal language or that the correctness of any specific formal calculus is simply presupposed. Rather, what provides the decisive methodological guideline are those considerations, actually paradoxical or nearly so, in which formalism itself encounters and demonstrates the inherent limits of its own scope of application and sense. In taking these results as demonstrative in this way, I have made an extended application of the formal methodology that Heidegger himself describes and applies as that of *formal indication*. Formalization, in this sense, is to be sharply distinguished from generalization or the demonstration of the formally universal. It is rather the indicative methodology by means of which the singular phenomena are shown in their own proper self-givenness in each case. Seen this way, such an indication is already, as I shall argue, an essential aspect of what Plato understood as the demonstrative force of the idea, at a great conceptual distance from its subsequent development under the heading of the formal-categorical universal.

In *The Politics of Logic* (2011), employing a similar guideline of reflection on the consequences of formalism, I distinguished among four formally possible orientations of thought, each determined by the specific way it conceives of the constitution and limits of the totality of thinkable beings as a whole. In that book, I did not discuss Heidegger in any detail, and the specific problems of truth and time were also treated only briefly and in passing. Nevertheless, because of the way each orientation constitutively involves a specific conception of the possibility or impossibility of thinking beings as a whole, the problematic developed there was already essentially related to that of what Heidegger calls the ontological difference. The critique of the onto-theological orientation of thought, in particular, essentially parallels Heidegger's critique of metaphysics as constituted onto-theologically by the forgetting or erasure of the ontological difference. But as I argued there, the metalogical terms and results that allow for the critique of ontotheology also equally provide grounds for the rigorous critique of the *constructivist* orientation that, by contrast to onto-theology, understands the totality of thinkable beings as constituted and limited by what is specifies as the finite powers of specifically human thought. In this book, I further develop the implications of formalism in overcoming both of these "pre-Cantorian" (as I called them there) orientations and thereby, not only the theological dispensation that assigns beings as a whole to a transcendent infinite-absolute, but also the anthropologism that seeks to constrain them within a constitutive analytic of human finitude.

The point at which both orientations are overcome, as I argue here, is that of the insistence of *difference* at the level of the real of being, over against its repression or dissimulation in thought under the form of identity. The idea of a development of the ontological problematic as involving such an ontological insistence of difference prior to identity and identification is familiar from recent French thought, particularly that of Deleuze and Derrida. But what will perhaps be less familiar is the suggestion of its communication with the conceptions of logical and linguistic structure whose theoretical development is broadly characteristic of the analytic tradition. In 2003, I published an article, "Thinking and Being: Heidegger and Wittgenstein on Machination and Lived-Experience," in which I suggested some connections between the later Heidegger's critique of technology and Wittgenstein's own critique of rule-following in the *Philosophical Investigations*.[2] The decisive consideration in each case, as I suggested there, was the way in which the idea of thinkable difference overcomes a formally determined configuration that pre-determines the sense of beings and the possibility of their representation in terms of the general form of identity or in terms of the rule, conceived as the infinite repetition of the same. In Wittgenstein in particular, the point at which the insistence of difference can be positively demonstrated is that of the indication of the paradox whereby every rule, in order to be applied, would seemingly call for another one to show how to interpret it. The recognition of this underlying paradox shows how the determined thought of the linguistic rule as the formal repetition of the same necessarily communicates with a deeper thought and experience of difference at the very basis of what is formally thought as the structure of interpretation and truth. Here, I argue that such a thought of prior and insistent paradoxical difference can also be seen as decisive in producing and underlying some of the logical and formal innovations that represent the best innovations of analytic thought, including Frege's argument for the distinction between sense and reference, and Davidson's development of the semantics of natural languages on the formal basis of the structure of Tarskian truth theories.

It has been said, and with insight,[3] that one can see clearly the methodological difference between "analytic" and "continental" philosophy by considering the contrast in the titles of two books written by leading practitioners of each: Michael Dummett's *The Logical Basis of Metaphysics* and Heidegger's *Metaphysical Foundations of Logic*. It is true that the difference in the relative prioritization of logical and metaphysical thought shows a marked distinction, important at many decisive moments in both traditions' self-conceptions, between what are markedly different senses and methods of "grounding", basis, or founding. But what the distinction, even if understood this way, leaves open is the possibility of a *twofold* formal-hermeneutical investigation into the factically given phenomena themselves. In this investigation, on the one hand, the specific implications of logical structures and results are interrogated with a view to their "metaphysical" (or actually ontological) implications and on the other, the foundations of "logic" in a broad sense are interrogated in their specific foundation in the formally indicated questions of the sense and truth of being. It is such a method, as I suggest here, that might represent *one* way in which the best thematic and methodological insights of both traditions could be accommodated within a unified theoretical framework and further pursued thereby.

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[2] *Inquiry* 46:3 (2003), pp. 324-45
[3] First, I believe, by Mark Wrathall.

This twofold hermeneutics of the facticity and givenness of the phenomena of sense, truth, and time provides a basis, in part I of the book, for a twofold interpretation of the structure of (specifically) *linguistic* truth as doubly founded, both ontologically in the deeper underlying sense of the being of beings as given, and formally-logically in the specific structure of a language that is revealed by means of a formal consideration of the structural ability of its sentences to express truths and falsehoods. The broader basis of what appears as this logical structure of language, specifically determinative of the possibilities of truth and falsehood, in the ontological problematic is pursued, in chapter 4, through the ontological interpretation of the specific sense of negation, and is there shown to depend on the phenomenon of an original difference that cannot be thought in terms of representation, identity, or presence in general. In part II, the formal-indicative hermeneutic investigation is deepened as an investigation into the relationship of sense and time as given; this leads to an "ontological" consideration of the temporal character of natural or "historical" languages as they change and develop over historical time. The question of the original sense of time, as co-given with number, is taken up by reinterpreting, under the condition of contemporary mathematical and formal results, the thematic and methodological linkage that is drawn, from Aristotle to Kant, between the sense of time and the givenness of number as its measure. Finally, I suggest that such a rereading offers to illuminate and evince the problems most pervasively characteristic of our technological present, in its institution and enforcement of the global regime of the total calculability and manipulation of beings in the abstract forms of capital, technological determinacy, and effectivity. With such a development of the ontological problematic in its contemporary form, I argue, one may also find terms in which to expose this contemporary configuration to the ontologically clarified terms of its radical, immanent, and possibly transformative formal critique.

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The Logic of Being: Plato, Heidegger, Frege

(Chapter 1 of Draft MS: *The Logic of Being: Heidegger, Truth, and Time*)

In a passage in his late dialogue, *Sophist,* Plato articulates clearly the interlinked problematic of logic, truth, and time in which, as I shall argue, a continuation of the Heideggerian questioning of being and the legacy of the twentieth-century "analytic" philosophy of language today converge. The passage comes in the course of the Eleatic Visitor's account of the views of his predecessors, amounting to, he says, a "battle of gods and giants" (246a) over the nature of being.[1] The battle is between those who seek to "drag everything down to earth" and define being entirely "as the same as body" and those others who "insist violently that true being is certain nonbodily forms that can be thought about" (245a-b). By contrast with this first group, who despise and refuse to listen to those who claim the existence of anything non-corporeal, the second group "takes the bodies of the other[s], and also what they call the truth, and they break them up verbally into little bits and call them a process of generation instead of being…" (246c). But even those who hold the materialist position, here dealt with in an "improved" form more likely to lead to the truth, must accept the existence of mortal animals. To do so is to accept the existence of ensouled bodies, and thus to count the soul or *psyche* among what is. But as these "rough men" must also admit, souls differ in being just or unjust, intelligent or unintelligent. They must also admit, though, that souls *become* just, or intelligent by the "having and presence" [*hexei kai parousia*] of justice or intelligence; and so it is necessary for even the materialist, if they are to admit souls at all, to admit the possibility of this possession and co-presence within them.

Thus even if the materialist continues to maintain that all that exists is to be understood in terms of its ability to affect bodies, he must be prepared to give a further account of this ability, capacity, or power itself. This account will point, ultimately, to what even those who recognize nothing other than becoming in being must nevertheless identify as the most basic underlying characteristic of whatever is:

> Visitor: Then let's go back to questioning [the materialists]. It's enough if they admit that even a small part of *that which is* doesn't have a body. They need to say something about what's common to [*sumphues gegonos*] both it and the things that do have body, which they focus on when they say that they both *are*. Maybe that will raise some confusion for them. If it does, then think about whether they'd be willing to accept our suggestion that *that which is* [*to on*] is something like the following.
>
> Theaetetus: Like what? Tell me and maybe we'll know.
>
> Visitor: I'm saying that a thing really is if it has any capacity [*dunamis*] at all, either by nature to do something to something else or to have even the smallest thing done to it by even the most trivial thing, even if it only happens once. I'll take it as a definition that *those which are* [*ta onta*] amount to nothing other than *capacit*y.

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[1] Plato, "Sophist", transl. by Nicholas P. White, in *Plato: Complete Works*, edited, with introduction and notes, by John M. Cooper (Indianapolis: Hackett, 1997).

The position, which looks ahead, in one way, to Aristotle and, in another, to Nietzsche, identifies capacity, potentiality, possibility, or power as the underlying characteristic of all that actually is or exists. Such a position is, the Visitor suggests, obligatory for the materialists because of their own claim that all that exists is constantly becoming; in particular, once a partisan of the position admits the existence of living souls and *their* possibility of temporal becoming, it is necessary to admit the general existence of possibility or *dunamis* itself.

The discussion now turns to the interpretation of the contrasting position of the "friends of the forms," those who sharply distinguish generation (or coming-to-be) from being, holding that we "interact with" (*koinonein*) the former through the body and senses, but with the latter only through the psyche and logical reasoning (*logismon*) (248a). Both kinds of access, however, whether through the body or through the soul and logos, obviously involve a "dealing with" or having in common (*koinonein*) which must be clarified. As for the materialists, the solution of this difficulty for the "friend of forms," turns on the *actual life of the soul*, or *psyche*, capable of touching in thought and knowledge on the real of being in itself. In particular, the Visitor suggests, one possible position for the friend of the forms is the one just mooted from the position of the materialists: that the possibility of any such trafficking or dealing is based in the power or capacity of two things to come together and affect or be affected by one another (248c). On this position, the commerce of the soul with both generation and being is again rooted in *dunamis*: power, capacity, or possibility. As the Visitor notes, however, the friend of the forms will not initially agree with this definition. For separating being from generation as they do, they will hold that *only* generation (or coming-to-be) involves such a constitutive power of body and matter to affect or be affected; being, on the other hand, does not "fit" with it:

> Visitor: In reply they [the 'friends of forms'] say that coming-to-be has the capacity to do something or have something done to it, but that this capacity doesn't fit with being.
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> Theaetetus: Is there anything to that?
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> Visitor: We have to reply that we need them to tell us more clearly whether they agree that the soul knows and also that *being* [*ousian*] is known. (248c-d)

While admitting this last claim – that being is in some way known – the friend of the forms nevertheless still resists the suggestion that this knowing involves doing something, or something's being done to something. For neither can apply, on the view, to being itself, characterized as it is as changeless and immobile.

It is here, though, that the Visitor invokes a consideration that will prove decisive in establishing the actual possibility of a *coexistence* of change and motion with being in itself, that of the actual basis of the understanding of being in the temporal *life* of the being that thinks:

> Visitor: But for heaven's sake, are we going to be convinced that it's true that change, life, soul, and intelligence are not present (*me pareinai*) in absolute being (*to pantelos*), and that it neither lives nor thinks, but stays changeless, solemn, and holy, without any understanding?

Theaetetus: If we did, sir, we'd be admitting something frightening.

Visitor: But are we going to say it has understanding but doesn't have life?

Theaetetus: Of course not.

Visitor: But are we saying that it has both those things in it while denying that it has them in its soul?

Theaetetus: How else would it have them?

Visitor: And are we saying that it has intelligence, life, and soul, but that it's at rest and completely changeless even though it's alive?

Theaetetus: All that seems completely unreasonable.

Visitor: Then both *that which changes* and also *change* have to be admitted as being.

Theaetetus: Of course.

Whether or not one can recognize in the position of the "friend of forms" the actual position of Plato himself, or perhaps some earlier version of it, it is clear that what is at issue in the Visitor's challenge is nothing other than the deep temporal problematic of what is indexed elsewhere in Plato's corpus as *mathexis* or participation, the relationship between the always-changing objects of the senses and their timeless and unchanging but thinkable forms. Through the Visitor's argument, the friend of forms is forced to admit that there is some real relationship between the temporal realm of becoming and the static realm of thinkable beings in themselves, and that change and becoming must accordingly *also* be admitted as part of what ultimately is. The consideration that most directly demands this admission is that the living, dynamic soul nevertheless has the capacity to *know* or understand being itself. The problem of this capacity is thus the problem of the *temporal structure* of the *thought of being* as such, or of the possibility, capacity or potentiality by which a being irreducibly situated in time nevertheless grasps the timelessness of what is (on this position) most ultimately real.

On *both* of the opposed views, according to the Visitor, it is thus necessary to admit the privileged existence of a living *psyche* capable of thinking or knowing being as it is in itself. This psyche is, moreover, conceived by both the materialist and the formalist as the privileged nexus of a definitive possibility of a *combination* or *mixing in co-presence* which ultimately demands, on either view, the admission of a real relationship of co-existence and interaction between the changeable and moving and being as it is in itself. Though there are certainly further problems that would have to be addressed in order for this common suggestion to amount to anything like a real solution to the "Platonic" problem of being and becoming, its generality is notable relative to standard conceptions of Plato's own views. Here, for example, the claim that the soul must be thought of as such a nexus of co-presence capable of allowing the mixing of being and becoming is not at all dependent upon any prior endorsement of the existence of static forms themselves, but is equally addressed to the materialists, for whom it is portrayed as a necessary *consequence* of their own admission that souls can *become* more or less just or

intelligent. Similarly, as presented from the materialist position, this conception of the psyche does not at all depend upon any suggestion of, or argument for its immortality; rather, in fact, the portion of the argument addressed to the materialist is premised explicitly only on the existence of *mortal* [*thanatos*] animals.

From the perspective of the Visitor (if not necessarily from that of Plato himself), the suggestion that being and becoming combine in the privileged medium of the soul thus represents at least the beginning of a *maximally general* account of the relationship obscurely indicated by Parmenides himself in the remark that "thinking and being are the same".[2] In the context of the dialogue, this suggestion will provide, as well, the basis for resolving the formidable Parmenidean problem of the possibility of saying "what is not". In particular, given the avowed possibility of a mixing or combination between the great types of being, rest and change, it becomes possible for the Visitor as well to argue that one must acknowledge the sameness and difference of these (254e). It is then possible to consider that difference can mix with all of the other great types, and in particular that a mixing of difference with being produces (257b) "something different from" it. This allows, finally, the actual essence or form of "that which is not" (the *me on*) to appear, and allows it finally to be said that it blends with speech or the logos in the deceptive discourse of the sophist (260c).

The actual form and structure of the potential combination of the types in the soul is, at this point, obscure. But as the dialogue moves toward its conclusion, the Visitor develops the suggestion of a superior *logical-syntactical grammar* of essential types figured (in a more than simply metaphorical sense) by the actual relations between phonemic or lexical elements characteristic of language.[3] The suggestion is closely related to the methodology of "collection and division", or *synthesis* and *diaeresis*, suggested by Plato in a number of late dialogues, and depends also on the recognition, common to the materialist and the friend of forms, of an essential capacity for synthesis or combination rooted in the nature of the soul. In particular, given this possibility of combination in the soul, the Visitor can now argue that such opposite types as *change* and *rest*, even if they cannot associate with one another, must themselves have some capacity for association (*dunata epikoinonein*) with other general types, including particularly *being* itself (251d – 252d). All of those who discuss being and becoming, the Visitor argues, are forced in their very statements to "use *being* about everything, and also *separate*, *from others*, *of itself*, and a million other things" (252c). Even those who hold that everything is in motion, in using the signifier "is", thus admit some possibility of the mixing of being and becoming. In this way, they incessantly "link together… in speech" the various types and attributes determinative of objects and phenomena, and so concretely exhibit the actual mixing and combination of these types.

Since it is untenable to suppose either that all of the types or elements mix with one another or that none do, it is necessary to recognize the existence of a broader structural determination of the actual possibilities of mixing, and of a specific type of art, or expertise, capable of discerning these possibilities and relationships:

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[2] "*to gar auto noein estin te kai einai*" (Diels and Kranz, Fr. 3; quoted in Clement, *Stromateis,* VI, 23 and Plotinus, V, I, 8); both the translation and the textual provenance of the remark are controversial. See Kirk, Raven, and Schofield, *The Pre-Socratic Philosophers*, second ed., (Cambridge U. Press, 1983), p. 246.

[3] Compare Wittgenstein, *Philosophical Investigations* 371: "*Essence* is expressed in grammar."

Visitor: Since some will blend and some won't, they'll be a good deal like letters of the alphabet. Some of them fit together with each other and some don't.

Theaetetus: Of course.

Visitor: More than the other letters the vowels run through all of them like a bond, linking them together, so that without a vowel no one of the others can fit with another.

Theaetetus: Definitely.

Visitor: So does everyone know which kinds of letters can associate with which, or does it take an expert?

Theaetetus: It takes an expert.

Visitor: What kind?

Theaetetus: An expert in grammar. (253a)

As is the case, similarly, with the capacity to combine high and low notes to produce pleasing harmonies, the *techne* (or expertise) of grammar requires a specific kind of knowledge (*episteme*) of the capacity of some kinds to blend and others to refuse such combination. This is a knowledge, according to the Visitor, proceeding through *logos* and allowing the possibility of recognizing those types or elements that run through everything else. It involves a singular knowledge of the number and relationships of the forms; such knowledge, the Visitor suggests, may in fact be that characteristic of the philosopher, the knowledge that "free people have" (253c). According to the Visitor, it is in fact none other than the science (*episteme*) of dialectic:

Visitor: Aren't we going to say that it takes expertise in dialectic to divide things by kinds and not to think that the same form is a different one or that a different form is the same?

Theatetus: Yes.

Visitor: So if a person can do that, he'll be capable of adequately discriminating a single form spread out all through a lot of other things, each of which stands separate from the others. In addition he can discriminate forms that are different from each other but are included within a single form that's outside them, or a single form that's connected as a unit throughout many wholes, or many forms that are completely separate from others. That's what it is to know how to discriminate by kinds how things can associate and how they can't. (253c-d).

Through his special technical understanding of the possibilities for the mixing and separation of forms, the dialectician is thus able to see clearly, using reasoning [*logismon*], in particular, to "stay near the form, being." Here, the philosopher is difficult to discern, according to the Visitor, because of its intrinsic brightness of this place [*khora*] (254a); nevertheless, the Visitor here suggests that this particular *techne* of discerning the combination and separation of forms is the proper art of the philosopher as opposed to the sophist and that, with respect in particular to the "great types" or genres,

reasoning about their structure of possible combination and difference will amount to reasoning fully about them, at least as far as the particular method thereby suggested will allow.

The dialectical method, as the Visitor then develops it, bears a specific relation to the possibility of a *counting* of the most general types of being, as well as of being and non-being themselves in relation to what they characterize. In particular, a brief elucidation of the structure of mixing and separation among the "most important" types leads the Visitor to identify the five great types of *being*, *rest*, *motion*, *identity* and *difference*. Difference, in particular, "permeates them all" in allowing each to distinguish itself from the others. Motion, in particular, is "other than being" in that it is different from being; with respect to motion, thus, "non-being is" (256d), although as has been shown, motion also takes part or participates in being. In fact, this consideration holds generally; in "each of the types" difference is operative to make them "other than being, and therefore non-being." This allows the Visitor to specify the duality of being and non-being, with respect to what each characterizes, as the problematic relation between a *multiplicity* and an *infinitude* : "And so, in relation to each of the [ideas], being is many, and not-being is infinite in number." (256e). Thus the realm of the possible application of the dialectician's art, that of counting the types of being by discerning the ideas, is here set off against the indefiniteness or *apeiron* character of non-being; it is in this infinitude of non-being that the synthetic/diaeretic technique of the dialectic reaches the specific limit of its capacity to discern forms.

It is here that one might begin to suspect that, if the Visitor goes on to specify the very possibility of a real appearance of non-being in the *psuedos logos* as dependent upon a constitutive mixing of the great type of difference with that of being, the solution results only from the suppression and transformation of a different and deeper problematic of genesis enveloping and directing, as if from a subterranean site, the whole positive conception of the specific possibilities of the "mixing" of forms as well as the Visitor's account of the dialectical *techne* that analyzes and counts them.[4] This problematic is the one to which Plato obscurely gestures elsewhere in invoking the possibly Pythagorean dualism of the limited and unlimited, or in pointing to the principle of an *aoristos duas* (the "indeterminate dyad") in ceaselessly producing and unfolding difference in opposition to the unifying force of the One or monad.[5] For if non-being is here indicated in passing as the specific place of the *apeiron*, then the limited mixing that allows difference to be fixed as a type and to make possible, on the Visitor's official theory, the specific variety of non-being that appears in the Sophist's *psuedos logos*, in fact stands over against an obscure domain of the *unlimited as such* that threatens to destroy the very possibility of the coherent

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[4] Cf. Gilles Deleuze: "By rising to the surface, the simulacrum makes the Same and the Similar, the model and the copy, fall under the power of the false (phantasm). It renders the order of participation, the fixity of distribution, the determination of the hierarchy impossible…Far from being a new foundation, it engulfs all foundations, it assures a universal breakdown (effondrement), but as a joyful and positive event, as an un-founding (effondement)… How would Socrates be recognized in these caverns, which are no longer his? With what thread, since the thread is lost? How would he exist from them, and how could he still distinguish himself from the Sophist?" (*The Logic of Sense*, transl. by Mark Lester and Charles Stivale, ed. by Constantin V. Boundas (New York, Columbia U. Press, 1969), p. 263).

[5] The phrase does not appear in Plato's *corpus* and is known chiefly from secondary reports of Plato's views by Aristotle and other commentators. See, e.g. Geoffery Sayre, *Plato's Late Ontology: A Riddle Resolved* (Parmenides Publishing, 2005), pp. 76-78 and 96-97.

logos itself.[6] Here, difference can no longer be fixed as a determinate type and there is no longer any possibility of "discriminating by kinds;" rather, behind the "official" duality of *stasis* and *kinesis* as types (mediated and allowed to combine by the third type of difference and the logical *koinonion* that in makes possible in general) there appears a deeper and more problematic duality for which there is no third term.

The deeper problem here glimpsed is thus, beyond that of the specifically sophistical *pseudos logos*, that of the very possibility of the *logos* as such, as well as of that knowledge of it, in singular relation to the forms, of which the philosopher is characteristically capable. In fact, the structure of limited mixing and separation whose discernment is the specific competence of the philosopher is also singularly connected, as the Visitor goes on to explain, to the structure of the *logos* in the everyday sense of that of the sentence or assertion. In particular, since anyone who wishes to discourse about being necessarily involves himself in an articulated, sentential structure of statement, those who separate all things from everything else wind up denying the coherence of discourse itself. In this sense, it is the "weaving together of forms" that makes *logos* (in the sense of speech) possible for us at all. The capacity of forms and types to mix or separate themselves from one another is thus the inherent precondition for the possibility not only of philosophy but also of ordinary discourse itself; without this doubly logical structure of the combination of forms in themselves and in the unity of an ordinary discourse which reflects them in everyday sentences and claims, it would be impossible to speak coherently about anything and the very possibility of meaning would be destroyed.

The twofold relationship thereby asserted between the relational structure of the forms, as available to the philosopher possessing the grammatical *techne* of dialectic, and the underlying structure at the root of the coherence of ordinary discourse significantly inaugurates the project of a *logical analysis of language* capable of seeing in the characteristic structures of ordinary speech the implicit or presupposed structure of the ultimate types definitive of the thought and knowledge of being in itself. Though chronologically preceding what is usually recognized as the first development of "formal logic" in Aristotle's syllogisms, this twofold conception points to a more original conception of what can already be called *logical form*. In this more original Platonic conception, what is at issue is not an abstractable structure of argument that can be filled by various contingent materials, but the original connection that Plato sees between the discursive logos as such and the philosopher or dialectician's knowledge of the possible combination and separation of the ideas.[7] This conception, as it is developed by the Visitor's argument in the *Sophist*, points to an original solution to the problem of the relationship already invoked by Socrates in his search for an account or definition for each of the various properties or ideas into which he inquiries: the problem, in other words, of the relationship between the definitional *logos* and the *eidos* it picks out or to which it points. As we have seen, in insisting upon a real basis of the *logos* in the life and temporality of the embodied soul, the Stranger points to a basis of

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[6]Cf. *Philebus* 15d: "…it is through discourse [logos] that the same thing flits around, becoming one and many in all sorts of ways…" and 16c-d (quoted below). Sayre (*Plato's Late Ontology*, pp. 122-124) notes that while there is a close resemblance between the latter passage in the *Philebus* (in the voice of Socrates) and the description of the method of collection and division in the *Sophist* (in the voice of the Visitor), the major and glaring difference is the prominence of the theme of the *apeiron* in the *Philebus* passage.

[7] Accordingly, "form" should be taken as a translation of "*eidos*" rather than "*morphe*", here.

the possible knowledge of being in the dynamic logical capacity of the soul to gather diverse types into the unity of a rational discourse. The suggestion anticipates, among other things, the project of a logical investigation of the structural form of the *assertoric or predicative sentence* thought as capable of discerning what is obscurely involved in the predicative form as such.

This original conception of the link between the logical structure of sentences and forms leads the Visitor to articulate what has been seen as the first significant conception of the grammatical structure of a *predicative* sentence in the entirety of the Western tradition. Specifically, (261e-262c) a sentence is a combination of names and verbs; it is no more possible for a series of mere names to come together to form a significant sentence than it is for a series of verbs to do so. Rather, someone who utters a simple sentences such as "man learns" puts together a noun with a verb; in so doing, he "gives an indication [*deloi*] about [*peri*] what is, or comes to be, or has come to be, or is going to be." (262d) Such an indication does not simply consist in naming either things or actions; instead, the "weaving together" of names and verbs into a sentence constitutes what is itself an accomplishment, that of *saying something*. As with the earlier example of letters, and the possible combination of forms that it illustrates, the discernment of the specific combinatorial possibilities of these elements thus makes possible the very structure of the logos itself, the possibility of saying or asserting rather than simply naming. And it is this structure, as well, which establishes that every sentence must be *about something* [*tinos*]; formed by the combination of a significant subject or name for an object and the sign for an action, the sentence as such thus has the articulate structure of *saying something about something*. It is through this capacity that it is finally possible for a *logos* to be false; in particular, a false logos says about its subject something *other* than what is (263a-b).[8] As thought [*dianoia*] is actually a kind of "silent inner dialogue" [*dialogos*] of the soul with itself, it is thereby possible for falsehood and illusion actually to occur in thought and in the language that expresses it, and for the formidable problem of the being of the Sophist as the purveyor of falsehoods finally to be resolved.

The Eleatic visitor thus finds the solution to the vexing Parmenidean problem of the possibility of saying and thinking non-being in the power or capacity of a living *psyche* to produce the co-presence of the logos through the dynamic *synthesis* of the "great types", including *being* and *difference*, in communication with the overarching structure of their possible articulated combination or mixing. The point of this communication, which forces the positions of both the materialist and the friends of the forms to admit the possibility of the combination of being and change, is the capacity of such a living soul to know or understand being as it is in itself. For the visitor, this capacity is moreover itself a *logical* one; it is achieved only on the structural basis of the specific structure of the *logos* as the predicative combination of subject and predicate, and through the possibility of appropriately combining the "great types" that this permits. The *topic* of the standing structural capacities of the types to mix with and separate themselves from one another is thus revealed as the superior place of a specifically logical *a priori* capable of dominating both words and objects, open to the philosopher as a practitioner of

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[8] Plato's formulation here closely anticipates the famous "definition" of truth and falsehood that Aristotle gives at *Metaphysics* 4, 1011b, in the course of a defense of the universality of the principle of non-contradiction: "To say that what is is not, or that what is not is, is false; but to say that what is is, and what is not is not, is true…"

dialectic but also capable of dominating and determining the meaningful everyday discourse that it structures and constitutes.

The Visitor's rigorously developed solution to the specific problem of the Sophist thus points to two more general problematics of logic and sense, characteristic of the development of reflection on linguistic meaning up to the present. The first is the problem of the nature of *predication*, of the specific structure of sentences, propositions, assertions or judgments, such that something is said, asserted, or judged of or about something else. The second is the problem of linguistic *intentionality*, or of the link between speech and the external reality that it characterizes, describes, denotes, or refers to. Both problems are discussed, in the *Sophist*, as problems specifically about the structure of the logos as such; but both are also properly "ontological" in being addressed specifically to the Parmenidean problem of non-being, to which the Visitor's argument responds. Both problematics are not only directly tied to the question of linguistic sense, but also articulated at the point at which this question communicates with the ontological problem of the sense or meaning of being as such. The first does so in pointing to what is later thought (by Aristotle) as the "copula," the synthesis of subject and predicate, or the logical/predicative synthesis that links subjective ideas or representations in the synthetic *unity* of a judgment. The second raises the question of the basis of the relationship through which thought or language has access to the real, and thus of the very possibility of truth.

Whether or not the Stranger's solution can be considered adequate in addressing these problems, it is significant for their subsequent development that the Stranger determines the ultimate basis of linguistic sense in the superior structure of an *a priori* connection whose privileged temporal medium is the life of the rational psyche, or the capacities of the *living being* capable of specifically *logical speech and thought*. Such a conception of the superior structural basis of the logical form of language and life looks back, from Plato, to the enigmatic remark by Heraclitus in which the imperative of a "common" identified with the *logos* is counterposed to the privacy or idiosyncrasy that is the characteristic assumption of the many:

> Therefore it is necessary to follow the common [*koino*]; but although the Logos is common the many live as though they had a private understanding.[9]

At the same time, it looks forward to a problematic of the relationship of logical forms to the commonality of a shared life that is as broadly representative of 20th century philosophy in its inquiry into the logic of language and is as pressing today as it was already for Plato. Within this inquiry in both its "analytic" and phenomenological/ontological forms, the question that arises repeatedly and decisively determines methods, considerations, and results, is that of the particular mode of the relationship of the *logical form of language* to the *facticity of a life*. As such, it is the question in the ultimate horizon of which it is possible to envision a joint contemporary inheritance of the methodological and problematic legacy of an analytic inquiry into the specific rational structure of language and that of an ontological inquiry into the structure and meaning of being.

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[9] Diels and Kranz, Fragment 2; quoted in Sextus, *adv. Math* VII, 133, translated in Kirk, Raven, and Schofield, p. 187. Kirk, Raven and Schofield note that Heraclitus probably used *zunos* instead of *koinos*, but that the former is simply the usual "epic and Ionic" formulation of the same concept.

II

Martin Heidegger's discussion of the "battle of gods and giants" over being, in his comprehensive Marburg lecture course of 1924-25 devoted to the interpretation of Plato's *Sophist*, comes just after he briefly discusses the remark of the Visitor which he would use, roughly 2 years later, as the epigraph for *Being and Time*:

> For manifestly [*delon*] you have long been aware of what you mean when you use the expression "*being*". We, however, who used to think we understood it, have now become perplexed.[10]

The remark, in its original context, is addressed to Parmenides and all those who have earlier attempted a "critical" definition [*epi krisin…diorisasthai*] of the number and types of beings [*ta onta*] (242c).[11] These predecessors, the Visitor avers, have been "careless," and have told stories [*mython*] as if to children rather than considering whether their arguments [*legousin*] can genuinely be followed out. In particular, Heidegger suggests, in aiming to deal with being, they have instead told stories about beings or particular things, actually only explaining beings in terms of beings; thus they have "moved naively in the dimension of beings" and thereby failed to enter into the "dimension of the *Being* of beings."[12] , all of those who have tried to explain being by counting the types of the most proper beings, including monists like Parmenides himself as well as those who hold that being is to be explained in terms of a duality or plurality of principles, have necessarily invoked, in so doing, the specific structure of *legein*, the saying or speaking. In so doing they have already, according to Plato as Heidegger understands him, also invoked "something else" that is "co-said" in *all* legein, or in all speaking about beings, insofar as the *logos* itself includes the possibility of its own saying as a constitutive and implicit moment. And this "something else" is, Heidegger says, "no less than Being itself" (p. 446). It is thus that the Visitor comes to pose in a radical fashion the question of what is really meant by the sign "Being," which all those who discourse about beings and their structure ceaselessly presuppose.

In particular, Parmenides and the Eleatics propose the hypothesis "*en to pan*," all is one (244b). Heidegger suggests that we can summarize Parmenides' principle with the slightly different formulation "en on to pan," or "all that is, is one" (though precisely this latter formulation does not occur in the text at this point). With respect to the hypothesis thus understood, according to Heidegger, Plato's demonstration does not have the goal of simply disputing the hypothesis but of showing that in it "there resides a moment which reaches beyond its own proper sense." (p. 453) The hypothesis raises the problem of the signification of the *name* "being" in relation to what it signifies. At 244d11-12, invoking

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[10] Heidegger, *Sein und Zeit*, 19te. Auflage (Tübingen: Max Niemeyer Verlag, 2006), p. 1 [henceforth: *S&Z*] (Translated as: *Being and Time*, transl. by John Macquarrie and Edward Robinson, Harper San Francisco, 1962).

[11] Παρμενίδης ἡμῖν διειλέχθαι καὶ πᾶς ὅστις πώποτε ἐπὶ κρίσινὤρμησε τοῦ τὰ ὄντα διορίσασθαι πόσα τε καὶ ποῖά ἐστιν.

[12] Heidegger, *Platon: Sophistes* (GA 19), herausg. von Ingeborg Schüßler (Frankfurt: Vittorio Klostermann, 1992) [henceforth: *PS*], p. 441. Translated by Richard Rojcewicz and André Schuwer as *Plato's Sophist* (Bloomington: Indiana U. Press, 2003). (pagination as in German text).

a problematic that is more fully developed in the dialogue *Parmenides* itself, the Visitor states an inherent dilemma involved in assuming "being" to have such a signification within the scope of the Parmenidean hypothesis of the *en on to pan*, that being is one. The dilemma is that admission of a *name* of being, in addition to what is named itself, already requires that *there are at least two*, and not only one, as the hypothesis apparently requires. Far from being a mere sophistical problem, according to Heidegger, the problem in fact concerns the very structure of the *logos* as *legein ti*, or as a saying *of* something "about something". The fact that every *logos* is a *legein ti*, that every logos is about something, here means that the hypothesis, as a logos about being, says *of* being that it is one. Thus the Visitor's consideration shows that, with respect to the number of being, in Parmenides' hypothesis itself "there is already given a whole series of phenomena, a multiplicity of characteristics of Being" (p. 461).[13] Though the articulation of these characters by the Visitor continues to involve, according to Heidegger, "essential unclarities … residing in the matter itself" (p. 459) nevertheless, the elaboration of these unclarities points to a "univocal basis of ontological questioning, in which the Greek [ontological questioning] is included and hence can come alive…" (p. 460).[14]

Heidegger accordingly suggests that the Visitor's inquiry as to what is meant by the word "being" [*on*] captures the "genuinely central concern … of the whole dialogue" (pp. 446-447); this, in particular, is the concern to *prepare* the ground for a possible ontology by posing in a radical fashion the question of the meaning of Being by interrogating the specific relation of the meaning of the *term* "being" in relation to the *logos* that articulates it. The continued trenchancy of the questioning for ontological investigation rests much more, according to Heidegger, in the specific *problematic* it sets up than in any actual solution given by Plato or the Visitor; in particular, "to raise the question of the meaning of Being does not mean anything else than to elaborate the questioning involved in philosophy in general." (p. 448) This question, Heidegger additionally says, "must provide guidance as to the possible meaning in any concrete question about the particular ontological structure of various beings" (pp. 448). As such, the questioning itself both requires and involves an "elaboration… of the *ground* on which the interrogation [*Befragen*] of beings as to their Being is at all possible." (p. 448)

In elaborating such a ground, the questioning involved in the Visitor's challenge to his predecessors in fact itself, Heidegger suggests, already amounts, even simply as a questioning, to a "determinate discovering and disclosing" of the specific possibility of questioning regarding the Being of beings (p. 448). The nature of what is thereby disclosed emerges in the course of the Visitor's questioning directed toward the partisans of materialism and those of the forms. The materialists, in particular, understand "body" and "material thing" to signify the same as *ousia* (or "being" in the sense of the (nominalized) present participle of the verb *einai*) (246a-b), holding that everything is constantly in motion and becoming. The friends of forms, by contrast, identify *ousia* with *eidos*, privileging the static form or idea as that which is most genuinely or substantially real. In having to admit the existence of *phronesis* in the actual living soul, the materialists necessarily admit a more general basis in the structure of the soul for the possibility of combination of the visible with the intelligible. This more general basis is the *dunamis* which, the Visitor suggests to the materialist, might thus be taken as the basic structure of everything

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[13] Transl. slightly modified.
[14] Transl. slightly modified.

that is. For the formalists, by contrast, true being, which is understood as *stasis*, is known only through thought and reasoning; nevertheless, the reality of knowledge as a capacity of the soul again forces the adherent of the position to acknowledge a more general possibility of combination or being-with-one another.

Heidegger suggests that the common form of this solution, for both parties, directly captures Plato's own solution to the difficult problem of the communion of change and becoming with stasis:

> Being itself, then, will mean for Plato, if he is to make both these positions intelligible, *dunamis*, as *the possibility of co-presence with something* [*Möglichkeit zur Mit-Anwesenheit bei etwas*], in short *dunamis koinonias*, or in a fuller determination, *parousia dunameos koinonias*, factual occurrence of the possibility of being with one another [*Vorhandensein der Möglichkeit zum Miteinandersein*]…This concept of *dunamis koinonias*, as the possibility of being with one another, is the focus of Plato's entire ensuing discussion. (p. 486)

In particular, in proceeding from the two positions discussed to the discernment of a characteristic unified phenomenon, Plato (according to Heidegger) identifies the possibility of knowledge as a "particular *koinonia*". This *koinonia* "includes, in the first place, a connection, a companionship, of the *psyche*, of *nous*, with the *eide*, i.e. a being of *genesis* with that of the *aei on*." (p. 487)[15] According to this solution, in particular, "the soul is the being in which we can see that in fact stasis is co-present with movement." (p. 552).

In this way, according to Heidegger, Plato solves the original problem that is at issue between the two parties in the battle, the problem of the relationship of what moves and changes with static being, of *kinesis* with the *aei on*. But the issue that is thereby resolved itself presupposes, ontologically considered, another problem also at issue between the two parties, at least implicitly: that of the proper "mode of access to what authentically possesses Being" (p. 467).[16] Although this question is not, according to Heidegger, formulated explicitly in the course of Plato's questioning, it is nevertheless presupposed in that both parties approach the question of the nature of Being by asking what mode of access is most appropriate to what most genuinely is, i.e. whether it is *aesthesis* (or sense-perception) directed toward bodies or *noein* (thinking) directed toward forms that gives the most direct access to genuine beings as they are in themselves. In this way, the question of access at issue between the materialists and the formalists formulates the specific and noteworthy requirement that "…the meaning of Being is …dependent upon the possibility that beings can be encountered by a being which possesses something like the present [*so etwas wie Gegenwart*] in general" (p. 468). But what is shown in the way Plato poses in placing exactly this requirement on the form of an account of the proper mode of access to genuine beings, according to Heidegger, is the inexplicit but guiding presupposition of a specific understanding of the meaning of Being [*ousia*], which guides not only Plato's questioning but the whole ontological problematic of the Greeks:

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[15] Transl. slightly modified.
[16] Transl. slightly modified.

This meaning of Being does not naturally lie in the light of the day but instead can be understood explicitly only by means of a subsequent interpretation. The meaning of Being implicitly guiding [Greek] ontology is Being=presence [*Sein=Anwesenheit*]. The Greeks did not get this meaning of Being from just anywhere, they did not just invent it, but rather it is the one borne by life itself, by factual Dasein, insofar as all human Dasein is interpretative [*Auslegendes ist*], interprets itself as well as everything that is a being in whatever sense. In this interpretation there is operative [*lebendig ist*] an implicit sense of Being. And indeed the Greeks drew their implicit sense of Being out of the natural immediate interpretation of Being by factual Dasein, where Being means to be there already at the very outset [*im vorhinein schon da sein*] as possession, household, property [Anwesen] – put more sharply: as presence [*Anwesenheit*]. We will make use of this meaning of Being (which we ourselves first make visible, although of course we cannot discuss it further in this context), namely Being=presence, because *in it lies concealed* [*beschlossen liegt*] *the whole problem of time and consequently the problem of the ontology of Dasein*. (p. 467)[17]

The problem posed in the battle of gods and giants thus captures in a very specific way the problem of the ultimate basis of the being of beings as it connects with the problem of time. In particular, according to Heidegger, the problem of the meaning of Being in general here appears specifically as the problem of the most proper mode of access to being in itself, a problem that is already posed with the admission, made by both parties to the battle, that the soul's knowledge of being is in some way possible. The solution points, according to Heidegger, to what is actually "what today we would call a *consideration of essence* [*Wesensbetrachtung*] or a *knowledge of the apriori*;" (p. 342)[18] that is, in locating the specific possibility of a combination of stasis and kinesis in the structure of the soul Plato develops what is actually an original account of the possibility of *a priori* knowledge, which is now treated, Heidegger notes, in the phenomenological theory of eidetic knowledge.

Although Heidegger urges that this solution, in Plato, should not be understood as a subjectivist one or as dependent upon a distinction between what is "immanent" and what is "transcendent" to the soul so conceived, it nevertheless depends, according to Heidegger, on Plato's assumption that "the grasping of the apriori resides on the same level as the grasping of the ontical in general" (p. 495); in particular, the factical and substantial existence of the *psyche*, as the basis for the possible combination of the essential types of *stasis* and *kinesis*, is here invoked as the basis for the possibility of knowledge of being as such. This leaves open, according to Heidegger, the actual character of eidetic knowledge, which is "connected to the general problem of Being" and to the "question of how something in general can be prior to something else and what this particular order of priority means." (p. 495) However, for Plato himself, the priority of the *a priori* and the whole possibility that the soul's synthetic capacities indeed touch on the knowledge of being, depends further on the specific relation of the soul to the structure of *logos*. This is necessary in order to explain how the dynamic capacity of the soul grounds the possibility of a knowledge of being, and how such a capacity underlies the further possibility of designating non-being as well.

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[17] Transl. slightly modified.
[18] Transl. slightly modified.

In particular, the consideration that being can be called by many names (251a) leads Theaetetus and the Visitor directly to consider the *koinonia* that is needed for access to being and non-being, not only in terms of the structure of the soul, but also as a "*koinonia* within *logos* itself" (p. 500). It in fact impossible, according to Plato as Heidegger reads him, to deny the actuality of this commonality, which is shown by the specific possibilities of ultimate types to mix as well as differentiate themselves from one another. For as the Visitor emphasizes, those who discourse about being constantly presuppose the specific capacities of types to mix or refuse mixing; in so doing, they already in fact implicitly invoke "a whole theory of Being" (p. 515). In other words, for Plato, "in the logos-structure as such, determinate moments of beings, determinate formal-ontological structures, are co-said." (p. 515).[19] Drawing the formal and methodological analogy to the *grammata* or basic elements of language, Plato considers these types, according to Heidegger, as those knowable beings which have, among all others "those which have the fundamental privilege of universal presence" and thus, since Being is here interpreted *as* presence, as beings with the "privileged rank" of that which is "always already, in advance, present in all beings." (p. 520). The "structural manifold" [*Gebildmannigfaltigkeit*] (p. 584) of *eide* thus modeled by the logical structure of grammar provides Plato, according to Heidegger, with a solution to the problem of the accessibility of the structural combinations of ideas on the basis of the spoken *logos* as well as, in that there are specific elements that are pervasively and eternally present throughout everything else, an answer to the problem of the possibility of knowledge insofar as this problem is a problem of being (Heidegger here mentions the analogy drawn in the *Theaetetus* of the soul to a dovecote, saying it expresses essentially the "same phenomenon").

As a specification of this general structure of correspondence between the dynamic *koinon* within the soul and the "*koinon* of the *logos*" which itself makes the knowledge of being, in general, possible, Plato additionally discerns in the structure of *legein* as such, according to Heidegger, the very basis of the relationship of *intentionality* between thought and its object. Specifically, as the Visitor notes, every *legein* is a *legein ti*; every saying is a saying of or about something. In recognizing this "basic fact of *legein*", according to Heidegger, Plato discovers the "…basic structure…of every human comportment and in general of the comportment of every living thing that is with and to something in the sense of Being [*das ist im Sinne des Seins bei und zu etwas*]" which contemporary phenomenology calls "intentionality." (p. 424).[20] The discovery represents a "fundamental insight into *logos*," one that later becomes "decisive for the entire further history of logic" (p. 597). The specific phenomenon of the *legein ti*, moreover, as a relation "pertaining to the living being with respect to its very Being" (p. 424) has the significance of exposing the "genuine constitution of the possible uncoveredness [*Aufgedecktheit*] of something addressed" and "what in general is said in a *legein* as something said." (p. 597). Although Plato does not further develop the "genuinely ontological problematic" thereby invoked, the discovery of the *legein ti* thus points, according to Heidegger, to the general structure of being through which it is possible for anything to become unconcealed or phenomenally revealed through a saying or *logos*.

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[19] Transl. slightly modified.
[20] Transl. slightly modified.

In this respect, according to Heidegger, Plato's conception of the *logos* as a combination of subject and verb as well as his conception of the *legein ti* as a particular combination or mode of co-presence of the sentence and its intentional object together in fact point back to a more original phenomenon of indication or revealing whereby, as the visitor says, a *logos* reveals (*deloi*) "the presence of beings or of non-beings" (*ousian ontos kai me ontos*) (262c; p. 593). This more "fundamental" phenomenon, according to Heidegger, is not simply an aspect or outcome of the spoken sentence as such; rather, it is in fact the "primary" phenomenon which harbors the very possibility of discourse to begin with. (p. 594). In particular, Heidegger urges, the capacity of the sentence to disclose or reveal is not somehow the result of a synthesis or combination *into* a sentence of words of various types which are themselves already equipped with disclosive meaning; rather, it is on the basis of the more fundamental phenomenon of *deloun* (revealing) that words can first be grasped as something beyond mere sounds at all. If, then, words are combined into the unified discourse of a logos, the "criterion for the unity" of such a logos remains their capacity of *disclosing* "the unity of the possible object of the disclosure." (p. 595). Specifically, at 262e, the Visitor understands a sentence as the result of "combining a thing and an action," (*pragma praxei*), or in other words as the combination of a noun [*onoma*] (a sign for a thing) and a verb [*rhema*] (a sign for an action or type of action). According to Heidegger, though, insofar as the sentence is thus a combination of indications, the capacity of the sentence to indicate is: "not the *result* of their composition, but, on the contrary, the *koinonia* of *onoma* and *rhema* is possible at all only because *legein* in itself is a *deloun*." (p. 596). This does not simply point to a synthesis, but to a more original unity of what is *indicated* in the *logos* as the "proper object of the discourse" which, as Heidegger emphasizes, remains elusive and difficult to capture even today. For as Heidegger emphasizes, "we have no appropriate expressions," even today, for this peculiar unity of *pragma* and *praxis* that is discovered by Plato but which is nevertheless not, Heidegger insists, "fixed appropriately by Aristotle's later attempt to do so in relation to the criterion of time." (p. 595).

With this specific conception of the *logos* as a synthesis of signs and of the *psyche* as the substantial basis for the capacity dynamically to achieve such a synthesis, Plato, according to Heidegger, thus develops a specifically "logical" understanding of the sense of Being, dependent upon the interpretation of Being as presence, which obscures and precludes a more "original" understanding of the ontological structure of presencing. In particular, Plato, as we have seen, proposes to solve the problem of the possibility of knowing being and the underlying problem of temporality to which it points by invoking the dynamic life of the soul as the substantive basis for an interlinked series of logical manifolds in whose linkage or communication in the structural configuration of the logos, both in terms of the individual sentence and the larger possibilities of "what can coherently be said" as such, provides the ultimate basis for the intelligibility of beings and any possible knowledge of being in itself. In a summary formation, Heidegger links this series of manifolds to what is, according to him, the basic determination of the nature of the human animal for the Greeks:

> It is no accident that …Plato refers to this double structural manifold, of *eide* and of *grammata*. ….The structural manifolds are therefore not juxtaposed, isolated realms but instead stand in an intrinsic substantive koinonia: the matters at issue, what is properly visible in them, word, word-sound – beings, world, disclosure [*Aufgeschlossenheit*] of beings, discourse, manifestation. This

is nothing else than the universal context of phenomena within which man, the *zoon logon echon*, ever exists. This context is ultimately grounded in Being-in, in the antecedent uncoveredness [*Entdecktheit*] of the world. (p. 585)

In particular, according to Heidegger, the specific structure of the *psyche* as a substantial basis for the combination in co-presence of ideas and logically differentiated types allows for the very possibility of the soul possessing knowledge of being in itself; this combination in co-presence itself has its specific basis in the *dunamis* or capacity for logical combination or synthesis that also shows up, in the traditional "definition" of man, as the living being's "possession" of the specific structure of logos or speech. This possession of the logos, and hence Plato's overarching determination of the possibility of some relation of thought to being, is itself grounded, as Heidegger emphasizes, in a specific conception of the temporality and life of this being as such, what Plato thinks as the being of the *psyche* and its *dunamis* or capacity for logical synthesis.

Plato thus ultimately gives, on Heidegger's reading, what can be called (in an anachronistic but nevertheless accurate sense) a *psychologistic* theory of being and truth. In particular, it is, for Plato as Heidegger reads him, the temporal capacity of the soul dynamically to synthesize logical elements in actually speaking and thinking that ultimately accounts for the sense and meaning of being in itself, insofar as it is thinkable or knowable. The temporal contact of the psyche *with* the larger structural possibilities established by the (presumably timeless) pre-eminently existing types is itself guaranteed by this dynamic structure of the psyche as the capacity for combining them into a thinkable *logos.* This dynamic capacity of the soul as capacity for appropriate combination is itself structurally linked, in turn, to the philosopher or dialectician's privileged technique of discerning the ideas through the study of their logico-grammatical interrelationships. The underlying structural basis for all of these connections between the psyche's capacity to produce intelligibility in the form of the logos and the logical structure of being in itself is the intercommunicating series of *koinonia*, or commons, that Plato thus sees in the capacities of the *psyche*, the structure of the predicative sentence, and the intentional relation between sentences and their objects. All of these are linked together, for Plato, in the notion of a *logical/ontological co-presence* that preserves meaning and ensures seamless communication among the different orders of the psychic, the material, and the ideal; the ultimate basis of this co-presence is the manifold *koinon* (or common) of the *logos* itself. From a more penetrating ontological perspective, this assumption of co-presence is open to interrogation by means of an original investigation of the phenomenon of presencing itself. This leads Heidegger to critically challenge the underlying assumption of the unity of presence among ideas, their representation in signs, and the capacities of the soul for rational thought that Plato assumes under the heading of a presumably unified *logos* modeled on the synthetic structure he sees in the logical/grammatical form of the predicative sentence as such.

Both parts of this critique of Plato's psychologism – that which interrogates the being of the psyche as the substantial nexus for the production of co-presence in synthesis and that which interrogates the structural/synthetic conception of logical form that permits and supports this production – are equally essential to generating the broader critique of the "logical tradition" of the West, along the guideline of the radicalized questioning of the sense of being, that Heidegger announces in *Being and Time*. In particular, if this critique necessarily takes the form of a deconstructive interpretation of ancient

ontology on the more original basis of the problematic of temporality (p. 25), it engages in particular the ancient determination of Dasein as the *zoon logon echon* or as "that living thing whose Being is essentially determined by the possibility of discourse." (p. 25) For this conception as it unfolds in the subsequent development of the Western tradition according to Heidegger, the being of the *psyche* enjoys a recurrently marked priority in the description of the ultimate basis of meaning and truth; thus for Aristotle, the soul "is, in a certain way, all things," and Aquinas the "distinctive entity" that is the soul (*anima*) is "properly suited to come together with' entities of any sort whatever" in such a way as to produce the possibility of truth and ensure its status as a "transcendental," something that characterizes any subject matter whatsoever (p. 14).[21]

But the ontological conception that underlies this position depends equally, Heidegger suggests, on taking the presumptively synthetic structure of *logos* and *legein* as "the clue for arriving at those structures of Being which belong to the entities we encounter in addressing ourselves [*Ansprechen*] to anything or speaking about [*Besprechen*] it." (p. 25) To penetrate beneath this presumptively synthetic structure, it is necessary not only to see it as in fact grounded in a more basic "*apophantical*" structure of disclosure, but also to see that this more original structure, in itself, has nothing to do with the "binding and linking together of representations" or with a "manipulation of psychical occurrences" in an uncertain relation of possible "agreement" with "outside" physical objects (p. 33). In this way, Heidegger's critique of the psychologistic position on truth that originates with Plato's conception of the synthetic logical *koinonia* of the *psyche* dramatically undercuts any conception of truth as correspondence between the psychical and the physical; in particular, the relation of correspondence or "agreement" supposed in such a conception to occur between a psychological representation or judgment and its object or objects is revealed as simply the flattened outcome of the more ontologically basic phenomenon of uncovering or disclosure itself.

Heidegger's critique of the synthetic conception of the *logos* thus motivates the rejection of correspondence theories of truth; but more broadly, it suffices to challenge the priority of any account of the structure of the logos as primarily defined by a psychological possibility of combination. If, then, it is possible to question the Visitor's interlinked position on the structure of the psyche, the *logos*, and the specific structure of truth on the basis of a deeper interrogation into the sense of Being and specifically into the problematic of time, this interrogation will unsettle and deconstruct the privilege accorded, in philosophical thinking from Plato to the present, to the fundamental conception of the *dunamis koinonion* in the psyche that makes the *logos*, and hence what is thinkable in being, present for the synthetic capacities of the *zoon logon echon*, the being that speaks and thinks. In particular, as we have seen this synthetic structure is the locus for an interpretation of being as presence that simultaneously looks two ways: toward the co-presence of representations in the unity of the psyche, and toward the basis of the possibility of this co-presence in what is conceived as the deeper logical/grammatical structure of beings as such. The conception links both unities in an obscure communication or correspondence founded on what is thought as the synthetic structure of the *logos* itself and the particular kind of co-presence it is thought to make possible, the dynamic co-presence of the psyche with the representations in which it traffics. But if, as Heidegger suggests, this synthetic

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[21] Aristotle, De Anima 3. 8, 431b21

unity and this particular co-presence themselves rest ontologically on the more basic and *essentially non-synthetic* phenomenon of the disclosure of beings, the ontological critique of the visitor's conception also suffices to challenge and deconstruct every conception of the human psychological subject as the privileged bearer of the logical capacity to think and understand beings as such.

If, moreover, the Platonic configuration that Heidegger interrogates in the *Sophist* lectures itself arises specifically in the Visitor's determinate questioning of the Parmenidean hypothesis of the *unity of beings* along the guideline of the *logos* (a hypothesis that articulates the Parmenidean assertion of the 'unity' of thinking and being) then the *logica*l problematic thereby elicited retains a priority for Heidegger's deconstruction of metaphysics throughout its whole itinerary. This is so even, and even in a heightened form, after Heidegger's thought undergoes, along with a marked intensification of the problematic of the being of language, the radicalization or "turning" that he specifies in the *Beiträge zur Philosophie* as the move from the "guiding question" of the Being of beings to the historical "grounding question" [Grundfrage] of being's (or 'beyng's') truth.[22] In the altered problematic of the *history of being* to which this leads, the Being of beings is said to be successively "metaphysically" determined according to a series of privileged figures, for instance as *idea*, as *hupokeimenon* and *dunamis*, as *transcendens*, as *cogito* and representing and willing subject, as will to power and technology.[23] Each of these determinations grounds the intelligibility of beings as a whole by essential reference to some particular figure of what is thought as the most essential aspect of their character. Throughout all of these specific determinations, however, the specific structure of metaphysical thinking is visible in its claim to *unify* beings as a whole into a determinate configuration of intelligibility. And according to Heidegger, the specific basis of this claim, through all the various configurations of the metaphysics of the West, is the privilege of the specific structure of the *logos* as the ground and the basis of the thinkability of beings as such.

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[22] "The question of being is the question of the truth of beyng. When grasped and worked out historically, it becomes the *basic question,* versus the previous question of philosophy, the question of beings (the guiding question)…And yet, if beings *are*, then beyng must occur essentially. But how does beyng occur essentially? And *are* there beings? Out of what else does thinking decide here, if not the truth of beyng? Accordingly, beyng can no longer be thought on the basis of beings but must be inventively thought from itself." *Beitrage zur Philosophie (Vom Ereignis)* (GA 65), ed. by Friedrich-Wilhelm von Herrmann (Frankfurt: Vittorio Klostermann, 1989), translated as *Contributions to Philosophy: Of the Event* (transl. by Richard Rojcewicz and Daniela Vallega-Neu, Bloomington and Indianapolis: Indiana U. Press, 2012), (p. 8). Heidegger uses the archaic spelling "Beyng" (Seyn) to indicate being as it may be thought outside its metaphysical determination as the being of beings. Cf. also my *Philosophy and the Vision of Language*, chapter 7.

[23] The connection of metaphysics with the thought of the totality of beings is already explicit, before the "turn", in Heidegger's 1929 Freiburg inaugural address "What is Metaphysics?" (and develops considerations about "world-view" and totality that go back much earlier, at least to the 1919 "War Emergency Semester" course "The Idea of Philosophy and the Problem of Worldview.") After the middle 1930s, the attempt to consider beings as a whole becomes the characteristic form of what Heidegger describes as all (onto-theological) metaphysics as such. Compare his statement in the *Beiträge:* "Yet does not philosophy as well, and indeed it above all, claim the 'total,' especially if we define philosophy as knowledge of beings as such and *as a whole*? In fact it does, so long as we are thinking in the form of the previous philosophy (metaphysics) and are taking this philosophy as it was molded by Christianity (by the systematics of German Idealism). It is precisely there, however, that (modern) philosophy is already on the way to 'worldview' (a term which, by no accident, gains ever more validity in the sphere of this 'thinking')." (p. 34). Compare also, "The Age of the World-Picture" in *Off The Beaten Track* (1938).

This privilege of the *logos* throughout the succession of differing metaphysical interpretations of the being of beings is marked in the double hyphenation of what Heidegger specifies in a late (1957) lecture as the "onto-theo-logical constitution of metaphysics." As Heidegger here explains, metaphysics in its thought of beings as a whole always has a twofold determination, as ontology and theology, uniting the ontological determination of "beings as such in the universal and primordial" with their theological determination in terms of "the highest and ultimate."[24] But the two kinds of determination of the being of beings (from 'above' and from 'below') are themselves further linked in the thought of the *unity of being and thinking* that makes possible the intelligibility of beings as a whole for each specific, epochal configuration.

Heidegger finds the basis of this unity, as it is thought throughout Western metaphysics, in the specific structure of the *logos* as a gathering and unification that grounds:

> Being manifests itself as thought. This means: the Being of beings reveals itself as the ground that gives itself ground and accounts for itself. The ground, the *ratio* by their essential origin are logos, in the sense of the gathering of beings and letting them be. They are the *En Panta*.[25]

Thus, the two interlinked structures of ontology and theology that together define Western metaphysics have a further and still unthought unity in the structure of the *logos* itself as the grounding basis for the *gathering*, binding, and presentation of beings in the unity of a whole.

> Ontology … and theology are "Logies" inasmuch as they provide the ground of beings as such and account for them within the whole. They account for Being as the ground of beings. They account to the *logos*, and are in an essential sense in accord with the *logos*-, that is they are the logic of the *logos*. Thus they are more precisely called onto-logic and theo-logic. More rigorously and clearly thought out, metaphysics is onto-theo-logic.[26]

Because "metaphysics responds to Being as *logos*," it is "accordingly in its basic characteristics everywhere logic" and in particular "a logic that thinks of the Being of beings."[27] In each of the determinate epochal configurations of metaphysics up to the present, the thinkability of beings as a whole in determinate figures of ontological and theological unity is, in fact, itself made possible by the specific grounding unity of the *logos*. In each of these configurations, "logic" is "the name for that kind of thinking which everywhere provides and accounts for the ground of beings as such within the whole in terms of Being as the ground (*logos*)." (p. 59)

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[24] *Identity and Difference*, transl. by Joan Stambaugh (Chicago: U. of Chicago Press, 1969), p. 61. Compare Iain Thomson's exemplary and perceptive analysis of the "twofold" operation of grounding that is characteristic of ontotheology for Heidegger: "All successful, epoch-grounding metaphysical systems *combine* these two different forms [ontological and theological] of foundationalism, thereby securing our understanding of the being of entities (and so grounding the intelligible order) from *both* the inside out *and* the outside in, microscopically *and* telescopically, floor to ceiling – or, as Heidegger puts it, ontologically *and* theologically, that is, *ontotheologically*." (Thomson, *Heidegger on Ontotheology: Technology and the Politics of Education*, Cambridge U. Press, 2005), pp. 18-19.

[25] *Identity and Difference*, p. 57.

[26] *Identity and Difference*, p. 59.

[27] *Identity and Difference*, p. 70.

If, then, the unifying and grounding character of the *logos* provides an original and pervasive basis for the various determinations of the Being of beings together that are, together, exhaustive of onto-theo-logy, Plato's thought of logical form as obscurely articulating the specific capacity of combination of logical elements in the soul provides an original determination of the thought of "being as presence" that underlies it. This Platonic figure thinks and grounds the temporality of the logic that links being and beings in the co-presence of the thinkable, according to what it conceives as the adequation between the psychological form of life of the animal possessing the capacity of *logos* and the overarching logical/ontological structure of the forms or types. The unity of this adequation allows being as such, in a figure that for Heidegger is always characteristic of metaphysics, to be determined as the unity of an ontic totality of beings, a thought which forecloses the ontological difference between being and beings and thus determines being as such as the thinkable unity of co-presence toward which Parmenides' hypothesis – *en on to pan* – originally gestures.

In Heidegger's historical project, which specifies the matter of thought beyond the closure of the epoch of metaphysics as this difference in itself, the determination of beings from Being itself will no longer be thinkable as any ontic relation of beings to beings. Accordingly, it will no longer be possible to think the basis of the conception of the Being of beings as the logical co-presence of ultimate beings in the soul, as the possibility of their subjective representation in the unity of consciousness, or as the result of the synthetic activity of a constitutive transcendental subjectivity on the basis of an original self-givenness of time. As the "intentional relationship" between subject and world is, here, radicalized into a more ontologically original problematic of unconcealment and disclosure, the logical/metaphysical operation that grounds beings as a whole from the position of an assumed and unquestioned *a priori* deepens into a more basic inquiry into the very temporal structure of ground as the structure of the truth of Being itself. In this deepening, it will no longer be possible to consider the relationship between Being and beings in the figure of a simple limit that bounds and enforces the sense of the totality of beings, theologically and ontologically, from above and below. That there will be no ontic figuration of the limit between Being and beings, except as originary and irreducible difference, means that there is no place from which to draw the line that bounds the metaphysical epoch of presence, unless it be drawn in its own erasure, in the original historical withdrawal of its own definitive trace.[28]

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[28] Cf. Jacques Derrida: "Since the trace is not a presence but the simulacrum of a presence that dislocates itself, displaces itself, refers itself, it properly has no site – erasure belongs to its structure. And not only the erasure which must always be able to overtake it (without which it would not be a trace but an indestructible and monumental substance), but also the erasure which constitutes it from the outset as a trace, which situates it as the change of site, and makes it disappear in its appearance, makes it emerge from itself in its production. The erasure of the early trace…of difference is therefore the "same" as its tracing in the text of metaphysics. The latter must have maintained the mark of what it has lost, reserved, put aside. The paradox of such a structure, in the language of metaphysics, is an inversion of metaphysical concepts, which produces the following effect: the present becomes the sign of the sign, the trace of the trace. It is no longer what every reference refers to in the last analysis. It becomes a function in a structure of generalized reference. It is a trace, and a trace of the erasure of the trace.

Thereby the text of metaphysics is *comprehended.* Still legible; and to be read. It is not surrounded but rather treversed by its limit, marked in its interior by the multiple furrow of its margin. Proposing *all at once* the

It is in terms of this withdrawal that Heidegger specifies, in *What is Called Thinking*?, the very *event* of our present:

> What must be thought about [*Das Zu-dekende*] turns away from man. It withdraws [*entzieht*] from him. But how can we have the least knowledge of something that withdraws from the beginning, how can we even give it a name? Whatever withdraws, refuses arrival. But – withdrawing [*das Sichentziehung*] is not nothing. Withdrawal is an event [*Entzug ist Ereignis*]. In fact, what withdraws may even concern and claim man more essentially than anything present [*als Alles Anwesende*] that strikes and touches him… The event of withdrawal could be what is most present in all our present, and so infinitely exceed the actuality of everything actual. [*Das Ereignis des Entzugs könnte das Gegenwartigste in allem jetzt Gegenwartigen sein und so die Aktualitat alles Aktuellen unendlich ubertreffen.*] (pp. 8-9).

The "infinite" excess of this withdrawal, beyond the metaphysical determination of the "actual" as that, in presence, which is capable of striking and touching us, exerts its claim from the "beyond" of a site whose topology is complex, and that cannot be thought as one of presence, unless it be, as Heidegger says, the place of the very presence of the present. The metaphysical determination that holds beings together as a whole and determines their totality in the figure of a limit, over against the absolute being of the theological transcendent that masters their intelligible sense from above or that of the ontological substrate that supports it from below, thus yields, as I shall argue in the succeeding chapters of this book, to a very different problematic of the limited and the unlimited as such. As I shall argue as well, it is in terms of such a problematic, and what is here specified as the event of withdrawal that it both marks and effaces, that it is alone possible to think the very structure of what the later Heidegger specifies, beyond any ontic figuration, as *Ereignis*, the "event" of Being that opens and closes the epoch of presence as appropriation and dispropriation.

Does, then, a deconstruction of the logical tradition along the guidelines of the problem of time point, in ways both marked and unmarked by Heidegger himself, to a more original problem of the relationship of the finite and the infinite as it both originally determines and subsequently (or even pre-originally) undermines the metaphysical concept of the world as a whole? And if, in this question, the ground of the onto-theo-logical determination of the Being of beings originating with Plato is challenged and unsettled along the guideline of a more penetrating thinking of the ontological difference, do the inherent *logical paradoxes of infinite totality* point, at or beyond the closure of the metaphysical epoch of presence, to a deeper logical/temporal problematic of the *inconsistency* of Being as such?

III

As we have seen, the problematic of thinking and being to which Plato, in the voice of the Visitor, offers the solution of the logical *koinonia* which forms, for Heidegger, the original basis of the subsequent

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monument and the mirage of the trace, the trace simultaneously traced and erased, simultaneously living and dead, and, as always, living in its simulation of life's preserved inscription." (p. 24).

logical thought of the West, is originally the problem of the specific *temporality* of logical thought insofar as it touches on what is thinkable in being itself. In a characteristically trenchant methodological passage in the *Grundgesetze der Arithmetik*, Frege takes up the consequences of precisely the same problematic as it bears on the issue of truth:

> For me truth is something objective and independent of those who judge…We can generalize this still further: I recognize a domain of the objective but non-actual, whereas the psychological logicians automatically assume that the non-actual is subjective. And yet it is not at all obvious why what persists independently of anyone's making judgments is actual [*wirklich*], that is, must clearly be capable of acting [*wirken*] directly or indirectly on the senses. Such a connection between the concepts [of objectivity and actuality] is not to be found.

> Because the psychological logicians fail to recognize the possibility of the objective non-actual, they take concepts as ideas [*Vorstellungen*] and thereby consign them to psychology. But the true situation asserts itself too powerfully for this easily to be carried through. And thus a vacillation arises in the use of the word 'idea' ['*Vorstellung*'], appearing at one moment to refer to [*bedeuten*] something that belongs to the mental life of an individual and that combines with other ideas with which it is associated, according to psychological laws, and at the next to something that confronts everyone in the same way, an owner of the idea being neither mentioned nor even merely presupposed. These two uses are incompatible… [29] (pp. 204-205)

The basis of Frege's conception of this specific mode of objectivity of the logically articulated concept, like that of so much else in Frege's thought, is the specific link between logic and truth. In particular, if logic is, as Frege says near the beginning of an 1897 work, "the science of the most general laws of truth," this is because its task lies in saying "what holds with the utmost generality for all thinking, whatever its subject matter;" (p. 228) in this way the "word 'true' can be used to indicate" the goal of logic, as "good" points to the goal of the study of ethics, or "beautiful" that of aesthetics. [30] (p. 227). As Frege suggests in a roughly parallel passage of the late (1918) article "Thought," if "the reference [*Bedeutung*] of the word "true" is spelled out in the logical laws of truth," it is thus accordingly necessary to consider logic as articulating the laws governing *what is* true, rather than "the laws of taking things to be true or of thinking" as a process or activity. [31] It is thus necessary, in order to preserve this definition of logic as articulating the laws of truth, to recognize also the privileged link between logic in this sense and being in the sense of *what is*, as opposed to the illusory or false objects of opinion, appearance, or fallible judgment. Recognizing this link is, in turn, sufficient, as Frege says in the *Grundgesetze* passage, to break any presumed link between the being of what is and "actuality" in the sense of the sensible, or of whatever has the capacity to affect or be affected.

A basis for this position can be found in the argument that Frege gives, both in the 1897 "Logic" and in "Thought," for the conclusion that *truth is indefinable*, and in particular that it cannot be identified with any property, feature, or relationship of objects:

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[29] In *The Frege Reader* [subsequently: *FR*] ed. by Michael Beaney (Oxford: Blackwell, 1997)
[30] "Logic" (extract) in *FR*
[31] "Thought" in *FR*, p. 326.

Now it would be futile to employ a definition in order to make it clearer what is to be understood by 'true'. If, for example, we wished to say 'an idea is true if it agrees with reality' nothing would have been achieved, since in order to apply this definition we should have to decide whether some idea or other did agree with reality. Thus we should have to presuppose the very thing that is being defined. The same would hold of any definition of the form 'A is true if and only if it has such-and-such properties, or stands in such-and-such a relation to such-and-such a thing.' Truth is obviously something so primitive and simple that it is not possible to reduce it to anything still simpler. Consequently we have no alternative but to bring out the peculiarity of our predicate by comparing it with others. What, in the first place, distinguishes it from all other predicates is that predicating it is always included in predicating anything whatever.[32]

In other words, if the truth of sentences were indeed definable in terms of any property, relation, or set of properties or relations, the usefulness of the definition to determine what is involved in the truth or falsity of a particular sentence would depend, in turn, on a determination of whether that sentence indeed *had* the requisite property (or stood in the right sort of relation to something else); and the need to make this determination in each case would lead, Frege suggests, to an infinite regress which would have to be traversed in order for the purported definition to be applicable at all. Frege formulates the argument primarily as applying to sentences, but if the argument is sound and valid, it in fact suffices to show the untenability of any definition of truth as correspondence (or indeed in terms of any other relation), however understood; whether the "correspondence" relation is understood as a relation of mind to world, ideas to objects, or sentences to states of affairs. On the other hand, the argument also suffices to defeat any "epistemic" or other definition of the truth of sentences (e.g. as warranted assertibility, coherence with the belief system of a community, etc.). For any such definition would presuppose for its application the further question of truth to which Frege points, and would thus begin the regress once more.

The argument, if sound and valid, thus has an exceedingly general bearing against putative theories of truth and bears radical implications for any conception of its metaphysics. At first, however, it is not apparent that it is indeed sound and valid: in particular, supposing truth to be definable as some feature or relationship X, why should it be necessary, in order to determine *that* a sentence has feature X (or stands in relationship X to something else), *first* to determine (in terms of the purported definition) whether it is *true* that the sentence has X (or bears relation X)? One might certainly reasonably hold, for instance, that a single act of determination is enough (i.e. that once we determine the sentence in question to have the requisite property or stand in the requisite relation, this by itself suffices to determine simultaneously the truth of all the infinite series of statements formed by iterations of "it is true that…"); in that case, though a regress threatens, it is not a vicious one, and the argument has no force.

But the argument is improved, and rendered valid, by noting that it has as an unstated premise another claim that Frege was probably the first to make, and that has elsewhere been called the "redundancy"

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[32] "Logic," p. 228; the parallel passage in "Thought" is pp. 326-27.

or "equivalence" principle.[33] The claim is that the assertion "It is true that 'A'", or the predication of the truth of A, is (in some sense) *equivalent* to the assertion "A" (or to predicating what A predicates). Frege states this equivalence principle elsewhere,[34] and he asserts it in the last sentence of the current passage by holding that "predicating [truth] is always included in predicating anything whatsoever." Given this, however, it is clear that any definition of truth in terms of any property, feature, or relation is untenable. For given any such definition, even while asserting "A," it would still be open to us to inquire whether "A" had the requisite property, feature or relation (thus, whether "A" is true). But that this is in fact *not* open to us is a direct consequence of the equivalence principle itself.

It is thus an interesting irony that the principle at the basis for Frege's general and powerful argument for the indefinability of truth in terms of correspondence or any other notion is, at its basis, just the same one that was subsequently used by Tarski to capture what he considered to be the most important formal constraint on the definition of a *truth predicate* for a particular formal language, L. For *if* applied, in this way, as a constraint on possible definitions of such a language-specific truth predicate, the equivalence principle becomes Tarski's notorious T-schema:

> (T):   *s* is true-in-L if and only if *p*

where 's' is replaced with a description of a sentence, and p is replaced by the same sentence, or a translation of it.

The schema would prove decisive in the development of many of the formal as well as informal approaches of the analytic tradition to the interlinked problems of meaning and truth; in particular, in application to natural rather than formal languages, it would become the basis for Davidson's powerful conception of the possibility of providing a theory of meaning, grounded in a Tarskian truth-theory, for any particular natural language, on the basis of the evidence available to an interpreter of that language who at first lacks any knowledge of it.[35] Nevertheless, as Davidson himself argues in the posthumously published text *Truth and Predication*, the applicability and definability of Tarski-style truth predicates for any number of particular languages in a situation of radical interpretation still leaves open a general question, not solved by any number of such definitions: that of the *general* concept of truth, or what is held in common by every language and formulated in *each* of the language-specific truth predicates.[36]

It is in this sense, the sense of the "general concept," that truth is plausibly "normative" in the sense that it provides (as Dummett has suggested) a "norm of assertibility" or, as Frege says, that it "points the

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[33] Cf. Michael Dummett, "Can Truth be Defined?" in *Frege: Philosophy of Language* (London: Duckworth), pp. 442-470 (esp. pp. 443-45).

[34] E.g., in "Thought" he says: "It is also worth noticing that the sentence 'I smell the scent of violets' has just the same content as the sentence 'It is true that I smell the scent of violets'." (p. 328).

[35] See the essays collected in Davidson, *Inquiries into Truth and Interpretation* (2nd edition, Oxford U. Press, 2001), especially "Truth and Meaning," "In Defence of Convention T", and "Radical interpretation."

[36] "My own view is that Tarski has told us much of what we want to know about the concept of truth, and that there must be more. There must be more because there is no indication in Tarski's formal work of what it is that his various truth predicates have in common, and this must be part of the content of the concept … The concept of truth has essential connections with the concepts of belief and meaning, but these connections are untouched by Tarski's work." Davidson, *Truth and Predication* (Cambridge, MA: Harvard U. Press, 2008), pp. 27-28.

way" for logic, where logic is, again, the theory that articulates the laws of truth rather than simply those of what is held true.[37] Any such theory will never, if Frege's argument is correct, amount to a *definition* of truth; in fact, as Davidson emphasizes, it is futile to look for any *definition* of the general concept of truth itself.[38] But if there will never be a definition of this general concept, it nevertheless remains open to hold that, as Frege himself says, it is "indicated" or "pointed toward" by the logical/semantic theory that captures the general structure of language itself. If this is indeed the case, the consequences of the equivalence principle that yields the general argument against the tenability of any definition of truth in terms of objects and their relations will have a special and pivotal role in producing the possibility of this indication; in particular, if, as Frege says, the peculiarity of the predication of truth is that it is always "included in" any predication whatsoever, a logical/semantic theory that articulates the constitutive logical structure of predication itself, gestures beyond the properties and relations of beings, toward the constitutive connection of the sentences of a language and the conditions of their truth. Beyond beings, such a theory would thus gesture toward the indefinable point at which the sentences of a language bear, in the structure of predication itself, the inarticulate mark of their Being.

What does it mean, then, that "predicating [truth] is included in predicating anything whatsoever"? On the one hand, as we have seen, it means that truth cannot be defined as any property, relation, or feature of entities. But on the other hand, it is possible to discern in Frege's remarks explicating the significance of the redundancy principle the thought that the structure of truth is in a particular way *shown*, albeit problematically, in the structure of predication, without it, however, being simply reducible to this structure. As is shown by the redundancy principle itself, in fact, predicating truth is 'included in predicating anything whatsoever' in that any predication as such 'includes', in a problematic way, the possibility of *asserting* something to be the case or, equivalently, asserting that the sentence formed by the predication is true.

As is well known, Frege officially distinguishes "assertoric force", the particular kind of force which is applied to a sentence or its content when it is asserted, from the content itself, holding that *asserting* is just one of several possible actions that can be performed with one and the same content. In a 1906 summary of his "logical doctrines," for instance, Frege placed at the top of the list his having "dissociated assertoric force from the predicate."[39] Along similar lines, he treats one component of what would become the familiar logical turnstyle as a "judgment stroke" signifying that what follows is in fact judged, or that its truth is recognized.[40] According to Frege, it is necessary in particular to use the symbolism in that it is necessary to separate the act of judgment, when it occurs, from its subject matter; for otherwise it would be impossible to distinguish the judgment (or assertion) that some

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[37] Dummett, "Truth" in *Truth and Other Enigmas* (London: Duckworth, 1978).

[38] *Truth and Predication*, chapters 1 and 2; cf. Davidson, "The Folly of Trying to Define Truth," *Journal of Philosophy,* 93:6 (June, 1996), pp. 263-278.

[39] "A Brief Summary of my Logical Doctrines," in Frege, *Posthumous Writings.*

[40] "A judgment will always be expressed by means of the symbol |- which stands at the left of the symbol or complex of symbols which gives the content of the judgment. If the small vertical stroke at the end of the horizontal one is *omitted*, then the judgment will be transformed into a *mere complex of ideas*, of which the writer does not state whether he recognizes its truth or not." (*Begriffsschrift*, p. 52)

content does in fact hold true from a mere supposition of the same content.[41] The maintenance of both claims (about the separation of assertoric force from the content and about the significance of the judgment stroke) invite difficult questions about the proper description of the activity of judgment and of force itself from a Fregean perspective.[42] The problem is, specifically, that of how the logical structure that characterizes a language and determines the sense of its terms communicates with the dynamic actuality of its use, and particularly with this use insofar as it characteristically involves the possibility of making assertions that are true or false. More generally specified, the underlying problem is that of the general (linguistic or non-linguistic?) context in which *force* communicates with *meaning* in general, or the broader contextual space *in which* the specific structure of communicative sense relates to that of meaningful intersubjective action and *praxis*.[43]

At other places, Frege gestures toward the inarticulate relationship between logic and force that shows up, not indeed in the sense or reference of any linguistic term by itself, but in the peculiar *failure* of the predicate "true" to contribute positively to the sense of sentences in which it figures:

> If I assert 'It is true that sea-water is salt', I assert the same thing as if I assert 'Sea-water is salt." This enables us to recognize that the assertion is not to be found in the word 'true', but in the assertoric force with which the sentence is uttered. This may lead us to think that the word 'true' has no sense at all. But in that case a sentence in which 'true' occurred as a predicate would have no sense either. All one can say is: the word 'true' has a sense that contributes nothing to the sense of the whole sentence in which it occurs as a predicate.

> But it is precisely for this reason that this word seems fitted to indicate the essence of logic. Because of the particular sense that it carried any other adjective would be less suitable for this purpose. So the word 'true' seems to make the impossible possible: it allows what corresponds to the assertoric force to assume the form of a contribution to the thought. And although this attempt miscarries, or through the very fact that it miscarries, it indicates what is characteristic of logic … 'true' only makes an abortive attempt to indicate the essence of logic, since what logic is really concerned with is not contained in the word 'true' at all but in the assertoric force with which a sentence is uttered. (p. 323)

In particular, according to the passage, it is the unique structural role that 'true' plays (in that, specifically, it adds nothing to the sense of *any* sentence in which it figures) with respect to *all* the

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[41] "Function and Concept," p. 142.

[42] On the ambiguity involved in any treatment of the judgment stroke as having logical significance (for instance the significance of a predication of facthood or of truth) see Wayne Martin, *Theories of Judgment: Psychology, Logic, Phenomenology* (Cambridge: Cambridge U. Press, 2006), chapter 3. Here, Martin convincingly argues that any attempt wholly to separate what is signified by the judgment stroke from the content judged must fail, and that this failure points to a necessary and ineliminable "expressive limit" in the logical representation of judgment.

[43] Cf. Jacques Derrida, "Signature, Event, Context" (in *Margins of Philosophy* (transl. by Alan Bass, U. of Chicago Press, 1982), p. 309: "To the semantic field of the word *communication* belongs the fact that it also designates nonsemantic movements. Here at least provisional recourse to ordinary language and to the equivocalities of natural language teaches us that one may, for example, *communicate a movement*, or that a tremor, a shock, a displacement of force can be communicated – that is, propagated, transmitted."

sentences of a language that allows it to "[seem] to" manifest the specific force of assertion that is involved in any predication whatsoever to appear *as* an element of a predicative sentence. But the attempt "miscarries"; it is not, in fact, possible for a predicate signifying this involvement to appear significantly as a predicate within a sentence. Nevertheless, in the miscarriage itself, "what is characteristic of logic" is formally and negatively "indicated".[44] The indication, though it is not of something that *can* figure within a sentence as the sense of any term, nevertheless points to the characteristic force of assertion that is "included" in all predication as such, and thus to the specific structure of predication insofar in, and as, it itself includes the possibility of truth.

Frege's formulation of this inclusion, that "predicating [truth] is included in all predicating whatsoever", thus invites comparison with Heidegger's claim with respect to the broader ontological significance of Plato's inquiry into the *logos*, that "in every *logos*, [Being] is co-said". In particular, what the predicate "true" "tries" and fails to bring to expression (or seems to bring to expression, and actually does not) is the "transcendent" dimension of linguistic *use* insofar as it structurally involves the specific possibility of truth. In the later development of the analytic tradition, this "transcendent" dimension has often been understood as explicable in terms of the unity of regular linguistic practices, intersubjective agreements, language communities or culturally specific "language games." However, as the structure of Frege's argument makes clear, no such reference to an empirical or sociological unity can in fact succeed in characterizing the basis of the structure of predication, insofar as it constitutively structures the domain of sense. For any such characterization would figure assertoric force as a particularly empirically describable structure of practice or action, and thereby break the specific link that it enjoys to the specific structure of the predicative sentence that makes it capable of enjoying (indefinable and impersonal) truth.

Although Frege's conception of truth does not resolve the problematic of logical force and combination that is already invoked by the Visitor's conception of the *dunamis koinoneon* as the specific structure of the logos, it thus radicalizes and deepens this problematic on the basis of Frege's thoroughgoing appreciation of the consequences of the impersonality and indefinability of truth. This appreciation plays a decisive role, along with the new quantificational logic itself, in producing a completely new understanding of the logical structure of the sentence with revolutionary consequences for the interlinked problems of linguistic meaning and truth. The methodological consequences of this new conception are displayed, in perspicuous form, in Frege's statement in the *Foundations of Arithmetic* of the principles guiding his investigation there into the logical basis of number:

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[44] Cf. Martin (2006), p. 96, who discusses the passage: "What Frege here calls a miscarriage is …exactly what befell him with his paraphrase of the judgment stroke in the *Begriffsschrift*. He tried to import the mark of assertion as a contribution to the content judged as true. The miscarriage exhibits the limits of Frege's representation of judgment: the expressive limit of the judgment stroke and the impossibility of fully excluding the truth-claim from the content available for judgment." Martin goes on to argue that this miscarriage or failure points to necessary features of logic in relation to truth that bear close comparison with what Heidegger formulates as the implications of the "ambiguity of the copula", and in particular that the work of both philosophers on the relationship of logic to judgment points to the necessity of a "pre-logical understanding of truth and judgment" (p. 102) in our understanding and use of natural language. See also Michael Dummett, *Frege and Other Philosophers* (Oxford: Clarendon Press, 1991), esp. pp. 247-48.

There must be a sharp separation of the psychological from the logical, the subjective from the objective;

The meaning of a word must be asked for in the context of a proposition, not in isolation;

The distinction between concept and object must be kept in mind.[45]

Whereas the second principle directly challenges any synthetic conception of the unity of a sentence, on which it is composed fundamentally of individually representative words, the third points to the very different conception of this unity that Frege positively proposes. The first consequence of this new understanding is already drawn in the *Begriffsschrift*; it is that judgments as represented in a logically perspicuous language do not have the form of subject and predicate.[46] In particular, since Frege considers what is relevant to the logical content of a judgment to be limited to the structure of its possible consequences, and that judgments expressed variously in subject/predicate form may nevertheless have the same content in this sense, it is essential to distinguish the superficial subject/predicate structure of a sentence (and, more broadly, all aspects of its superficial grammatical form) from its real underlying logical structure.[47]

The new devices of quantification that Frege had already developed in his close consideration of the logical structure of mathematical judgment permitted this distinction to be drawn and allowed relations of multiple types of generality to be displayed as complex predicates. It is impossible on this conception of logical form to portray the structure of a predicative sentence simply by means of the grammatical distinction between subject and predicate. Rather, within the sentence it is necessary to distinguish concept-words from object-words, and to recognize the fundamental difference in their logical structure. Whereas an object-word has an object as its reference, what a concept-word signifies is inherently "unsaturated," or requiring completion by means of an object; more generally, the references of concept-terms are *functions* from objects (or sequences of objects) to truth-values. The unity of the sentence as such is thus fundamentally not the outcome of the combination of separately representative elements on the same level, but rather results from the way it captures the logical structure of truth.

This leads to a fundamental distinction in the modes of signification of concept- and object-words, which issues in the notorious restriction upon which Frege rigorously insists; namely that a concept-word must never be used in the logical place of an object-word.[48] It is thus impossible to *refer* to concepts as we logically would to things. In particular, we cannot predicate *of* concepts; as much as we would like to say "the concept 'horse' is a concept easily attained," to do so would be to violate a fundamental aspect of logical structure and to utter what could only be nonsense.[49] For Frege, this is no arbitrary restriction, but one that cuts to the very underlying heart of sense in its privileged link to truth. Indeed, insofar as this shows that it is not possible to treat concepts as (any kind of) objects without changing the sense of

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[45] *Foundations of Arithmetic,* p. 90.

[46] *Begriffsschrift*, p. 53.

[47] *Begriffsschrift*, p. 54

[48] "On Concept and Object", pp. 181-193.

[49] "On Concept and Object", pp. 184-85.

the terms referring to them, it also shows that it is impossible to consider the features of the concept, and thus of what they make it possible to present (to say), as features that the concept has. It is thus impossible to treat the concept *as* an item that achieves the representative or designative power that it has, in the context of a sentence, by means of its designating a particular object self-standing object capable of its own separate existence.

Accordingly, on this conception, the reality or event of predication can never be understood as establishing a simply *ontic* relation between entities; in a Heideggerian paraphrase, the being of beings, such as it is expressed or indicated in a predicative sentence, is never itself a being. Or equivalently: *between* what metaphysics since Aristotle thinks of as substances and what are thought as their properties, there lies the genuinely *ontological* structure of unsaturated concepts and saturated objects, which links sentences in a language to the conditions of their truth. Like the ontological difference itself, the distinction between concept and object thus points, in a fashion that resists direct summarization and also leads to its own original paradoxes of meaning, to the generation of sense at the ontological point of the insistence of a fundamental difference that cannot be positively schematized in a figure or captured as a positive substrate.[50]

It is from this perspective, as well, that it is possible to grasp the radical significance of the second of the principles that Frege articulates at the beginning of the *Foundations*, the notorious "context principle" that holds that the meaning of propositions or sentences holds a methodological priority over that of individual words. In its methodological application there, and in particular in its application to the definition of the concept of number, it is intimately linked, as Frege immediately says, to the observance of the first methodological principle, that of the distinction of logic from psychology. For in particular, "If the second principle is not observed, one is almost forced to take as the meaning of words mental images or acts of an individual mind, and thereby to offend against the first as well." (p. 90). The connection is this: if one seeks to find the meaning of a sentence involving a number-term, for instance "There are 29 students in the class," by first asking after the meanings of the individual words, one has to find something to separately identify as the meaning of "29". But the images one might form of this number, or the means by which one might represent it intuitively within one's own psyche, are various and idiosyncratic. Moreover, in the case of large numbers, it is highly doubtful whether it is even (so much as) psychologically *possible* to represent them with an intuitive image. Thus, if the meaning of the number-symbol is supplied wholly from the psychological realm, it will be impossible to connect the meaning of the sentence as a whole to its objective possibility of truth or falsehood. If, on the other hand, the meaning is supplied in a way that does connect it to this possibility, the context principle will be respected and even the meaning of the individual terms will be determined logically rather than psychologically. In fact, as Frege argues further on in the *Foundations*, it will be possible to capture the actual meaning of sentences involving number-terms *only* if we give number-terms itself such a "logical" definition in accordance with a systematic consideration of the conditions for their truth or falsity.

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[50] And thus, *a fortiori* (as we shall see), a difference that cannot be captured as a "type" of "form" capable of mixing with others, as in the *Sophist*.

The decisive significance of the context principle for the subsequent development of the analytic tradition has often been pointed out.[51] In particular, Frege's application of it, in the *Foundations*, stands at the beginning of a development of systematic thinking about the logical, grammatical, or inferential structure of language that underwrites the initial projects of logical analysis that would ultimately give the tradition its name, as well as the broader projects of ordinary language philosophy, clarification of grammatical structure, and radical interpretation that arose from these intitial projects around the middle of the twentieth century.[52] In Quine's inquiry into the consequences of radical translation and Davidson's development of it, along with the Tarskian framework for truth-definitions, into the project of a systematic semantics of natural language, the contextualism suggested by Frege's context principle is developed into a *holistic* conception of the structure of a language, according to which the significance of individual terms and expressions can be understood only within the structure of a systematic *translation manual* or *theory of meaning* for the language as a whole

If the context principle thus underlies, in a significant way, the structuralist picture of *language* on which many of the most significant linguistic projects of the analytic tradition, in turn, rest, it is also intimately connected, as Frege's application of it in the *Foundations* shows, to the problem of the nature of number and the basis of arithmetic judgments. For Frege's appeal to the principle in the *Foundations* suffices, as we shall see in more detail, to refute any conception which bases number in the provision of an intuitive image or schematization to the individual *psyche*; indeed, it suffices to refute the conception, equally Aristotelian and Kantian, according to which the origin of number (and hence of the possibility of counting) is ultimately to be found in the givenness of its sensible schema, or in the intuitive figuration of the temporal form of inner sense. The basis of this challenge is Frege's commitment to the *impersonality* of truth, which demands that logic and logically articulated content cannot be referred to the realm of the private, individual, psychological, or intuitive. This impersonality itself demands the recognition, as Frege says, of a distinction between objectivity and actuality, and of a specific mode of unity of the (potentially true or false) proposition that is in no sense simply an act of combination, or a synthesis of elements. Rather, the distinction between the objective/impersonal and the actual in the sense of causal activity is ensured as soon as the relation between truth and the structure of a proposition is itself acknowledged.[53]

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[51] For instance, in *Origins of Analytical Philosophy* (Cambridge, MA: Harvard U. Press, 1993), p. 5, Michael Dummett defends the claims that 'analytical' philosophy is born with the 'linguistic turn' and that this turn is taken specifically when Frege invokes the context principle in the Foundations. In "Two Dogmas of Empiricism" (*Philosophical Review*, Vol. 60, No. 1 (Jan., 1951), pp. 20-43), Quine portrays the recognition of the sentence or statement as the "unit of significance" in the early stages of the analytic tradition as a decisive step forward on the way to his own recognition of entire theories as the basic units of empirical significance.

[52] Cf. "Frege on the Context Principle and Psychologism" in my *Philosophy and the Vision of Language* (New York: Routledge, 2008).
[53] In a forthcoming work (*Thinking and Being*, forthcoming, Harvard U. Press), Irad Kimhi argues, drawing chiefly on considerations about negation and force, that Frege's first principle (of the separation of logic from psychology) actually "undermines" (Chapter 2, page 26) the other two principles in that it commits Frege to a "psycho-logical dualism" of content and force, thereby making it obscure how actual acts of predication can be thought to be constrained by logical principles or norms and actually effacing the "radical" distinction between naming and predicating that Plato had been the first to point out. Kimhi contrasts with this a "psycho-logical monism"

This relation is, again, at the conceptual core of the particular conception of sense, as distinct from reference, that Frege articulated a few years after the *Foundations.* According to this conception, the sense of a nominal term is a mode of presentation of or of givenness of a referent, and the sense of a sentence as a whole is a thought with a truth-value. The motivation to which Frege appeals is the distinction is the need to account for the possibility that a judgment of identity has the value of positive knowledge.[54] As Frege recognizes, it is not sufficient, in accounting for this possibility, simply to assume (as on his own earlier account in the *Begriffsschrift*) that the informativeness of an identity judgment consists in its recognition that two *signs* designate the same object. For if that were the case, the identity judgment "a=b" would concern *only* the signs rather than the object itself, and its possible value for knowledge would remain inexplicable. The use of signs is, moreover, "arbitrary" in that anyone can use "the arbitrarily producible event or object as a sign for something." (p. 152) In order to explain this value, it is thus necessary to recognize that a positive identity judgment concerns not simply the signs, but rather the different *modes of presentation* of the object itself. Frege thus argues that it is necessary to recognize, beyond or behind the contingencies of the actual uses of signs, the real differences in the ways in which objects are presented and thereby made available as the objects of possible judgments, including judgments of identity, capable of truth. The "realm "of senses is thereby separated from the domain of signs and their use, on one hand, and from the "realm" of references, on the other. The basis for the separation is the need to recognize a constitutive and essential link between the possible *truth* of judgments and the ways their objects are presented or disclosed in them.

The structure of these ways or modes of givenness is spelled out in the concept of objective sense, which accordingly cannot be identified with any ontic domain of entities but rather exhibits the constitutive link between truth and their presentation. This is the motivation, as well, for the Fregean

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according to which the "locus" of assertoric activity is the structure of predication (or "the predicate") itself; the conception hearkens back, as Kimhi notes in a detailed discussion of the "Sophist", to Plato's conception on which predication is itself an "accomplishment" and force is not separated from the locus of predication or from the whole sentence more broadly. Kimhi goes on to argue that the predicative frame of a sentence should be seen as the "locus" of activity of a "two-way" or asymmetric ability of the soul that is differently invoked or realized in the assertion or denial of a particular sentence (type).
Although it is clear that Kimhi's account provides a reasonable reconstruction of what were probably Plato's views, and perhaps Aristotle's as well, of the relationship between predication and activity, it is far from clear that it solves (rather than simply ignores) the problem to which Frege's distinction between logic and psychology responds. In particular, whereas Kimhi's solution restores a close connection between logical principles and the activity of predication, it depends on the existence of an infinite multiplicity of "capacities" held within the soul and realized in activities of asserting and negating, one for each possible predicative sentence-type (in a particular language). Without denying that there is a real problem about the relation between force and content in Frege, it should be noted that it is obscure, on the conception Kimhi suggests, how such abilities as types are attained or maintained within the individual soul, unless it be by grasping precisely what Frege would describe as language-independent "contents" or sentential senses (which are, again, defined primarily by their inferential relations and are independent of any particular force). More broadly, it is clear that Kimhi's account, insofar as it depends on invoking the activity of (or in) the soul of someone with the requisite capacity in order to make possible a meaningful act of assertion or denial, is incompatible with Frege's conception of sense as *impersonal* and hence capable of "confronting everyone in the same way" (regardless of what particular linguistic abilities they may possess).
[54] *Erkenntniswert*; standard translations render this as "cognitive value," but this is somewhat misleading, given Frege's thoroughgoing separation of sense from anything "cognitive" in the sense of "psychological."

conception, which some commentators have found problematic, according to which the reference of a true or false sentence is one of the two unique objects, "the true" or "the false," but which we must rather understand, again in the Heideggerian jargon, as pointing to the thought that the employment of a true sentence, in addition to presenting its referent or referents, *also* in a certain way structurally presents or co-discloses the specific phenomenon of truth itself. That this structure is manifest in the structural form of the sentence, again, indicates the privileged logical connection between that structural form and "being in the sense of truth." The structure thereby elicited, and articulated (without being defined) through the articulation of the laws of logic themselves, is the one that Frege identifies in the *Grundgesetze* passage as the objective and non-actual domain of the contents of judgments, itself ultimately demanded by the impersonality of thought.

IV

As subsequent developments of Frege's thought have often noted, Frege uses two distinct kinds of metaphors to characterize the structure of the realm of sense, both in fact suggested by the underlying conception of the impersonality of thought. The first is the notorious metaphor that Frege employs in the late article "Thought," namely that of a "third realm," beyond the realm of the physical (or spatiotemporal) and that of the subjective or psychological; but second, there is the implicit or explicit reference to the intersubjectivity or publicity of language as that which speakers of a language must be considered to share and which facilitates common access to the shared meanings of terms and objective senses of sentences. In the subsequent development of the analytic tradition, the second conception of the positive basis of the "objectivity" of sense has been much more widely developed than the first, yielding social, pragmatic, and structuralist theories of linguistic meaning as explicable in terms of public activities, practices, or dispositions to behave. It is significant, however, that Frege himself never accounts for the impersonality of sense in terms of the empirical, contingent and anthropological unity of a shared natural language; quite to the contrary, in fact, on Frege's conception the same sense can be expressed by sentences in *any number* of natural languages. Thus, the impersonality of thought and the conception of sense to which it leads is never specified positively as grounded in any positive figure of community, whether social, linguistic or culturalist in specification; nor is it intelligible, as Frege's argument in "On Sense and Reference" makes clear, as a matter of the contingent use of signs.[55] Quite to the contrary, the conception underlying Frege's idea of sense as well as its real significance in the context of an analytic project that traces and decomposes what it envisions as the structure of language is not any positive figure of intersubjectivity or community, but rather the purely *privative* specification of the *impersonality* of thought, the conception that yields the claim that the thought "confronts everyone in the same way." As I shall try to show, this logical conception is so little grounded in any consideration of the sociological or anthropological unity of languages, practices, or cultures that it,

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[55] "The sense of a proper name is grasped by everybody who is sufficiently familiar with the language or totality of designations to which it belongs, but this serves to illuminate only a single aspect of the *Bedeutung*, supposing it to have one. Comprehensive knowledge of the *Bedeutung* would require us to be able to say immediately whether any given sense attaches to it. To such knowledge we never attain … The same sense has different expressions in different languages or even in the same language." (p. 153).

rather, provides the basis for a systematic logical deconstruction of any conception that understands them as the ultimate basis of meaning and sense. The fixed point that makes this deconstruction possible, and necessary, is the reality of impersonal truth, which is radically subtracted both from any assumption of empirical actuality and from any personal determination.[56]

As I shall argue, it thus necessary to recognize behind the analytic tradition's sustained development of the motif of the public and intersubjective another conception of sense, one that ultimately figures its non-actual place as that of a logico-structural virtuality, real but not effective, indicated without description or definition in the structure of ordinary life and practices of assertion and judgment but nevertheless irreducible to any description of them. On this conception, rather, senses are impersonal, and they are modes of presentation, both of objects and of truth; it follows that presentation is here thought, also, as impersonal, as the a-subjective place of what confronts everyone equally. This impersonality is not, however, positively determined as the unity of a common set of practices, conventions, or agreements; here there is, in other words, no *koinoneon*, not even that of the "public" and the intersubjectively "shared". Rather, the place of presence is thought as the virtual limit of the specific structure of truth that is articulated in the laws of logic, and hence as a peculiar and articulate unity. This unity is not reducible to the synthetic structure of the sentence or even to the specifiable structure of a particular language; nevertheless it is indicated ubiquitously in the everyday life of our discursive comportment insofar as it touches on the indefinable-real of truth.

Only a superficial reading could identify this conception with a "Platonism" in the sense in which that term is usually used today, that in which its reference is to a "theory of the forms" as substantial, timelessly enduring or sempiternal entities to which ordinary sensory objects are connected through the obscure relationship of "participation." The distinction between concepts and objects, for example, by itself suffices to clarify that the mode of relationship that makes for the unity of a predicative sentence on Frege's conception is, in no sense, a relationship between two self-standing entities of any kind, but rather the peculiar kind of unification that occurs in the figuring of a specific object as a definite value of a variable function. [57] In the further development of this conception of unity made by Tarski, the formal theory of truth turns on the interpretation of this relation as "satisfaction," a relation whose dynamics is modeled, not by any memetic or representational account of the relation of universals to individuals, but rather in terms of the mathematical set theory developed by Cantor and Frege among others at the inauguration of the analytic tradition. In this connection, it is necessary to consider both the specific relationship of set theory to mathematics, including the mathematics of the infinite, and the inherent paradoxes definitive of it; in fact, rather than simply replicate the Platonic problematic of the "one over many" that figures in the official conception of the *methexis*, they actually overturn this Platonic problematic by figuring the relationship of the one and the many on a radically new and original basis.

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[56]See K. Green, "Was Wittgenstein Frege's heir?" (*Philosophical Quarterly* 49:196, pp. 289-308) for a version of this point.

[57] Cf. Michael Dummett, "Quantification" in Frege: Philosophy of Language (second edition, London: Duckworth, 1981): "The very sharpness of Frege's distinction between objects and concepts makes it impossible to compare his doctrines at all fruitfully with those actually advanced by Plato." (p. 541)).

As I have argued elsewhere, specifically, In conceiving of the concept of a set as that of a whole in which a plurality, indifferently finite or infinite, of distinct entities "can be thought as one," Georg Cantor transfigured the ancient conception of the problem of the one and the many on the basis of what amounts to a new and transformative formal theory of the relation between thinking and being itself. [58] Crucial to this transformation is the possibility of formally conceiving of the infinite as the real domain of an ordered succession of positive wholes, by contrast with the conception dominant since Aristotle on which the infinite is thinkable only as the open potentiality of the unlimited. If the Fregean conception of sense thus points to an original structural domain of formal unity at the basis of the possibility of presentation, it is thus no mere accident that Frege's own project of logicist reduction of mathematics founders at the point of the dramatic paradox demonstrated by Russell in 1901 at the very formal center of this theory in its naïve conceptualization. In the context of Frege's attempt to reduce arithmetic truths to purely logical ones in the *Grundgesetze*, this conception has the consequence that is formulated in his notorious basic law V, which requires that every coherent concept pick out a determinate set or range of objects as its extension. It is this consequence which leads, when applied to the consideration of the possibility of making reference to the totality of beings as a whole, to the contradiction witnessed in Russsell's paradox, that of a totality that both is and is not self-membered.

The possibility, and problem, of this reference to totality is equally characteristic of the structure of linguistic predication and that of the basis of mathematical reasoning and arithmetic itself. In particular, while for the contemporary thought that figures the unity of thinking and being as the possible application of predicative language to the features and relations of beings, such a reference to the totality of beings is both constitutively necessary and necessary paradoxical, it is equally so with respect to conceptual foundations of the arithmetic reasoning about the one, the many, and the unlimited that ensure the unlimited possibility of counting beings itself. If Cantor's theory, through its radical new thinking of the possibility of intelligible unity, thus puts the ancient problem of the limited and unlimited on a new and transformed formal footing on the basis of the thinkability of the infinite as such that it witnesses, the problem on which Frege's logicist project founders in his attempt to the unlimited assumption of comprehension also witnesses a profound original structure of being as such, insofar as it is thinkable as a unity at all. This aporeatic structure is, as I shall argue in the following chapters, by no means avoidable or dispensable in the context of an ontologically oriented questioning of the meaning and truth of Being itself. Rather, it points, at the very historical limit of the "metaphysical" or ontotheological reference to the ontic totality, to the inherent logical paradoxicality in which the foundations of this reference elicit their own actual incoherence.

Thus, as I shall try to show, the aporeas of totality in set theory, far from suggesting a defect or a flaw for the set-theoretical *thought of* the structure of being, can and must be recovered as constituting a *positive* phenomenon and a decisive formal indication of the very underlying structure of the real in which metaphysics (ontotheology) constitutes and decomposes itself. What Russell's paradox and the closely related set-theoretical and semantic paradoxes of totality and reflexivity ultimately witness, in other words, is not a flaw in the set-theoretical thought of being, but a flaw in the very structure *of* being, as it necessarily appears in determining and determined relation to the "ontic" totality of beings.

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[58] Cf. *The Politics of Logic*, chapter 1.

It is in such a paradoxical figure of the ultimate logical incoherence of the presentation of the ontic totality of presented beings that it is uniquely possible, as I shall argue, to trace the event of what Heidegger suggests is the problematic contemporary (in)-closure of the "metaphysical" epoch of presence.[59]

It is from the position of the altered problematic of predication determined by Frege's logic that we can understand, as well, the specific problems that contemporary "analytic" commentators on the *Sophist* have seen in the Visitor's apparent "solution" to the problem of non-being, or to the question of how it is possible to say what is false. On the kind of interpretation that is by far the most widely adopted in recent interpretation, to utter a falsehood, e.g. "Theaetetus flies," is to say of Theaetetus something that is different from everything that *is* "of him." The Visitor's basic claim with respect to the structure of a falsehood such as "Theatetus flies" is thus that it is false in that the action (or action-type) signified by the verb ("flies" or "is flying") is different from, or perhaps incompatible with, everything that actually holds of the subject (Theaetetus); or perhaps in that the subject (Theaetetus) is different from everything "of which" the action signified ("flying") actually does hold.[60] Both the false "Theaetetus flies" and the true "Theaetetus sits" are thus the results of a specific combination of two distinct lexical elements, one of which is the signifier of a person and the other the signifier of a type. In the case of the falsehood, what ultimately makes possible the combination of something that "is not" with respect to Theaetetus with Theaetetus himself is, furthermore, the logical capacity of *difference* to mix with *being* to produce what is *not being* (or what is *different from being*).

There are, accordingly, two problems that must be solved if the account is to succeed: first, it must be explained how the relation of mixing between the great types of Being and difference itself produces the structure of predication evident in the false sentence; second, it must be explained how the combination of lexical elements that separately signify a person and an action-type suffices to explain the capacity of a sentence (whether true or false) to *say* something (possibly true or false) at all.

As Davidson emphasizes in *Truth and Predication*, the Visitor's solution is incapable of answering the second question, and the root of this incapability lies in the way that it answers the first. For because it treats the structure of the sentence as a combination of separately representational elements, the Visitor's theory inevitably produces a vicious infinite regress closely related to the "Third Man" problem that Plato and Aristotle had already themselves discussed:

> The sentence 'Theaetetus sits' has a word that refers to, or names, Theaetetus, and a word whose function is somehow explained by mentioning the property (or form or universal) of Sitting. But the sentence says that Theaetetus *has* this property. If the semantics of the sentence were exhausted by referring to the two entities Theaetetus and the property of Sitting, it would just be a string of names; we would ask where the verb was. The verb, we understand,

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[59] For the terminology and structure of "inclosure" see Graham Priest, *Beyond the Limits of Thought*, (second edition, Oxford: Clarendon, 2002). Cf. also my *The Politics of Logic: Badiou, Wittgenstein and the Consequences of Formalism* (New York: Routledge, 2012), esp. chapter 1.

[60] For a helpful discussion of the position and citations to those who hold it in different varieties, see Paolo Crivelli, *Plato's Account of Falsehood: A Study of the* Sophist (Cambridge U. Press, 2012), especially chapter 5.

expresses the relation of instantiation…But this cannot be the end of the matter, since we now have three entities, a person, a property, and a relation, but no verb. When we supply the appropriate verb, we will be forced to the next step, and so on. (pp. 85-86)

In order to solve this problem, it is not sufficient to refer simply to the capacity of forms to mix with and separate from one another; although such a reference might be seen as preceding a more modern or contemporary conception of the logical structure of concepts, what remains obscure is how such a topology of conceptual relations can be related to the possibility of predication itself without producing the regress. The problem, which as Davidson says is just "one of the ways in which the problem of predication may be posed" is, moreover, not one that is solved by Aristotle's invocation of the copula:

> Aristotle seems at one point to suggest that the copula, written separately, or combined with the verb, tells us that the named entity, for instance Theaetetus, *is* an entity with a certain property. It is easy enough to symphathize with Aristotle's insistence that the copula itself brings in no new entity. We sympathize because if it did bring in a new entity, we would once more face the regress. But sympathy is one thing; clear understanding is another. What is impossible to understand is why, if the function of a verb is to introduce a universal, the copula, expressed or not, does not in turn introduce another universal, this time a relation that must be expressed in every sentence. Aristotle has not solved the problem of predication. (pp. 93-94).

Despite his awareness of the issue, Aristotle's theory of the copulative "tie" thus does not solve the problem of the regress that always threatens in the context of the assumption that each significant lexical element (and in particular each verb) represents a separately existing entity. Aristotle's thought, in particular, that the copula is present (whether expressed or unexpressed) in *every* sentence, threatens in fact, in the context of this assumption, to intensify the problem and in a certain way absolutize it, for the universality of the copula then apparently requires that there be a particular relation that is referred to in *every* sentence insofar as it asserts anything at all, that of predication or of being "in a predicative sense." But being is not a being; and the attempt to determine the copula as having any ontic referent, whether to a substantial entity, an obscure relation of beings, or the assertoric act or performance of a mind, psyche, or subject, inevitably (as Frege says) "miscarries," producing the infinite regress to which Davidson points.[61]

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[61] Paolo Crivelli (*Plato's Account of Falsehood: A Study of the* Sophist, Cambridge U. Press, 2012) argues convincingly that on Plato's view as expressed by the Visitor, there are no unified or composite entities that are involved in the assertion of sentences (or other acts involving them); rather, like a violin player combining bow and violin in action, in the utterance of a sentence "a speaker puts together two entities (namely an action and an object) by performing a single act in which each of the two entities involved is employed in a distinctive way" (p. 231). The suggestion is reasonable as an interpretation of the Visitor's views, but it does not suffice to solve the problem of regress that Davidson points out. In particular, holding that the utterance of a sentence is itself an event of combination of significant terms of different types does not clarify how these terms gain their own independent significance, and thus how an "action and an object" (rather than simply the terms for them) can be said to be combined by the utterance of the sentence itself. The difficulty, as noted, is sharpened in the case of a false sentence, where either the signified object, the signified action (-instance), or the particular combination asserted or represented to hold between them by the sentence does not exist.

It remains that something is shown in this miscarriage; and that in particular the place of truth is thus, as I have argued, demonstrated as the obscure structural *limit* of a structure of predication that is indicated, not as any form of ontic relation, but nevertheless by way of the specific structural resources requisite to a systematic theory of linguistic meaning. In concluding his discussion of Plato's conception of predication in the Sophist in relation to the modern one developed in the wake of Frege's new logic, Davidson gestures toward the way in which his own inquiry into the systematic structure of a theory of meaning for a natural language transforms and deepens the problem at the basis of both conceptions:

> The notion of 'places' in a predicate is the key to the modern concept of a predicate. Any expression obtained from a sentence by deleting one or more singular terms from the sentence counts as a predicate; the spaces left in a predicate when singular terms are removed are the places…The resources of quantificational languages and logic mirror the resources of natural languages well enough to justify treating the problem of predication as it applies in such cases. The problem of this form includes the problem as it came to life in the work of Plato and Aristotle. In its modern form, the problem is both clearer and more formidable – clearer because exactly what counts as a predicate is better defined, more formidable because of the infinity of structures that general quantification and the truth-functional connectives introduce. (pp. 96-97)

If, in particular, the logical conception of the Visitor shares with that of Aristotle the central thought of the *dunamis koinonian* of the psyche, which obscurely combines the problematic of force with that problematic of an ontic or representational combination in the unique nexus of co-presence that is the soul, the Fregean conception decomposes this configuration term for term. It does so, in particular, by insisting upon the problematic distinction of force from the predicate and locating the possibility of the formation of the predicative sentence outside the *nexus* of the finite psyche and in a completely different, non-psychological, and (as Davidson points out) constitutively infinite structure. This is not to say that Frege solves, or even provides the basic ingredients needed to solve, the underlying problem of the relationship of force and sense. Rather, his account of the impersonality of sense provides at most, as I have suggested, the positive terms in which this problem must be grasped and intensified today. As Davidson's own development of the implications of Frege's logic and Tarski's semantic conception in the context of radical interpretation witnesses, these are the terms in which the problematic of truth can be formally *indicated as a problematic in* the actual structure of judgments, in the structure of language as we use it or apply it in the course of a life, without being in any way reducible to or definable in terms of this use or to this life considered as an empirical fact.

V

In the 1925-26 course *Logic: The Question of Truth*, given just one year after the *Sophist* course, after describing the structure of the uncovering [*Entdeckens*] of "something as something" as the "basic hermeneutical structure of Dasein" (p. 160) which ultimately underlies the structure of the *logos* and the possibility of its being about something, Heidegger considers the specific possibility of the false *logos*

through a close analysis of Aristotle's *Metaphysics*, book 9, chapter 10.[62] In the chapter, Aristotle discusses the meaning of truth and falsity with respect to both composite and incomposite things. Whereas, with respect to composite things, being amounts to synthetic unity and the truth of statements about them thus depends on whether or not the composite is unified, in the case of non-composite or simple entities or statements about them (Aristotle gives the examples: "the wood is white" and "the diagonal is incommensurable"), neither being nor truth can be understood in terms of *synthesis* and *diaeresis*. In fact, according to Aristotle, in these cases there is *no* possibility of falsehood; all that is possible to is to "simply touch and address" the entity. The possibility of falsehood, error, or deception is thus dependent, according to Aristotle as Heidegger reads him, on the possibility of a synthesis of these ultimate entities into a unity of co-presence, whereas this possibility of synthesis is itself, in turn dependent upon the standing existence of the ultimate non-composite elements that are simply and always present. (pp. 183-84)

The twofold analysis confirms, according to Heidegger, that Aristotle understands being as "presenting or presence" [*Präsenz, Anwesenheit*] and understands the "corresponding comportment [*Verhalten*] to beings as beings" as one with the basically "presentative" [*Präsentisch*] character of being the "rendering present" [*Präsentierens*] or "making present" [*Gegenwärtigens*] of something (pp. 191-92). Whether it is a case of the synthesis of composite entities or the simple encounter with things that always are, this "making-present" is furthermore, according to Heidegger, a *temporal* phenomenon. In particular, it is "letting a present being be encountered in a now-moment [*Anwesendes in eine Gegenwart begegnen lassen*]" (p. 192) and this "presence-now" is a characteristic of time. [*Gegenwart ist ein Charakter der Zeit*] (p. 193).

This provides the basis for Heidegger to turn, in part II of the course, to the deeper analysis of the "abyssal problematic" (p. 193) which now opens up with respect to being and time. In particular, if the analsyis of Aristotle has elicited that "truth, being, and consequently falsehood, synthesis, and assertion are in some kind of, up until now, wholly obscure sense, connected [*im Zusammenhang*] with the phenomenon of time" (p. 198) this recognition points toward a phenomenological investigation of the characteristics of truth, falsehood, synthesis and statement whereby they are grounded in a more basic *temporal* determination. This "phenomenological chronology," Heidegger clarifies, will not characterize the phenomena simply in terms of how they are temporal [*Zeitlich*] in that they "run their course in time"; rather, it will aim to elucidate their more fundamental temporal determinedness of the phenomena by means of a basic study of temporality itself. (p. 199) Kant, Heidegger says, is the only philosopher up to the present to have even suspected the possibility of such an investigation (Heidegger here quotes the notorious passage in Kant's discussion of the schematism that calls it a "hidden art in the depths of the human soul"); but even Kant was kept from "understanding... the idea" of a phenomenological chronology by the rigidity of his distinction between the sensibility and the understanding and by his having understood the character of time as "primarily and solely related to nature." (p. 203). In particular, if Kant has essentially followed Aristotle in determining time as the countable time of natural processes and as "something just there on hand," [*vorfindlich*] the task that

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[62] *Logik: Die Frage Nach der Wahrheit* (GA 21). Frankfurt: Klostermann (2. Auflage, 1995). Translated as *Logic: The Question of Truth* (transl. by Thomas Sheehan, Indianapolis: Indiana University Press, 2010).

falls to phenomenological chronology is that of asking whether there are other possible determinations of the overall character of time, and in particular whether the hermeneutically basic "as-structure" itself has a basic temporal significance that is lost in the Aristotelian conception of truth as the unity of synthesis or co-presence in the now (p. 205).

In this way, the basic temporal determination of Aristotle's conception of the truth of the logos as grounded in the gathering of eternally existing elements into the unity of a co-presence is elicited and subjected to a more fundamental inquiry into its temporal ground. The conception is obviously very closely related to the Visitor's conception of the logical basis of the unity of the logos, as discussed by Heidegger in the Sophist lectures, and if, as Heidegger says here, Aristotle has with the conception in a certain way, identified thinking and Being, then the critical analysis that subjects the logical conception of presence to the deeper question of temporality applies just as well to the Visitor's conception of logical form. In particular, if *synthesis* is, as Heidegger says, for both Plato and Aristotle a "chameleon-like concept [*schillernder Begriff*], sometimes logical, sometimes ontological – or more precisely, usually both at the same time…" (p. 141), then the critical question of the temporality of synthesis requires that the basis of the configuration according to which the unity of the sentence is thought, by Plato and Aristotle alike, on the one hand as the logical unity of subject and predicate and on the other hand as the ontological unity of basic elements *itself* be further interrogated in terms of the conception of temporality that makes *it* possible. This conception is none other than the conception of presence as grounded in the unity of a "now," or in the simultaneous co-presence that allows the articulate structure of the *eide* to appear together in the unified nexus of the sentence and in the unified cognitive act of the thinking soul.

At the beginning of the summer 1925 course, *History of the Concept of Time*, Heidegger further specifies the task of a phenomenological chronology as that of a "history of the discovery of time" and a "history of its conceptual interpretation" that amounts to a "history of the question of the being of entities." This investigation will take as its guideline the particular understanding of time that has made it possible to determine the various domains of reality according to their temporal characteristics, for instance as "temporal, extratemporal" or "supratemporal reality."[63] (p. 6)

The phenomenological chronology thus investigates in particular the temporal conditions for the separation of domains of entities, most significantly the separation of the domains of "nature" and "history," and provides a phenomenological disclosure of the "original and undivided context of subject matter" that "remains hidden" behind the division (p. 2) by investigating the specifically temporal basis of the concepts of positive science and their origin in pretheoretical experience.

> …both historical reality and natural reality are continuities that run their course *in time* and are traditionally understood as such. In natural science, especially in its basic science of physics, the *measurement of time* plays a fundamental role in defining its objects. The investigation of historical reality is completely incomprehensible without a *chronology*, an ordination of time. Viewed simply from the outside, history and nature are temporal. To the totality of temporal

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[63] *Prolegomena zur Geschichte des Zeitbegriffs*. Frankfurt: Klostermann, 1979. Transl. by Theodore Kisiel as *History of the Concept of Time: Prolegomena* (Indianapolis: Indiana U. Press, 1992) (page #s as in translation).

reality we tend to juxtapose the *extratemporal* constituents which, for example, are the topic of research in mathematics. In addition to these extratemporal constitutents we are familiar with *supratemporal* constituents in metaphysics or theology, understood as eternity. (p. 5)

The investigation amounts, Heidegger says, to "what I call a *productive logic*"; this is, in particular, "an anticipatory disclosure and conceptual penetration of potential domains of objects for the sciences". (p. 2).

> Unlike traditional philosophy of science, which proceeds after the fact of an accidental, historically given science in order to investigate its structure, such a logic leaps ahead into the primary field of subject matter of a potential science and first makes available the basic structure of the possible object of the science by disclosing the constitution of the being of that field. This is the procedure of the *original logic* put forward by Plato and Aristotle, of course only within very narrow limits. (p.2)

The particular need for such an investigation into the givenness of the domains of objects and objectivities studied in the various fields of science is shown, Heidegger says, by the "crisis of the sciences" much discussed at the time. Specifically, the sciences have thus lost the "original understanding of their subject matter" that is needed to give them a positive ontological foundation, throwing them back upon the tendency, and the need, to secure their basic concepts in a more original way and thus "forge their way back to the field of subject matter which is thematizable in their research." (p. 3) But although the need for this renewed fundamental reflection is thus sharpened and made evident by the situation of crisis, it points to the appropriate way to further develop the sciences positively, for "genuine progress in the sciences occurs only in this field of reflection [i.e. in the attempt to secure …concepts in a more original understanding of its subject matter]." [64] The phenomenon of crisis thus points to the need, and the possibility, of a more original logical research grounded in the consideration of the specific structure of *temporality*, and Heidegger next points to a series of examples of contemporary sciences whose individual "crises" manifest this need.

The first and most "characteristic" example that Heidegger gives is in fact the crisis in the *foundations of mathematics* that yields the dispute between Hilbert's formalism and the intuitionism of Brouwer and Weyl. The dispute, which developed over a period of several decades but came to a head in the late 1920s, concerns centrally the question whether the foundations of the mathematical sciences can be understood as consisting in purely formal propositions within an axiomatic system or whether "what is primarily given" is, rather, "the specific structure of the objects themselves" (including the continuum in geometry, which, as Heidegger notes, provides the basis for the integral and differential calculus) (p.

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[64] Cf. *S&Z*, p. 9: "The real 'movement' of the sciences takes place when their basic concepts undergo a more or less radical revision which is transparent to itself. The level which a science has reached is determined by how far it is *capable* of a crisis in its basic concepts." There follows a compressed version of the *HCT* discussion of the present crises in various sciences, with the formalist/intuitionist crisis in mathematics again at the head of the list.

3).[65] In the dispute, "what is *prima facie* the most firmly established science manifests the tendency toward a transposition of the entire science onto new and more original foundations." (p. 3).

Though Heidegger gives further examples of the contemporary crises in existing sciences, including the issues surrounding relativity theory in physics and the question of the definition of life in biology, the problems involved in the "foundations crisis" in mathematics clearly have a certain priority (both marked and unmarked) for the more general questions of the phenomenological chronology itself. In particular, insofar as mathematics provides a general grounding for empirical science as a whole and thus determining the "domain" of nature itself, the issue of the availability of and proper mode of access to mathematical truths and objects amounts to a crisis for the positive possibility of empirical science as such, not limited to any specific ontic dimension of objects or objectivity. Moreover, the priority that Heidegger himself marks of the question of *measurement* with respect to the broader question of the fundamental constitution of temporality as it is understood both within and without the natural sciences points to the depth of the issue of the problem of the nature of number, counting, and measurement, and to the depth of the problem of the continuum, or of the relationship of the discrete to the continuous, to which formalists and intuitionists offered opposite solutions.

If, in particular, the domain of the mathematics, though historically determined as that of the "extra-" or a-temporal, nevertheless underlies the specific structure of natural time as it has been determined since Aristotle, the phenomenological chronology that provides an "original logic" of the being of beings by interrogating the basis of this determination must apparently interrogate specifically and with regard to its own temporality the problematic point of the intersection of mathematics and logic (to which Frege's own researches into number are, of course, unremittingly devoted). The problem is, again, none other than the one to which Plato's visitor responds, that of the specific temporality of thought in relation to what is thinkable in Being itself. Although the specific problematic (actually the threefold problematic) at issue between the logicism, intuitionism, and formalism of the 1920s was never univocally resolved, but rather transposed into a whole different domain by logical and syntactical research in the subsequent decades (chiefly by Gödel's incompleteness results in 1931), that the debate is specifically motivated by the problem of the *infinite* is far from irrelevant here and in fact, as I shall argue, provides a fundamental and requisite imperative for the contemporary continuation and radicalization of Heidegger's own project of chronology.

In the 1928 lecture course *The Metaphysical Foundations of Logic*, Heidegger points to the way in which such a chronological investigation of traditional logic provides for the possibility of radicalizing the underlying metaphysical assumptions of that logic toward the deepening of the problematic of ground itself. In particular, Leibniz, along with the tradition since Plato, understands the specific structure of the logos as that of a *koinenon*, a linkage in unity of subject and predicate. (pp. 30-31).[66] For Leibniz this is essentially a structure of inclusion; in a true judgment, in particular, the predicate or its concept is in

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[65]For a helpful overview, including original sources, see Paolo Mancosu, ed., *From Hilbert to Brouwer. The Debate on the Foundations of Mathematics in the 1920s* (Oxford University Press, 1998)

[66] *Metaphysische Anfangsgrunde der Logik im Ausgang vom Leibniz.* (Frankfurt: Klostermann, 1978). Transl. by Michael Heim as *The Metaphysical Foundations of Logic.* (Indianapolis: Indiana U. Press, 1984) (page #s as in translation).

some way included in the concept of the subject (p. 33). The consideration wavers between an ontological level, on which the containment is the real containment (or *inesse*) of a property in a substance, and a purely logical one, on which the primary relation of containment is exhibited in the true sentence itself (pp. 33-35). For both determinations, the specific nature of the connection is furthermore, insofar as truth is idem esse, *identity*, here thought as the basis for the unity of the unitary structure of the sentence or judgment as such. This conception in turn provides the basis for Leibniz's own conception of the monad as individuated drive, capability of representative apprehension (p.90), and reflection of the totality of the world. It further underwrites, Heidegger suggests, Kant's subsequent determination of the highest principle of subjective unity as that of the synthesis of transcendental apperception. (p. 69).

Leibniz's notorious principle of sufficient reason, moreover, expresses the implication of this originally and undecidably logical/ontological unity in identity for the problem of *grounding*. This is the problem of the nature of beings, understood ontologically and metaphysically as the problem of the *basis* of beings as a whole. The problem of grounding is, according to Heidegger, here specifically that of a "rather then" which takes up being insofar as it asks: why beings *rather than* nothing? (p. 114)[67] If the problematic of grounding thereby identified as developed on the basis of an original ontological/logical unity of identity must be radicalized along the lines suggested by invoking the problematic of the ontological difference between being and beings, the radicalization replaces the unity of the monad as subject with the transcendence of Dasein, understood in its constitutive relationship to the possibility of world-disclosure. Such a relationship is not simply a relation of Dasein to an ontic totality of entities; nevertheless in a suggestive "appendix" to the first section of the second part of the course ,Heidegger points to the need to develop, alongside the fundamental ontology of Dasein, a "metontology" capable of considering the "factical extantness of nature" as a possible totality of beings as a whole within which Dasein *itself* is factically extant (p. 157).

This possibility is manifest in the structure of "world-entry," which itself is based more on a more "primal" "temporalization of temporality." (p. 209) Both structures, though, bear a somewhat ambiguous relation to the metaphysical totality of the world as such, as is shown by Heidegger's brief concluding comparison of the underlying temporality of Dasein's own transcendence with Leibniz's conception of the monad as mirroring the universe on the basis of its own temporal constitution as drive:

> Time is essentially a self-opening and and expanding into a world. I will not go into the comparison [with Leibniz] any further, particularly the question of the extent to which one might conceive the interpretation of Dasein as temporality in a universal-ontological way – just as the monadology is presented as an exposition of the whole universe of beings. This is a question which I myself am not able to decide, one which is completely unclear to me. (p. 210)

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[67] Cf. *Introduction to Metaphysics.*

What is literally undecidable for Heidegger in 1928 is thus the question of the relation of Dasein's being in the world to the ontic totality of beings *and thus* to the temporality at the basis of the possibility of counting them (of totalizing them).

This undecidability of the question of world and world-entry in relation to the ontic totality of beings remains characteristic, as I shall argue, of Heidegger's inquiry into the epochal conditions for the historical intelligibility of beings even after the "turn" of the 1930s, and can in fact, as I shall also argue, be understood as a positive phenomenon that remains *constitutive* of the problematic thereby developed. In particular, if Heidegger's description of the conditions for the possibility of the various epochal determinations of the being of beings retains the structural ambiguity of the undecidability of the question of world-entry in relation to the totality, then the underlying structural cause of this undecidability remains the aporeatic relationship of finitude and the infinite. One might begin to surmise, here, the existence of a problem of limits and the unlimited that determines the whole late Heideggerian consideration of the constitution of the metaphysical epoch of presence and its problematic in-closure, the withdrawal of Being as the matter for thinking, and the exteriority of Ereignis to the metaphysical epoch that it ostensibly both determines and exceeds. In venturing to think the problem of the metaphysical thinkability of beings from out of a more originary difference, Heidegger will have evoked this problematic constantly, even as it is prevented from appearing at the surface of Heidegger's text by the assumption that the infinite can only be thought as the absolute, or in the figure of an onto-theological closure.

Such an undecidable problematic of the finite, the infinite, and the constantly unstable limit between them, thought by modern formalism in the aporias of set theory and as the problematic being of language in its relation to the totality of the world, would then be, as I have argued here, the specific site of a contemporary thinking, with and beyond Heidegger, of the temporality of Being in relation to the closure of the epoch of metaphysics that decides it as presence. It is in such a problematic, and the aporeatic temporality that it reveals, that one might locate the problem of ideal genesis, of what is treated since Plato as the origin of the idea.

This temporality, suspended between the most ancient and the radically futural, in which the very intelligibility of Being as such is unfolded as the undecidability of limit and the unlimited in determining the intelligible Being of beings, in a way that simultaneously opens and closes the entire epoch of presence, is the one that Plato himself seems to evoke, behind or beyond the Visitor's official logical solution to the problem of thinking being and non-being, in a passage he puts into the mouth of Socrates near the beginning of the *Philebus*:

> And the people of old, superior to us and living in closer proximity to the gods, have bequeathed us this tale, that whatever is said to be consists of one and many, having in its nature limit and unlimitedness. Since this is the structure of things, we have to assume that there is in each case always one form for every one of them, and we must search for it, as we will indeed find it there. And once we have grasped it, we must look for two, as the case would have it, or if not, for three or some other number. And we must treat every one of those further unities in the

same way, until it is not only established of the original unit that it is one, many and unlimited, but also how many kinds it is. (16c-d)

VI

As we have seen, both Heidegger and Frege, in different but complementary ways, thus point to a transformative deepening of the problematic that is already laid out in the Visitor's discussion of the positions of the materialists and the friends of the forms. The problematic is that of the *relationship of thought to being* that allows, within what is there determined as a human life, for the *specific possibility of thinking being as such*. If the solution suggested by the Visitor to the problem of this relationship turns on the particular conception of logical form, as *duamis koinoneon*, that has set the terms for the subsequent development of thought about the relationship in the Western tradition, both Heidegger and Frege, in their radical thinking about the logical structure of the sentence and its relation to the structure of world as such, challenge the specific solution by deepening the general problem to which it responds. Whereas Heidegger does so by pointing toward the more original *ontological* phenomenon of unconcealment, which relates Dasein to the very structure of world as such, thereby relating Dasein's factical being back to its sense, i.e. to the Being of beings, Frege does so by pointing to the place of impersonal and ineffectual *sense* and to its constitutive link with indefinable truth. But if truth is indefinable for Frege, being is equally so for Heidegger, and for similar reasons.[68] In particular, in both cases, the attempt at definition collapses the phenomenon into an empirical or ontic one that appears then to be both ubiquitous and empty; this is the basis of the prejudice which, according to Heidegger, keeps us from raising the question of Being today and of the inevitable vicious regress which, according to Frege and Davidson, results from any ontic account of the basis of predicative truth. In neither case, however, does the impossibility of definition point to the emptiness or meaninglessness of the phenomenon itself. Quite to the contrary, in fact, for both philosophers the possibility of re-interpreting what at first appears as the mere indefinability of being and truth, instead, a positive phenomenon grounded in the matters themselves, will point in significant ways to the possibility of reconsidering the very structure of the logical/ontological context in which all definition takes place.

For both philosophers, as we have seen, this reconsideration implies a radical challenge to any and all *correspondence* theories of truth, according to which truth consists in the structural resemblance, correlation, or representation of a thing or state of affairs by a sentence or mental item. But in both cases the challenge is actually more general, since it also, and equally, challenges *any* ontic figure of truth whatsoever (and hence, I have argued, not only any "correspondence" account of truth, but also any coherentist view, or any view of truth-as-assertibility, warranted assertibility, or any other

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[68] "'Being' cannot be derived from higher concepts by definition, nor can it be presented through lower ones. But does this imply that 'Being' no longer offers a problem? Not at all. We can infer only that 'Being' cannot have the character of an entity. Thus we cannot apply to Being the concept of 'definition' as presented in traditional logic, which itself has its foundations in ancient ontology and which, within certain limits, provides a justifiable way of characterizing "entities". The indefinability of Being does not eliminate the question of its meaning; it demands that we look that question in the face." (*S&Z*, p. 4)

"epistemic" notion). The challenge is radical because what it questions in both cases is the very possibility and ground of *identity*, thereby undermining the thought that truth can be understood, in any sense, as having any ontic ground in antecedently *identifiable* beings at all. Thus, in both philosophers, the thought that truth can be grounded in identity cedes to a more basic thinking of *difference* as the positive basis for the phenomenon of truth. To identify this positive phenomenon, in each case, it is necessary to recognize a specific mode of phenomenalization operating at the very boundaries of the ontic totality and indicated, from within the specific activities, concerns, and judgments of a human life, as the initially obscure supplement of their sense. For if "truth is included in all predication whatsoever" for Frege, and "being is co-said in every logos" for Heidegger, both statements point to the obscure structural point of presupposition within the activities of judgment and predication where these activities or their result touch on the real of being in itself.

The precise term for the mode of this demonstration is, as we shall see in chapter 2, the one used by Heidegger in a variety of early lectures and treatments: it is the *formal indication* [*formale Anziege*]. Though it is neither reference nor sense, formal indication is precisely a *non-universalizing* mode of demonstration of the structural surrounding in which the being of beings is evinced in a human life. Here, formalization is not generalization or universalization, but rather points to the conditions for possibility of the singular as such; it captures the particular mode in which a pervasive intelligibility of being in which we inexplicitly live can be explicitly recovered for theoretical understanding. As I shall argue, the terminology, though it is Heidegger's, is equally appropriate for Frege; for as we have seen, Frege identifies the place of sense as precisely indicated, without definition, in the formal structure of our everyday judgments and acts of assertion insofar as these involve the specific possibility of truth.

For both philosophers, moreover, recognizing the essential link between sense and truth poses a radical challenge to the traditional account of the unity of the sentence, or proposition, as the *synthetic* combination of subject and predicate. This points the way, for both, to the need to understand the sentence as such out of a broader holistic and contextual surrounding that ultimately encompasses and even *points beyond* the totality of the world (of beings or of referents) as such. Nevertheless this "beyond" cannot simply be described, for either philosopher, as the place of the "transcendental" in any traditional (e.g. Kantian) sense. For both philosophers, in particular, the effect of pointing to the broader contextual surrounding in which the truth of individual sentences is ultimately lodged is not simply to insist upon the reference to the world as an ontic totality or locate it with respect to an unproblematic "beyond", but rather to decompose the 'metaphysical' figure of the world as the totality of beings by means of a more original thinking of the structural aporias inherently involved in the thinking of this totality as such. It is this thought that produces for both philosophers the necessarily supplement or *virtual* surrounding of sense as the non-actual and ineffective surrounding of the ontic totality insofar as it touches on being (truth) as such. This supplement is produced as the correlate of a questioning whose topic and site, for both philosophers, is the singular difference between being and beings. The proper phenomenon of this difference is *truth* as the formally indicated structure of the impersonal *presentation* of beings in their determinate *being*-thus-and-so. In both cases, it is a question of the conditions for presencing, as appears immediately if we can take seriously the thought of sense as "mode of presentation" that is in fact shared (in different but related ways) by both philosophers.

These connections point, as I shall argue in detail in chapters 3 and 4, to the contemporary possibility of a unified *logic of truth*, drawing both from Heidegger and from theory in the analytic tradition, that elicits its structure along two perpendicular but complementary directions: that of the "semantical-logical" description of the logical structure of language as such; and that of the "ontological-logical" conditions for the disclosure of beings without prejudice to their linguistic or discursive status. Both dimensions can be pointed out, as I shall argue, by means of a unitary configuration of formal indication; and both dimensions, in their articulation of the structure of judgments and practices of everyday life, are essentially "hermeneutic" in the sense of a "hermeneutics of facticity." This conjoint hermeneutic configuration cross-cuts at a basic methodological level the usually assumed "divide" between the methods and results of "analytic" and "continental" philosophy. It is hoped that the demonstration of such a unitary problematic configuration, if successful, can help to provide terms for a continuation of the problems invoked at a conceptually and historically conceptual level in both "traditions" in such a way as to provide the possibility for a substantial surpassing of the distinction.

The suggestion of such a reconciliation of analytic methods of primary linguistical/logical analysis with Heidegger's ontological inquiry into the truth of beings will seem to some flatly incompatible with the criticism that Heidegger constantly makes of what he treats as a constitutive and misguided prejudice of traditional logic, namely its tendency to treat the linguistic *assertion* [*Aussage*] as the basic locus of truth. By contrast with this prejudice, as Heidegger recurrently emphasizes in *Being and Time* and elsewhere, for the ontological problematic truth is to be seen as *aletheia*, or unconcealment, and thus as primarily and essentially a phenomenon whose locus is the disclosure of beings rather than assertions, sentences, judgments, or anything linguistic in nature. Though Heidegger in fact never engages in any serious or sustained way with Frege's logic or with any of those who have followed out its consequences methodologically, his recurrent employment of this criticism, alongside the criticism of correspondence theories, in his own positive argument, can appear to suggest that Frege and the post-Fregean tradition are, in their prioritization of the structure of the sentence and in particular in the orientation of their research toward language, party to a "logical prejudice" that they share with the "logical tradition" since Aristotle and consists in seeing the logical structure of the predicative sentence as the "basic" or fundamental place of truth.[69] By contrast with this, Heidegger is sometimes supposed to have had a definitive insight into truth's actual "pre-linguistic" or "non-lingusitic" ontological foundations which leads him to a position that is fundamentally different from and irreconcilable with anything developed in the subsequent analytic inquiry into truth in the wake of the "linguistic turn."

The suggestion is, I think, overstated on the basis of Heidegger's text and the implication of irreconciliability accordingly misguided. The suggestion that there is a basic disagreement about the

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[69] This suggestion is made, e.g., by Daniel Dahlstrom in *Heidegger's Concept of Truth* (Cambridge U. Press, 2001), especially pp. 23-28. In particular, Dahlstrom holds that various partisans of the "Fregean tradition" (p. 24) hold the "logical prejudice" of "conceiving truth primarily as a property of a proposition" (p. 17) insofar as they have conceived of "a 'thought' or 'proposition'…as the truth-bearer" (p. 25) or insofar as they have held "redundancy," "semantic," or "pragmatic" theories of truth (pp. 25-28). Dahlstrom does not, however, does not discuss the implications of Frege's argument for the indefinability of truth, which has, as we have seen, the consequence that truth is precisely *not* the property of a proposition or any other entity, and also that any definitional *theory* of truth is untenable.

"primacy" of the sentence as the "basic" locus of truth has little meaning, in particular, unless it is further specified what sense of "primary" and "basic" is at issue; and once this sense is disambiguated, the impression of a deep irreconciliability between the two conceptions largely dissipates. To begin with, we should note that the problem of the structure of the predicative sentence is a central, perhaps *the* central, concern with which Heidegger occupies himself in the investigations leading up to, and including, *Being and Time* in which he radically and recurrently poses the problem of truth itself. Moreover, as we have seen, the investigation yields a deep-seated critique of the traditional conception of the structure of predication and of the whole traditional conception of the subject/predicate form of the sentence that shares much, as we have seen, with Frege's own similarly motivated critique of this conception. More importantly, however (and as I shall argue in more detail) it would be highly misleading in the broader context of Heidegger's own ontological problematic to portray the ultimately hermeneutic structure of truth as aletheia that he opposes to the traditional conception as *simply* "pre" or "non-linguistic." Though there is certainly a sense in which truth is "pre-logical" for Heidegger – namely, that the disclosure of beings, rooted in an ontologically basic structure, can and does take place without and prior to the active *formation* of predicative judgments or their expression in an assertoric act -- the kinds of disclosure to which Heidegger points as basic are explicitly rooted in a basic *hermeneutic* structure, the "as" structure of something-as-something, which is certainly not simply unrelated to the possibility and structure of *logos* as such.

If, then, truth is not basically "logical" for Heidegger, it nevertheless remains that, as in the title of the 1925-26 course, the *question* of logic *is* in a basic sense the *question* of truth, and the problematic of truth is unthinkable without a constitutive reference to the problems of logic that unfold and point to it. This is not to say that either the actual structure and nature of the *logos* or sentence, or, more broadly, the problem of the being of language to which it ultimately points, are adequately clarified in Heidegger's approach, especially at this time. It is only to say that the critique he voices of the substantialist and representationalist assumptions underlying the traditional conception of subject/predicate logic gives us simply no reason to suppose that the analytic problematic of the logic of language inaugurated by Frege should similarly be rejected on its basis.

Nevertheless, the suggestion of a unitary hermeneutic configuration that I shall make here *does* point to the possibility of deepening *both* problematics of sense thereby conjoined – i.e. the Heideggerian "ontological/hermeneutic" problem of Being and the Fregean/Davidsonian "semantic/hermeneutic" problem of the general concept of truth – each in ways suggested by the other. In particular, as I shall argue, on the one hand Heidegger's ontological /temporality problematic suggests the possibility of an ontological interpretation of the specific conception of *the being of language* underlying the possibility of a Davidsonian "theory of meaning" as well as the specific kind of temporality that is involved, on the conception, in the learning, attaining, communicating and possessing of a language as such (chapter 5). But on the other, the problematic of the basis of *number and mathematics* suggested by the Fregean problematic and in particular by the constitutive problems of set theory in its dual reference to totality and infinity points the way to a deepening of the Heideggerian theme of the ontotheological and metaphysical determination of the being of beings and *its* "historical" and ultimately evental temporality.

The suggestion, again, may seem to fly in the face of Heidegger's own self-description of his methods; for as is well known, he constantly and unequivocally rejects the applicability of "logic" in the sense of formal, mathematical logic or logistics to the ontological/hermeneutic problematic with which he is concerned. The point of this rejection is not, as is abundantly evident from Heidegger's own use of the terminology and methodology of "formal indication," to reject the relevance of any and all formal methods to the problems of hermeneutics; rather, it is to oppose what is here seen as the "empty," merely calculative or "formalistic" technique of logical symbol manipulation to the substantiality of a concrete and disclosive indication or demonstration of the things themselves. The opposition, which has its roots in the distinction which Husserl adopts from Kant between a "formal" logic capable only of such empty calculation and a "transcendental" one capable of going beyond this to demonstrate the "truth" of beings in the sense of manifestation, is in fact overcome in Frege's radical conception of senses as modes of presentation and as thereby constitutively linked to truth. On this conception, as we have seen, the constitutive nexus of sense is the domain of *impersonal* presentation, or of a presentation of beings and truths that founds and decomposes equally the identity of beings and the possibility of linguistic reference to them.

The conception is not without its own constitutive problems, including eminently those constitutively involved in the possibility of the extensional reference to *beings as a whole*, which language as such appears to presuppose but which is nevertheless, as shown by the development of the set-theoretical paradoxes, essentially contradictory. But I shall argue (chapters 6 and 7) that these problems, including ultimately the problematic of the relationship between the finite and the infinite which the set-theoretical aporias of totality and infinity display in precise form, cannot ultimately be separated from an ontological inquiry which interrogates the formal and ontological conditions for the possible presentation of beings in their being, up to and including the formal conditions for the metaphysical determination of being as presence itself. It is, moreover, ultimately necessary in the context of this problematic to find terms and means structurally to indicate the place of truth as the anonymous, a-subjective and ineffectual structural "place" of unconcealment. To find these terms and means is not, as I shall argue, to dispute or cast doubt on Heidegger's recurrently reiterated claim of the ultimate dependence of disclosive truth on Dasein, but rather to think Dasein itself, outside any reference to the biological or psychological nature of the human subject, as the *impersonal* structure of truth; and the place of unconcealment, outside any reference to beings, as the *ineffective* structure of Being.

For this conception, there will be no *privileged* access to truth, not even the privilege that determines Dasein within the limit of an "authentic" finitude whose individuating end is found in its capability of death.[70] It is necessary, in other words, to follow out the ultimate consequences of the claim that Dasein is, independently of any human or subjective determination, a structure of being in the world; and one that cannot any longer be thought as a subject of capacities in any sense. Such a conception will be, I shall argue, the one requisite to any legitimately *realist* conception of being and truth that also takes seriously the implications of Heidegger's ontological interpretation of truth as unconcealment. It

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[70] Cf. Jacques Derrida, *Aporias: Dying – awaiting (one another at) the 'limits of truth'* (transl. Thomas Dutoit, Stanford U. Press, 1993). For some trenchant critical considerations about Derrida's position, see Iain Thomson, "Can I Die? Derrida on Heidegger on Death", *Philosophy Today* 43:1, (1999), pp. 29-42.

is such a conception of truth that is moreover needed, as we shall see, in order to overcome what has seemed to many commentators to be a significant limitation of Heidegger's approach to truth in relation to ontological constitution: its apparent failure adequately to treat *ahistorical* events and occurrences in the realm of nature (up to and including the "natural" origin of Dasein itself).

If we look beyond Heidegger's own official disavowal of the problems of the "foundations" of mathematics and number, it is in fact possible, as I shall argue, to discern and verify in other parts of Heidegger's text the applicability and even a certain conceptual *priority* of these problems in connection with the ontological problematic of being, time, and history. In discussing the possibility and structure of the "metaphysical" conception of being as constant, standing presence, Heidegger often makes reference to a conception of time based ultimately on the domain of nature and the kind of (regular, countable, calculable and mathematizable) time characteristic of it. In the culmination of metaphysics, i.e. the contemporary regime of technological enframing correlative to the dominance of a "calculative thinking" that appropriates objects and resources as standing reserve, it is the calculability or mathematical form of natural science that ultimately co-determines the possibility of the technological regime of handling and trafficking with beings. The two sides of this configuration – the dominance of calculative thinking modeled on mathematical computation, on one hand, and the treatment of beings as raw material for mechanistic manipulation and trafficking – converge, in a way that is predicted by Heidegger himself, though never developed in detail, in the contemporary pervasiveness of what is today called "information technology."

This dominance is linked, both historically and conceptually, very closely to the developments of contemporary mathematical logic inaugurated by Frege; in particular, the specific conceptual origin of the computer lies in Alan Turing's analysis of the implications of this logic, at the very boundaries of its effectiveness, for the formalization of the specific question of the solubility of mathematical problems by regular, algorithmic means. As I shall argue in chapter 5, the undecidability and essential ineffectivity that Turing's results (along with Gödel's closely related ones) elicit in fact point in a significant way to the positive phenomenon of undecidability at the limits of calculative effectivity themselves.[71] The phenomnenon, formally demonstrated at the origins of the contemporary regime of computing technology, points, as I shall argue, to an apparently necessary *inexhaustibility* of the mathematical-real in relation to any regime of practice that attempts to capture and totalize it. The regime of "calculative thinking" that comes to dominance and to enjoy an unquestioned privilege in the contemporary configuration of "late capitalist" life and *praxis* is thus, as I shall argue, already prepared from long afar in implicit or explicit thought of the basis and applicability of number as such that underlies a specific conception of time, long dominant in the Western tradition; while simultaneously, the positive phenomenon of undecidability and the ultimate ineffectivity that it elicits provide essential terms in which this regime can be interrogated and even perhaps transformed.

In particular if, as Heidegger suggests, the "metaphysical" interpretation of being as presence is itself determined by a particular conception of time, the inauthentic, everyday or "vulgar" one according to which time is a succession of present, punctual "nows", this determination is explicitly and decisively co-

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[71] Compare also *The Politics of Logic*, especially chapters 6 and 10.

original in Aristotle's *Physics* with a particular and specific conception of the nature of number. According to this conception, on which "time is … number of motion in respect of 'before' and 'after'", time is definitively that which can be mathematically counted and numbered.[72] It is thus possible to see the history of metaphysics, as Heidegger describes it, as in fact opened and closed with determinate and decisive reference to number and mathematics. In this respect, the total "mathematization" of nature achieved in the Enlightenment by Descartes and Gallileo is but one determinative moment of a larger regime of thinking and praxis that opens with Aristotle and closes or culminates in the contemporary regime of technological enframing.

This leaves, in the other direction, the issue that will perhaps appear to many Heideggerians to be the biggest thematic obstacle to a sympathetic reading of Frege's project: Frege's determination (or metaphorization) of the realm of sense as a *timeless* or *extra-temporal* "third realm." In relation to the problem of the origin of number and mathematics, the determination may seem to replicate the traditional determination of the temporality of mathematical beings as those which are maximally separate from history and temporal becoming; the question arises of how the being of mathematical objects can be thought on the basis of a more originally grounded interpretation of the modes of temporal being themselves. The question, if posed in relation to Frege's literal or metaphorical picture of the "third realm," bears a strong resemblance to the critical question the young Heidegger repeatedly posed to Husserl's own determination of phenomenological "laws of essence" as grounded in a realm of ideality wholly distinct from the spatiotemporal world: the question of the *being* of such a realm in relation to time. Here, the question of the "a priori" as a specific temporal designation of ontological existence is not simply criticized, but rather modified and deepened in Heidegger's particular inquiry into the conditions for the possibility of a temporality that transpires structurally "before" all that is empirical.

In reading Heidegger's problematic together with the "analytic" one that arises from Frege's initial conception of the atemporality of sense, it is thus necessary to pose radically the question of the original temporal determination of the structural picture of language that dominates in the analytic tradition. This is the picture on which language as a whole is a structural configuration of signs governed in their combination and use by comprehensive, logically tractable rules. In fact, in the tradition inaugurated and underwritten by this conception, the underlying logical or grammatical structure of language appears in various guises: not only (as in Frege) as a timeless, supersensible structure of laws and norms, but again as a system of conventions (Carnap), as the empirical regularities of language use (Quine), as the explicitation of what is grasped or understood implicitly in coming to understand and master a language (Davidson, Dummett, Brandom), or again as the unique resource of a special type of "imagination", the "projective imagination" that unfolds and projects the ordinary uses of words into ever-new contexts (Cavell). This conception equally underlying Frege's discussions of the scope of the laws of logic with respect to language as well as Davidson's conception of a "theory of meaning" for a particular natural language. In this conception, as I shall try to show, the analytic conception of the nature of language grounded in Frege's logic finds its specific ontological expression as a positive description of the ultimate nature of language as such. The inherent problems of this conception,

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[72] *Physics* 219b1-9.

including its structural aporias, then point to the depth of the problem of the being of language and its unique relation to the problem of being.

It is thus necessary, in order to grasp and reawaken the ontological problematic as it characterizes our present, to perform a twofold reading with respect to the philosophical traditions that dominate today: on the one hand, to interrogate Heidegger's text with respect to the question of the basis and status of number and mathematics as it is linked both to the problem of thinking the totality of beings as a whole and to the problem of time; and on the other, to perform an "ontological" reading of the conception of the structure of language that dominates in the analytic tradition and determines its own key problems and insights.

The result of such a twofold reading should be to elicit terms and problems with a critical and even potentially transformative bearing on the overarching determinants of contemporary life and practice insofar as they are rooted in the contemporary ontological situation itself. In particular, if, as Heidegger suggests, this contemporary situation is characterized by a certain exhaustion or completion of the metaphysical epoch of presence, then such terms for its critique can only be found by developing the contemporary implications of the original Parmenidean unity of thinking and being as they figure in the determination of contemporary life.

In a decisive passage in the *Beiträge*, Heidegger specifies the contemporary form of this unity as the hidden unity of *machination* [*Machenschaft*] and *lived-experience* [*Erlebnis*]:

> If machination and lived experience are named together, that indicates an essential belonging of the two to each other but at the same moment conceals an equally essential non-simultaneity with the 'time' of the history of beyng … The belonging of the two to each other can be grasped only through a return to their most disparate non-simultaneity and through a dispelling of the semblance of their extreme oppositionality. If thoughtful meditation (as questioning of the truth of beyng and only as this) achieves knowledge of such belonging, then at the same time the basic thrust of the history of the first beginning (the history of Western metaphysics) is already grasped out of a knowledge of the other beginning. Machination and lived experience constitute as a formula [formelhaft] the more original version of the one expressing the guiding question of Western thought: beingness (being) and thinking (as representational grasping). (p. 101)[73]

In the contemporary configuration that is dominated by thinking as calculation and thereby by the "machinations of technology, which are epistemologically grounded in mathematics," the attitude of action and practice that Heidegger calls *machination* comes to dominate; this is an unlimited and totalizing trafficking in and with beings that determines them in "rules and guiding principles," a regime for which "nothing" is "impossible" with respect to them, everything must conform to the priority of planning and organization, and accordingly, "the question of the essence of truth is no longer needed." (p. 95). This is the regime, in other words, of the unbridled assumption of the priority and totality of the

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[73] I discuss the passage and the link between *Erlebnis* and *Machenschaft* in more detail in my "Thinking and Being: Heidegger and Wittgenstein on Machination and Lived-Experience" (*Inquiry* 46:3 (2003), pp. 324–45).

actual, where all and only what can act and effect (or be acted or effected upon) in a regular, calculable regime of organization is thought as real.[74] Here, there is "no problem that is not solvable, and the solution is merely a matter of number applied to time, space, and force." (p. 98)

It is under the heading of the critique of machination that Heidegger first raises, accordingly, the question of the dominance of technology in the sense of technique, and above all in the sense of that attitude of calculation that totalizes the calculable as the real, whose essence he would later designate as enframing [*Gestell*].[75] But the hidden and necessary obverse of this priority of calculable machination in the contemporary handling and organizing of beings, Heidegger suggests, is the dominance of the humanist conception of "lived experience" as the basic structure of the appropriation of beings to the human subject of experience; here, everything counts as a being only insofar as it can be "lived through" and experienced by the living human being, ultimately determined as the *animal rationale* (p. 102). This dominance is closely connected with a dominant "anthropology" which, regardless of whether it is "dressed in an enlightened/moral, psychological/natural-scientific, human-scientific/personalistic, Christian, or political/ethnic coiffure" simply postpones the "decisive question," that of whether "the modern era is grasped as an end and another beginning is sought." (p. 106). Nevertheless, the interlinked configuration of machination and lived-experience, which figures the original Parmenidean link between being and thinking, *if thought and grasped as a unity and in their non-simultaneity with the original configuration*, the coming together of machination and lived experience contains a peculiar event within the hidden history of beyng." (p. 105). In particular, "Machination as the essential occurrence of beingness provides a first intimation of the truth of beyng itself." (p. 100).

It is thus that Heidegger's identification of the essential non-simultaneity of the formulas of unity that determine metaphysics in its entirety – thinking and being (in the sense of beingness or presence) and lived-experience and machination – bound the era of metaphysics and, Heidegger suggests, point to the futural possibility of its opening into a wholly other history. The opening of this other history is indicated in what is precisely the critique of the closure of the modern configuration that figures being as the capacity of beings to be effected, acted upon, represented and experienced by the human subject of capacities, in particular the anthropological or psychological bearer of the capacities of thought and language. When applied as a dominant configuration of practice and conviction, this configuration looks simultaneously in two directions: on the one hand to the individual as the center of the capacity of a language, endowed with "culture" and an empirical autonomy correlative to it; and on the other, to the "commonality" of shared practices lodged within the anthropological unity of a culturally determined natural language.[76] In this picture, there is no longer anything like the *impersonality and*

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[74] "It seems to be a law of machination…that the more prescriptively machination unfolds…all the more obstinately and machinationally does it conceal itself *as such* … in modernity behind *objectivity* as the basic form of actuality and thus of beingness." (p. 100)

[75] Cf. "The Question Concerning Technology"

[76] One can usefully compare Heidegger's gesture here, then, to the one made more recently by Alain Badiou in opposing, at the beginning of his 2006 *Logics of Worlds* (transl. by Alberto Toscano, London: Continuum, 2009) the axiomatic statement of prevailing contemporary conviction according to which "There are only bodies and languages" to the statement of his own "materialist dialectic," which holds that "There are only bodies and languages, except that there are truths.": "In order to validate the equation 'existence=individual=body',

ineffectiveness of truths, both of which, as we have seen, Frege emphasizes as much as Heidegger; rather, truth can here only be determined as assertibility, as conformity with the empirical unity of established and effective practices, or as "correctness" in the sense of the ontic correspondence of experience with experienced.

If, on the other hand, as Heidegger suggests, the matter of difference, in its withdrawal, gives us cause to think, then the very conception of the impersonality and ineffectivity of truth that Frege and Heidegger share claims our thinking of the "logical" event that has the ultimate significance, as Heidegger suggests, of the closure of metaphysics itself and its temporal opening to a wholly other relation to being. This opening can take place, as Heidegger emphasizes, only through a questioning that, by contrast with what is determinable in the contemporary configuration, "is not the purposive act of an individual nor something delimited and calculated by a community;" rather it is "the passing on of an intimation that comes from, and remains assigned to, what is most question-worthy." (p. 6). This matter that is today most "question-worthy" is, as we have seen, the abyssal ground of difference that amounts, in its withdrawal, to a singular event that exhibits what Heidegger calls an "infinite excess" over all that is calculable and actual. It remains to be seen whether such an "excessive" futural event of being to come is indeed, as Heidegger suggests, legible today as the obverse face or hidden correlate of what is most present in the practical/technological configuration of the present, which absolutizes the calculable; or whether rigorously logical contemporary reflection on the origin of number and the ultimate nature of language rather discerns in this configuration an undecidability of being and thinking for which there are no longer signs, hints, or disclosures, but only the original insistence of the unlimited, which surrounds and ultimately decomposes every delimitation of the present and every determination of time as such.

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contemporary *doxa* must valiantly reduce humanity to an overstretched vision of animality. 'Human rights' are the same as the rights of the living. The humanist protection of all living bodies: this is the norm of contemporary materialism…Moreover, it is essentially a *democratic* materialism. That is because the contemporary consensus, in recognizing the plurality of languages, presupposes their juridical equality. Hence, the assimilation of humanity to animality culminates in the identification of the human animal with the diversity of its sub-species and the democratic rights that inhere in this diversity." (p. 2). It is thus clear that, despite differences in emphasis, Badiou's foundational insistence, in exception to this contemporary axiomatic of the human animal and linguistically determined community, on the existence and essential structure of truths should be seen as repeating Heidegger's gesture in more than one way.

The Early Heidegger and the Givenness of Form

(Chapter 2 of Draft MS: *The Logic of Being: Heidegger, Truth, and Time*)

"What has to be accepted, the given, is – so one could say – forms of life." – Wittgenstein

"In Plato's work, form is the knowledge that fills being. Form doesn't know any more about it than it says. It is real in the sense that it holds being in its glass, but it is filled right to the brim. Form is the knowledge of being. The discourse of being presumes that being is, and that is what holds it." -Lacan, Seminar XX, 1972-73

Without a doubt, the radicalization of Husserl's phenomenology that Heidegger undertook in the years leading up to the publication of *Being and Time* determines in many ways his thinking about being, time, and truth in that book, as well as for many years after. I shall argue that this radicalization can be understood as directed toward a particular set of problems, what might be called (although this is neither Husserl's terminology nor Heidegger's) the problems of the *givenness of form.* In particular, Heidegger's pursuit of these problems between 1919 and 1926 led to his development of the methodologically decisive device of "formal indication" and his penetrating critique of Husserl's phenomenology of consciousness. At the same time, it essentially articulates the guiding interpretation of the ontological and metaphysical tradition, from the Greeks to the 20th century, which Heidegger would maintain throughout the rest of his career: his interpretation of this tradition as committed to the understanding of Being as presence and of time as based upon the presence of the punctual "now". As I shall attempt to show, it is by pursuing the problems of the givenness of form that the young Heidegger first develops his original phenomenological critique of this historically dominant conception of being as presence. The critique is closely connected, on the one hand, with the young Heidegger's radical rethinking of the structure of logic on the basis of his own original re-working of the problematic of truth and, on the other, with his developing understanding of the structure of Dasein in terms of its own originary kind of temporality, wholly distinct from what the tradition understands as the temporality of the subject, or of the psychological being that thinks.

What I mean by "form" here is something general, but also relatively straightforward: I mean to indicate whatever gives *unity* to a plurality of phenomena, or what makes a *one* out of the many of appearances. This is meant to evoke Plato's appeal to the idea in one of its most important aspects, that of the "one over many," or what justifies calling the diversity of a set of appearances by one and the same name or giving them the same account. Equally, though, it gestures toward the closely related problem of predication, to which Plato's ever-developing thinking about forms and participation is constantly directed. This is a problem that is already marked in both Plato's and Aristotle's thought of the structure of the *logos apophantikos*, the proposition or assertive statement, but is equally central to the problems of contemporary formal and phenomenological logic. For Heidegger as well as other twentieth-century thinkers, this problem is understood, at least in part, as the problem of the structure and *unity* of the

predicative proposition, judgment, or assertion. In his thinking of the ground for this unity, Heidegger comes to see the historical tradition of logical and ontological thought, from Plato to Husserl, as gesturing, albeit obscurely, toward the possibility of an original disclosure of the sense of Being itself.

In particular, during the years leading up to 1926, Heidegger's historically radicalized development of phenomenological methodology focuses, above all else, on the question of the *availability* of form, on what the tradition understands as its presence or presentation, as structuring element, precondition or possibility of synthesis, to the being that thinks: the person, psyche, subject or self. This leads Heidegger to pose a set of radical and penetrating questions about the relationship that Plato figures as methexis or participation, as well as to what he comes to see as Husserl's own silent and unquestioning presupposition of the priority of the region of pure consciousness and his consequent failure to inquire into the *being* of the entity that possesses or inhabits it. More generally, Heidegger shows during these years that the entire the tradition from Plato to Husserl invokes the givenness of form as the priority of the *a priori*, the unthought temporality of that which always comes before. But although, as Heidegger argues, the true temporal sense of the *a priori* has, despite being constantly presupposed, never yet been positively understood within the tradition, Husserl's own phenomenological methods serve to point the way toward a deeper understanding of the ground of its very possibility. This, in turn, points to Heidegger's radicalized recapitulation of the question of the givenness of form as the question of the givenness of time, and finally to the suggestion of the opening of a deeper, more original sense of time, beyond the tradition's prioritization of the "now" and constant presupposition of the priority of presence.

I am aware that portraying Heidegger as concerned with "form" in this sense is likely to appear anachronistic and perhaps even un-Heideggerian. Heidegger's recurrent dismissals of results derived from "formal logic" and of analyses that are "merely formal" (as opposed to genuinely phenomenological), for instance, are well-known. And in his analyses of the structures of Dasein and world in *Being and Time* and beyond, Heidegger does not always privilege the issue of the kinds of generality and unity that these structures must display. Nevertheless, as I shall argue, behind each of these structures is the thought of a specific kind of unity of phenomena, and this thought of unity underlies, in profound ways, Heidegger's interlinked and developing conceptions of truth and time, as well as his critique of the tradition's understanding of being as presence. For with his own pursuit of the problem of the force and availability of the idea in its relationship to the things of experience, Plato took up the problem of the relationship of Being and thinking, the original relationship already thought by Parmenides as a simple unity or sameness of thinking in the sense of *nous* with the totality of what is. If the problematic taken up by Plato from Parmenides and thought in terms of the obscure relationship of "participation" bears an original relationship with the question that both Heidegger and contemporary logic treat (though with different results) as that of the possibility and sense of predication, then there is again a relationship of this problematic to the question of the nature and kind of unity that makes beings or entities intelligible at all. And if Heidegger comes, during the formative years 1921-26, to see the predicative structure of the proposition, along with its meaning and its truth, as always secondary to, and dependent on, a more originary disclosure of things themselves, this does not preclude that the

original conception of primary givenness (the –as- structure) that Heidegger develops over these years remains a profound form of unity.

The formal dimension of the "one over many," the question of the availability of this dimension to thought, and above all the question of the ultimate ground of the unity of being and thinking will thus, as I shall argue, never have ceased to determine Heidegger's analyses, even as he moves to thinking of the basis of this unity in increasingly radical terms of difference, withdrawal, and ex-stasis. In the last part of the paper, I will suggest that understanding Heidegger's conception of logic, truth, and time in terms of the formal problems of the one and the many, even where he did not ostensibly do so himself, can point the way to further possibilities for the development, and deepening, of Heidegger's great problem of the possibility of a givenness of Being itself, outside or beyond the traditional understanding of being as presence.

I.

In a 1963 retrospective essay devoted to tracing his own "way to phenomenology," Heidegger recalls one of the particular issues in Husserl's phenomenology that, as he studied with Husserl in the early 1920s, yielded a special directive for Heidegger's own developing sense of the application of phenomenological methods to the problem of being:

> As I myself practiced phenomenological seeing, teaching, and learning in Hussserl's proximity after 1919 and at the same time tried out a transformed understanding of Aristotle in a seminar, my interest leaned anew toward the *Logical Investigations*, above all the sixth investigation in the first edition. The distinction which is worked out there between sensuous and categorial intuition revealed itself to me in its scope for the determination of the "manifold meaning of being." ("My way to phenomenology," p. 78).

In the same essay, Heidegger recounts how he had been fascinated with Husserl's Logical investigations since the beginning of his adult academic studies in 1909-10, but without, at that early time, "gaining sufficient insight into what fascinated me." (p. 75). When Heidegger returned to the *Logical Investigations* (and in particular to the doctrine of categorial intuition) in the early 1920s, amidst his transformative and dramatic encounter with Aristotle, he had also already begun, at first cautiously and inexplicitly, to voice the radical critique of Hussserl's phenomenology of consciousness that would provide an essential impetus to his own conception of the project of a "fundamental ontology" grounded in a hermeneutic of Dasein.

In the course of developing this critique, Heidegger would come to doubt many aspects of Husserl's phenomenological project: its basis in what was, for Heidegger, the unexamined privilege of the being of the conscious subject, its prioritization of theoretical understanding over the concrete life in which all theory is rooted, its basic (and, for Heidegger, ungrounded) distinction between the domains of the real, factical accomplishment of intentional acts and the ideal realm of their content or sense. Even Husserl's vaunted "principle of principles," holding that all phenomenological knowledge must be grounded in the

acceptance of what intuition directly presents to consciousness, would come to seem to Heidegger to be an untenable expression of a transcendental subjectivism that fails to penetrate deeply enough into the "things themselves" in its uncritical assumption of the foundedness of all knowledge in intuitive presence.[1]

But in the 1963 retrospective, Heidegger also alludes positively to an essential connection between Husserl's theory of categorial intuition and his own radicalized phenomenological understanding of the disclosure of beings in truth. What, then, is categorial intuition, and how did the young Heidegger come to see it as an essential phenomenological method, even beyond its application within what he came to see as the narrow confines of Husserl's phenomenology? Most directly, Husserl's theory of categorial intuition arises in response to questions internal to his own phenomenological account of truth and knowledge. On this account, knowledge consists in a particular kind of "identifying" synthesis between an intentional act that intends an object or state of affairs and a distinct act of intuition or presentation that "fulfills" this intention. For instance, in a simple perceptual act, an object of perception may be intended in an unfulfilled way as I take myself to see it; if the object indeed exists and presents itself, the act is fulfilled and knowledge is attained. Husserl understands this as an "identifying synthesis" that connects the meaning-intention with the actual presence of the object as it is in itself and is directly given (cf. section 37).

Indeed, Husserl suggests in the introduction to the sixth *Logical Investigation*, it is in terms of such an "identifying synthesis" that we must understand the phenomenological idea of "being in the sense of truth"; here we have, Husserl says, the "single…phenomenological situation" upon which all of the "varying notions of truth" must be based. The complete fulfillment that occurs in the "identifying synthesis," moreover, is, Husserl says, "'correspondence' rightly understood, *the adequatio rei ac intellectus*"; here we have, in other words, a complete and final correspondence of the intellect with the givenness of the object as it is in itself.[2]

It is this conception of the universal structure of truth that leads Husserl, in connection with the complexities of the various kinds of intentional acts, to introduce the concept of "categorial" as distinct from merely "sensuous" intuition. In a simple act of perceiving an object, knowledge can be understood simply as the correspondence of an intending act with a purely sensory fulfillment that presents that individual object in its sensuous appearance. Here, for instance, I perceive a red surface; the sensory quality of redness is given directly and simply in the fulfilling intuition. But it is very often the case, (as, for instance, in the acts underlying even simple predicative judgments and assertions) that what we have knowledge of has, essentially, a form and structure that goes beyond simple, individual perceptual presentations. I may have, for instance, a perceptual experience that yields not only the simple seeing of an individual object, but also of *how things stand* with the presented object (or objects) as well:

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[1] Cf. "The End of Philosophy and the Task of Thinking," pp. 63-64. [expression of the prejudice of all W. philosophy of Being as presence (thus intuition)].

[2] (here we may see Husserl's phenomenological formulation of what Heidegger repeatedly cites as the motto of the traditional "correspondence" theory of truth).

> In the case of a perceptual statement, not only the inwrought nominal presentations are fulfilled: the whole sense of the statement finds fulfillment through our underlying percept. [For instance]…we do not merely say 'I see this paper, an inkpot, several books', and so on, but also 'I see that the paper has been written on, that there is a bronze inkpot standing here, that several books are lying open', and so on. (p. 339)

This possibility, that complex and structured states of affairs as well as simple objects can be given intuitively, essentially complicates the phenomenological account of truth as "identifying synthesis." In particular, we must pose, as Hussserl now does, the question of "What may and can furnish fulfillment for those aspects of meaning which make up propositional form as such, the aspects of '*categorial form'* to which, e.g., the copula belongs?" Since, Husserl says, there is nothing in the sensory givenness of the objects to correspond with such elements of the complex judgment as are expressed by words such as ""the', "a', "some," 'many' "few," "two", "is", "not", "which", "and," "or," etc.,[3] we must recognize, in addition to sensuous intuitions, the possibility of a distinct kind of wholly non-sensuous intuition which yields knowledge of the possible forms of objects and their combination and relation, including the sense of "being" as expressed in the copula of a predicative assertion such as "the paper is white". In fact, Husserl suggests, categorial intuition is involved even in minimally complex nominal presentations such as the presentation of the "the white paper". Here, too, there is an essential relationship in the object that must be able to be given, or presented, in an adequate (sensory or non-sensory) presentation of the object as it is in itself. More generally, Husserl says, all talk of "logical form" must be understood in terms of the kind of structure that is added by categorial intuition to the simple "material" of objects presented. In any case of complex, structured presentation, there will be aspects of what is presented that go beyond the simple, sensory material itself. In each such case, Husserl argues, it is therefore necessary to acknowledge the givenness of structure or form that goes beyond mere sensory intuition, yielding possible knowledge of the properties, aspects, and relations (logical as well as empirical) of the things as they are in themselves. Indeed, according to Husserl, it is in categorial intuition that *universals* and types are first given to us as objects of knowledge. In particular, on the basis of several acts of intuition of individuals, it is possible that a new kind of "abstractive" act occurs in which an object of a new type is given – the universal under which each of the several particulars stands. (p. 357) Although this new objectivity remains abstractively *founded* on wholly sensory presentations, it also goes beyond the individual sensory presentations in yielding intuitive access to an "ideal object", the "very sort" shared by them.[4]

The doctrine of categorial intuition as a wholly distinct, non-sensory form of givenness of logical form and ideal objects is thus Husserl's answer to the traditional question of the accessibility of categories and universals, which was first pursued as such by Aristotle had developed in close connection with his own conception of formal, syllogistic logic. At the same time, however, it points back, beyond Aristotle, to the issues involved in Plato's appeal to forms as paradigms or exemplars of qualities, properties or relations and to the problems of their manifestation in perceptible reality and their capability of being grasped by the mind. In particular, it is the possibility of predication, whereby an object is characterized

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[3] find this.
[4] later distinction between categorial intuition and eidetic intuition (seeing of essences) – cf. Exp. and Judgment.

as having some property or other, or more generally appears *as* something or other at all, in which Plato, like Husserl, finds the basic imperative for a theory of the givenness of form, which is for Husserl supplied by the doctrine of categorial intuition. This is so not only in the middle-period dialogues, where Plato sees a sensible particular's possession of a specific feature or property as a matter of its "participation" in a form or idea, but even more so (and in a somewhat different way) in late dialogues such as the Sophist, Statesman, Theatetus and Philebus, where, perhaps in response to Plato's own dissatisfactions with the middle-period theory of forms, the structured logos or sentence is seen as the site of the productive "mixing" or blending of forms into a more complex synthetic/diaretic logical unity. Husserl's conception of the availability of logical and categorial form also bears comparison [though I will not carry out this comparison here] with more contemporary conceptions of logical form and its basis, for instance the conception that figures centrally in the semantics and metaphysics of Wittgenstein's Tractatus, whereby logical form pervades the world and first makes possible the meaningfulness of structured language in relation to the states of affairs it represents. More generally, as I have argued elsewhere, Husserl's conception can usefully be compared to the variety of conceptions of logical structure and categorial form that remain current in analytic thinking; these conceptions tend to develop from Frege's famous context principle and locate the ultimate basis of logical form in the logical articulation and inferential relations of sentences or propositions.

In his Formal and Transcendental Logic of 1929, Husserl further clarifies the phenomenologically crucial dimension of the logical givenness of form as supported by the possibility of categorial intuition. Here, in characterizing the totality of a phenomenological logic devoted, as a whole, to the structure of judgments, Husserl distinguishes between the levels of a "formal logic" devoted only to the possible forms of judgments and a "transcendental" logic that goes beyond this to characterize the evidential and other aspects of judgments by virtue of which they become candidates for possible truth. According to Husserl, the study of the possible relations of judgments in accordance with fundamental laws of validity, and most importantly the law of non-contradiction (p. 54), yields a "pure analytic apophantics" or a general theory of the possible forms of judgment and possibilities for their conjunction in the unity of a statement or theory (pp. 65-66). Significantly, Husserl sees this "analytic apophantics" also as yielding general caetgorial structures such as that of the state of affairs, the object, and other general categorial determinations, as well as unity, plurality, and more complex mathematical structures ; as such, this analytic apophantics is capable of underlying a general and comprehensive formal-mathematical ontology that functions as an a priori formal theory of the possible structures of all objects and objectivities – p. 78, 88-89.

This is to be supplemented with a "transcendental logic" that, going beyond the mere constraint of the law of non-contradiction, yields a synthetic theory of the givenness of material-apriori provinces "in one totality", i.e. the totality and unity of "world". (p. 150). This involves extending the formal-analytic investigations of formal apophantics and ontology into the consideration of various material regions and the different kinds and degrees of *evidence* involved in the acquisition of knowledge in each of these domains. In accordance with the later Husserl's "genetic" phenomenology, the domain of transcendental logic is seen, along with the unity of the world that it articulates, as constituted by a transcendental subjectivity that gives unity and normativity to all possible empirical theories of the

world. Nevertheless, this "transcendental" logic remains rigorously grounded in the first, purely analytic and apophantic level of logic, and in a certain sense both actually remain "formally" determined. In particular, both levels of logical theory remain wholly dependent on non-sensory, categorial intuition of form to specify their relative articulations of the specific formal and material ontological domains that they yield. In both cases, what remains essential is the possible givenness of *ideal* structures and objects, in which, according to Husserl, a consciousness is formed of the ideal judgment, argument, etc. as "not merely quite alike or similar" in their various empirical instances, but rather "numerically, identically, the same". Thus, although the instances of the "appearance of the judgment" in consciousness may be multiple, it is possible to attain an intuitive awareness of the judgment itself as an objectivity outside of temporal determination and identically the same in each of its appearances.

Here, Husserl's argument extends the devastating critique of psychologism that he already undertook in the "Prolegomena to pure logic" at the beginning of the *Logical Investigations*. Whereas the psychological occurrences of thoughts and judgments, and their expressions in language, appear multiply and at discrete temporal moments, it is possible to obtain an awareness and evidence of them as single, identical objects not determined as existing at any particular point or span in time. This is, according to Husserl, an original form of presentation of the judgment as such, a presentation capable of underlying its multiple appearance at discrete times and in various instances, but itself giving its object as outside time and independent of temporal determination. The judgment as given in this way, on the abstractive basis of sensory intuition but essentially through categorial intuition, is an "irreal" ideality which, though like all "irrealities" capable of participating, in its own way, in temporally determined states of affairs and situations but nevertheless independent of time in itself.

II.

From the beginning of his academic career, Heidegger's investigations of contemporary thinkers and the historical tradition show a deep and central concern with the question of the source and provenance of categories in relation to the psychology of the thinking subject. In the first, doctoral qualifying dissertation of 1913, *The Doctrine of Judgment in Psychologism*, Heidegger applies Husserl's critique of psychologism about the basis of judgment to the theories of Wilhelm Wundt, Theodor Lipps, Heinrich Meier, and Franz Brentano. Two years later, the *Habilitationsschrift*, titled "The theory of the categories and meaning in Duns Scotus," had exhaustively examined the problem of the origin of categories in Scotus' scholastic philosophy, with particular emphasis on the origination of a "material determination" of formal categories in relation to the phenomena of unity, reflexivity, and what Scotus called haecciatas or "thisness". Here, Heidegger already draws on the phenomenology of Emil Lask, who had developed Husserl's doctrine of categorial intuition to describe the pre-theoretical or pre-cognitive givenness of categories in immediate, factical experience.[5]

 In the course "The Idea of Philosophy and the Problem of Worldview," given in the "war emergency semester" of 1919, Heidegger takes up the problem of the "essence of worldview" and considers

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[5] Kisiel, p. 27., crowell, etc.

critically the methodological and thematic views of the neo-Kantians Natorp, Rickert, and Windelband about our access to categories, the forms of judgment, and the sources of value and truth. Here, Heidegger raises a challenge to the neo-Kantian "critical-teleological" method that will become increasingly important to his own thinking and eventually merge with his developing criticism of Husserl. For the neo-Kantian "philosophy of value," truth appears only in the category of what "holds value" [in the sense of *gelten*] or what amounts to a teleological norm for thought. Here, the category of "value" in this sense is moreover sharply distinguished from the existence of what is in being: the realm of what holds value and truth is conceived as wholly distinct from actual existence, and the relationship between the realms left somewhat obscure. But, Heiedegger objects, it would be impossible to determine the normativity of value and truth, or what is to be valued or taken as true, if this "normativity" did not somehow have a basis in what is given in the concreteness of actual, lived experience. Thus, according to Heidegger, "Teleological-axiomatic grounding would lose all sense *without a pregiven* chooseable and accessible *something,*a *what*. " (p. 33)

Heidegger next attempts to determine the possibility of this "material giving" by which concrete, pre-theoretical life experience yields access to the theoretical categories and structures by means of which we can understand the structure of judgment and the possibility of truth. Here, what is thought in neo-Kantianism as the "psychic" realm of the givenness of ideals and values must be interrogated as to its own status and kind of existence: thus the whole problematic "concentrates itself" on the single question of "how the psychic is to be given as a sphere." (p. 47) And since, according to Heidegger, "the theoretical itself and as such refers back to something pre-theoretical" (p. 47), it is essential to determine how the structure of categories might alreadybe given in pre-theoretical experience and in the kind of availability of objects that is displayed in ordinary, non-theoretical life. This demands, in particular, that we come to see concrete lived experience as a continuous temporal flow of change already endowed with meaning, not what "pass[es] in front of me like a thing" or even "a fixed process, but an ongoing event of appropriation [here Heidegger, suggestively, uses for the first time the term "Ereignis," which will much later become one of the key words of his thought] which is neither "inner" nor "outer," neither "physical" nor "psychical", but rather "lives out of one's 'own-ness'" and only in this way. (p. 60).

How, then, does the flux of concrete experience with its event-like, appropriative character actually suffice to point toward the formal categories of judgment, being, and truth? And how might these categories actually be determined theoretically on the basis of their pre-givenness in concrete, lived experience? Heidegger sees Husserl's phenomenology, here understood as a "pre-theoretical primordial science" (p. 49) as holding the answer to these problems. In particular, a rigorous practice of "phenomenological seeing" allows the "pre-worldly" "experienceable as such" to be elicited and thereby to point toward the level of the "formally objective" which is not limited to the categories and structures of objects, but itself refers back to the "fundamental level of life in and for itself." (p. 89). The key to this reciprocal movement between pre-theoretic experience and theoretical recapitulation is what Heidegger calls, in the closing pages of the course, a "hermeneutical intuition" which functions as an "originary phenomenological back-and-forth formation of the recepts and precepts from which all theoretical objectification, indeed every transcendent positing, falls out." (p. 89)

In the 1923 course "Ontology—The Hermeneutics of Facticity," Heidegger further specifies the "hermeneutical" methodology of the eliciting and demonstration of the formal dimension of ontology from out of the pre-theoretical factical givenness of concretely experienced life. Emboldened by his decisive and transformative confrontation of Aristotle, Heidegger is now willing to criticize the totality of "traditional ontology" since the Greeks, as constantly having in view what is really only a specific modality of being, namely "being-an-object." In so doing, Heidegger suggests, traditional ontology systematically blocks access to "that being which is decisive within philosophical problems," namely Dasein itself.[6] In particular, Heidegger says in the course of a discussion of Max Scheler, the philosophical tradition presupposes the guideline of the traditional definition of man as "animal rationale" and thereby places extant, objective beings in advance in "definite categorial forms" that are pre-determined by this definition. By contrast, hermeneutics in Heidegger's sense has as its thematic object "in each case our own Dasein in its being-there for a while at the particular time" [jeweilen das eigene Dasein] (p. 21); Heidegger defines "facticity" in terms of the "ownness" and "appropriation" [eigen, Aneignung] of this being. He emphasizes that Dasein, so conceived, is not to be understood as "human being" in any familiar sense, or indeed as an answer to the question "what is man?"; in fact, facticity as the Dasein which is in each case our own "initially contains nothing of the ideas of "ego," person, ego-pole, center of acts." (p. 24) Indeed, in the hermeneutics of facticity, the expressions "human Dasein" and "human being" are explicitly to be avoided (p. 21) and "even the concept of the self is, when employed here, not to be taken as something having its origin in an 'ego'!" (p. 24) [7]

The critique of the humanism of the rational animal, which Heidegger voices here, will remain, in various forms, a fixture of his critical discussions of the tradition throughout much of the rest of his career. Here, although Heidegger still conceives of his own method of hermeneutical inquiry into facticity as simply an application of Husserl's own phenomenological method of seeing, the critique nevertheless yields the terms in which he will first begin to offer some cautious criticisms of Husserl's project, or at least of what he sees as its "misunderstanding" in the further development of the phenomenological tendency, in Husserl and others, after the *Logical Investigations*. In particular, on Heidegger's gloss, phenomenology arises in close connection with the rapid development of psychology at the end of the 19th century, at a time when "the work of philosophy was … applied mainly to the phenomenon of consciousness" (p. 55) and epistemology and logic were widely thought to have a psychological foundation. By contrast, the *Logical Investigations* boldly asked about the kind of being possessed by the "objects about which logic speaks"; this questioning yields Husserl's detailed study of content and meaning, as well as his decisive development of the concept of "intentionality" already suggested by Brentano. Nevertheless, Heidegger suggests, the *Logical Investigations* have largely been misunderstood, for instance as primarily a contribution to epistemology in line with neo-Kantianism, and the further development of phenomenology has exhibited four moments that jointly tend to distort its original sense and even render impossible its fundamental mode of investigation. First, the thematic domain of "consciousness" has been "held fast" as the proper domain for phenomenological investigation and as the ur-region including the whole of the real, and this has led to a predominance of

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[6] p. 2
[7] [Heid adds "cf intentionality and its *arche*"].

epistemological rather than ontological questions, as well as the introduction of transcendental idealism as the basic position of phenomenological research. Second, the results of the investigations which Husserl first carried out in the field of logic were unjustly applied to other domains, leading to the presupposition of a specific (and, Heidegger implies, inappropriate) model of inquiry across all fields, and third, the "drive for a system" has come to predominate. (p. 57) Finally, all of this has resulted in a "general watering down" that lets phenomenological research sink toward a "wishy-washiness, thoughtlessness," and a lamentable general tendency toward mystification.

Heidegger rails against all of these trends, albeit without making completely clear which of them he attributes to Husserl himself and which to his followers in the "philosophical industry" that phenomenology has become, and calls for a revitalization of phenomenology that does not define it in terms of any privileged domain of being or fixed methodological model, but rather as "a how of research which makes the objects in question present in intuition and discusses them only to the extent that they are there in such intuition." (p. 57). This provides the essential guideline for the "hermeneutics of facticity" which always interprets the phenomena on the basis of Dasein's "forehaving" of them as they are actually given in concrete, factical life (pp. 61-62) and in the phenomena of Dasein's "having-itself-there" and "always-being-in-such-a-manner." In particular, Heidegger suggests: "The forehaving in which Dasein (in each case our own Dasein in its being-there for a while at the particular time) stands for this investigation can be expressed in a formal indication: *the being-there of Dasein (factical life) is being in a world*." (p. 62). In particular, in the movement from Dasein's factical life to the formal indication of its structure, Heidegger discovers "significance" in the sense of "being-there in the how of a definite signifying and pointing" as the fundamental characteristic of Dasein's capacity of encountering worldly things and hence, in a sketchy analysis that already anticipates some of the main categories of *Being and Time*'s first division, as the fundamental structure of Dasein's being-in-the-world, further to be articulated into the phenomena of "disclosedness," "familiarity" and "the unpredictable and comparative." (sections 23-25).

In specifying the general structures of Dasein and world that are thus hermeneutically articulated on the basis of the fore-having of concrete life, Heidegger makes use of a methodological device that he had first introduced in the course "Introduction to the Phenomenology of Religion" of 1920-21 and which, as recent commentary has emphasized, plays an essential role in specifying his method of analysis throughout the early 1920s as well as in *Being and Time*.[8] This is the device of "formal indication." By means of formal indication, the concreteness of factical experience points "back" to the more universal structures that are its basis in the structurally articulated phenomenon of Dasein itself. In particular, in introducing "formal indication" in the 1920-21 course, Heidegger emphasizes a distinction already drawn by Husserl between two types of universalization. Generalization is one type: in generalization, we move from the individual objects or phenomena to their genus or type. This is to be distinguished, however, from formalization: in formalization, we do not simply move from a phenomenon to the higher genus under which it falls, but rather elicit its structure and sense, including the distinctive way in which it is given. The "formal indication" is an indication or pointer to this structure and sense, not limited to "formalization" in the sense of ordering or mathematizing, but rather capable of pointing out

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[8] Kisieal, Dahlstrom, van Buren, etc.

the more comprehensive and fundamental structure that Dasein and world shows themselves as having in the course of concrete hermeneutical (phenomenological) interpretation.[9]

As Daniel Dahlstrom has recently argued, formal indication may thus be distinguished from other modes of signification or demonstration in that the achievement of formal indication is intended, constitutively, to involve (and potentially transform) the agency of the indicator herself; through the accomplishment of the formal indication we can achieve a fundamental kind of insight into the structures of what we must, constitutively, recognize in each case as *our own* Dasein in its concrete, temporal, unfolding. Formal indication is thus emphatically *not* a way of abstractly describing the forms or categories of human life or of entities in general from an abstract, theoretical position, and in the "hermeneutics of facticity" course Heidegger emphasizes that a formal indication "can only be filled out by looking in the direction of its concrete source in intuition" and is "always misunderstood when it is treated as a fixed universal proposition." (p. 62). Nevertheless, though a formal indication is not a generalizing description or a theoretical ordering, it remains *formal* in at least two respects. First, the use of the formal indication in connection with the hermeneutic, interpretive method of inquiry that Heidegger had developed by 1923 and would continue to employ in *Being and Time* is precisely to indicate, on the basis of given, factical experience, more universal, unitary, and constitutive structures of Dasein as such; this is not the description of categories of objects present at hand but, as developed in Division I of Being and Time as a "fundamental ontology", the necessary pre-condition for any possible clarification of the modes in which objects and phenomena may be given at all. Second, as Heidegger points out in the *Phenomenological Interpretations of Aristotle* course of 1921-22, (p. 33), the formal indication remains formal in that it has a *binding* character – it essentially links the diverse phenomena given in the heterogeneity of lived experience back to the unity of a single formal structure in which the distinct modes of being both of individual objects, and of the world itself, come into view.

III

By 1923, Heidegger was thus already in essential possession of the distinctive methodology for the elicitation of the formal structure of Dasein that he would employ in the "preliminary fundamental hermeneutic of Dasein" in Division I of Being and Time. Over the next several years, his further radicalization of the methodology first suggested by Husserl for the demonstration of what were for him the atemporal categories of being, would lead Heidegger to undertake a devastating critique of his erstwhile teacher and to violently re-open the most fundamental questions concealed beneath the traditional determination of the senses of being and time. This route from Husserlian phenomenology to this dramatic re-opening of the fundamental questions of philosophy is most evident in two courses from the period immediately preceding the finalization of Being and Time: The course "History of the Concept of Time: Prolegomena to a phenomenology of History and Nature" from 1925, and the comprehensive "Logic: The question of truth" of 1925-26. In these courses, we can witness not only the methodologically instructive "back-story" to the use of the phenomenological method in Being and

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[9] Kisiel, pp. 165-170.

Time, but also, beyond this, the way in which the guiding question of the givenness of form which Heidegger posed to existing phenomenology along with the whole preceding philosophical tradition led him to the profound and original question of time itself.

In the 1925 course, Heidegger opens the project of a "history of the concept of time" intended to clarify and lay out the fundamental senses of temporality underlying the various specific sciences and "domains of being as such", including importantly the domains of nature and history. (p. 5). In order to elicit the fundamental significance of time as it is interpreted across these domains, it is essential that we employ a mode of investigation that is neither historiological nor systematic, but rather phenomenological (p. 7). In particular, the phenomenological mode of investigation, which precedes both narrowly historiographical and abstract, systematic forms of investigation of time, is necessary in order to clarify how the basic question of philosophy, the question of the *being* of entities, falls into decline and distortion with the theoretical determination of the various domains of reality as "temporal, extratemporal, and supratemporal." (p. 6).

Heidegger focuses his explication of phenomenology here on the interpretation, and radicalization, of what he sees as its three most important discoveries so far. The first is the discovery of intentionality as the basic structure of "lived experience as such" that makes possible all judging, meaning, and understanding (p. 29). Here, criticizing what he sees as misinterpretations of the basic structure of phenomenology by Dilthey and Rickert, Heidegger emphasizes the inadequacy of representational theories of awareness and consciousness: in a simple intentional act of perception, for instance the perceiving of the chair before me, there is no secondary representation of the object but rather simply the direct presence in perception of the chair itself (p. 37-38). More generally, according to Heidegger, intentionality is deeply misinterpreted if it is understood as a relationship between the distinct spheres of the psychic and the physical; this misinterpretation, ultimately drawn from the ontology of the natural sciences, is at the root of the representationalist picture (p. 35) and fundamentally mischaracterizes the actual nature of intentionality, which is that of a purely "psychic" structure of comportment in which objects and phenomena may nevertheless be given directly "in bodily presence," just as they are in themselves. Nevertheless, the nature of this "psychic structure" itself raises important and fundamental questions which, Heidegger now ventures to assert, even Husserl has not yet answered in a satisfying way. In particular, in the development of phenomenology so far, "The character of the psychic itself was left undetermined, so that that of which intentionality is the structure was not brought out in the original manner demanded by intentionality." (p. 46). According to Heidegger, although Husserl has tried to go beyond the "psychic restriction" of intentionality with his late theory of the universal structure of reason, even this development does not succeed in attaining the "more radical internal development" of the theory of intentionality that is now necessary. In particular, Heidegger suggests, "it must…be flatly stated that what the belonging of the *intentum* to the *intention* implies is obscure. " Even with Husserl's extended efforts, "how the being-intended of an entity is related to that entity remains puzzling." (p. 47)

The second major discovery which Heidegger sees phenomenology as having made is that of categorial intuition. Heidegger here rehearses Husserl's conception of evidence as the "identifying synthesis" of fulfillment and of truth as the *adequatio intellectus ad rem*, or the "being-identical" of what is intended

and what is intuited. (p. 51). Already in this conception, Heidegger suggests, there is a basic and important ambiguity. According to Husserl's theory, in a successful intentional act that attains truth, the meaning-intention is actually brought into coincidence with the fulfilling intuition of its object; this is the actual performance of the "identifying synthesis" of truth. Is, then, truth to be identified with the standing and atemporal "subsistence" of the relationship of identity between what is intended and what is actually given? Or is it rather to be identified with the actual, particular and datable act of bringing-together of the intention and the intended? In the first case, truth will be the standing, always-possible correlate of a possible act of synthesis or identification, but will not be identified with any such act; in the second, by contrast, it will be an aspect or achievement of such an act itself. This ambiguity, which Heidegger suggests characterizes any and all accounts of truth as correspondence, becomes sharpened if we consider the phenomenological account of even a simple assertion made on the basis of direct perception, for instance: "the chair is yellow." Here again, we may consider the "being-yellow" of the chair in either of two radically different ways. First, the *being*-yellow of the chair may be emphasized – that is, we can take it that the truth of the assertion consists in its being able to present the chair as "really" or "truly" yellow, in the subsisting and standing relation of identity between the *content* of the act that intends it as yellow and the chair as it is in itself. Second, however, we can emphasize the being-*yellow* of the chair, and under this conception we have in view an actual aspect or structural moment of the state of affairs itself. (p. 54). In the first case, the "is" of the true predicative assertion "the chair is yellow" is again understood as "being in the sense of truth as the subsistence of identity;" in the second case it is understood "in the sense of the copula interpreted as a structural moment of the state of affairs itself." (p. 54). But because these two senses of being and truth have never been clearly distinguished within phenomenology, Heidegger suggests, there remains within Husserl's conception a basic confusion with respect to the sense of being itself. In fact, however, both confusions can be avoided if we understand truth in a third, more radical sense, one that refers neither to a subsisting relation of abstract identity between intention and fulfillment, nor to the actual performance of any act of identification. This third and (according to Heidegger) more basic sense of truth is one grounded in the intuited entity itself, which itself "provides the demonstration" of the truth of any assertion or statement about it. This is, Heidegger suggests, "the concept of truth which also emerged very early in Greek philosophy"; it is the concept of truth as *aletheia* or the disclosure of the entity itself, which Heidegger here suggests means that "Truth comes down to *being*, to *being-real*." (p. 53)

In the Logic course, Heidegger further clarifies what he sees as the implications of this third, most fundamental understanding of truth for the disclosure of beings and situations and for the structure of the logic of assertions and propositions. In particular, the truth and falsity of all propositions and assertions is grounded in a prior level of disclosure of beings. On this level, truth does not yet have the propositionally articulated structure of predication and the copula, but is simply the disclosure of "something *as* something." (p. 121) This primary "as-structure" is what Heidegger calls the "hermeneutical 'as'" to distinguish it from the secondary, "apophantic" "as-structure" of the articulated proposition; crucially, the original, hermeneutical "as" characterizes the kind of disclosure involved in everyday coping and handling of everyday objects and situations, and so may be considered to precede and condition the explicit formation of predicative judgments. (p. 122). In an extremely close and detailed reading of Aristotle's Metaphysics, book 9, section 10, Heidegger attempts to show how

Aristotle's own official theory of the *logos apophantikos* (or propositional statement) as a synthetic/diaretic structure capable of truth and falsity (that is, a structure formed of the combination and separation of distinct propositional elements) is itself essentially preconditioned by this original, disclosive sense of truth and the primary hermeneutic "as-" structure. (pp. 136-157). This leads Heidegger further to characterize this primary hermeneutic structure, in its conditioning of propositional truth, as essentially including three constitutive moments: i) an orientation toward the uncovering of things (or a "prior intending and having of the subject matter"); ii) a showing of the subject matter as something else; iii) the possibility of synthesizing something with something. (p. 158). But what is most important in connection with Heidegger's development of phenomenological methods is the way in which this analysis yields a primary sense of truth that owes nothing to identity, correspondence, or correlation – either the actual identity of acts or the synthesis of meanings – but rather sees truth as pointing directly to being, in the sense of the possible disclosure of things in themselves. In particular:

> "Truth is not a relation that is 'just there' between two beings that themselves are 'just there' – one mental, the other physical. Nor is it a coordination, as philosophers like to say these days. If it is a relation at all, it is one that has no analogies with any other relation between beings. If I may put it this way, it is the relation of existence as such to its very world. It is the world-openness of existence that is itself uncovered – existence whose very being unto the world gets disclosed/uncovered in and with its being unto the world." (p. 137)

As I have argued elsewhere, despite the indisputable insight involved in this rejection of all correspondence theories of truth (an insight which Heidegger in fact shares with many of the most percipient philosophers of the analytic tradition), Heidegger's own understanding of truth as simple disclosure is in many ways problematic from the perspective of a broader inquiry into the constitutive logical forms of judgments and assertions.[10] In particular, as Ernst Tugendhat pointed out in his classic critique of Heidegger's notion of truth as aletheia, it is deeply uncertain whether this sense of truth as primarily the disclosure of entities can in fact support a robust distinction between truth and falsehood at all. Understood simply as an event, the aletheic disclosure of an entity would seem either simply to occur or not to occur, and Heidegger indeed sees no room in the basic concept of truth for the identification of presenting intention and fulfilling intuition that Husserl sees as occurring in the case of truth and failing in the case of falsity. Instead of consisting in any kind of identity or even adequation between an intentional act and its object, for Heidegger truth is simply the being-true of the entity itself, its being-revealed or being-present, and it is uncertain what we are to make, in this case, of an entity's *failing* to be true, assuming it shows up at all. Nevertheless, Heidegger in fact devotes exhaustive analyses, here and elsewhere, to the original possibility of falsehood, which he understands as a kind of being-revealed but in the mode of being veiled or covered-up, and he holds here that the possibility of this veiling is itself to be found in the original structure of what he here calls the hermeneutic "as", the pre-theoretical and pre-predicative structure in which something is revealed *as* something. This "as" structure gives, in a certain way, an original articulation to the entities that can be revealed, in turn making it *possible* to form explicit, predicative and judgments about them that combine names with non-nominative elements such as categorial expressions and the "is" of predication. But unlike Husserl's

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[10] " Heidegger, Tugendhat, and Truth"

correspondence theory, this yields, according to Heidegger, an understanding of truth that in no sense relies on psychic acts of comparison or identification, and in fact demonstrates the pre-eminently objective and original meaning of "truth".

Despite this fundamental objection to the treatment of truth in Husserl's phenomenology, Heidegger nevertheless continues to emphasize the crucial importance of Husserl's discovery of categorial intuition for the actual interpretation of the overall sense of being itself. Heidegger here sketches the basic motivation for Husserl's introduction of a fundamentally non-sensory type of intuition, emphasizing that in the presentation of what we already have in a simple perception, e.g. that "This chair is yellow and upholstered", goes far beyond the sensuous matters perceived (the chair, its being-yellow, and its being-upholstered) to include essential elements (e.g. "this", "and, "is") that we cannot ever perceive. However, these moments, including importantly "being" in the sense of what is expressed in the perceptual assertion by the copula "is", clearly also amount to essential aspects of what is actually perceived in itself. This is what leads Husserl to suggest categorial intuition as a distinct form of intuition capable of revealing what is ideal, by contrast with the real-sensory objects of sensory intuition. In fact, Heidegger suggests, with this Husserl has taken an essential leap forward, beyond empiricist, idealist, and subjectivist theories of consciousness and representation, precisely in that he has shown that "the non-sensory and the ideal cannot without further ado be identified with the immanent, conscious, subjective;"(p. 58) for Husserlian phenomenology, there is, in other words, a wholly distinct mode of being of categorial form and structure that cannot be reduced either to the sensory or to its representation or recombination in subjective consciousness. Indeed, the categorial structures demonstrated by categorial intuition, which always intrinsically "pervade" every act of even simple perception, are "nothing like consciousness", but instead amount to a "special kind of objectivity" (p. 59), one which allows the objects and matters given in simple acts to be "disclosed *anew*, such that these objects come to explicit apprehension exactly as they are." (p. 62)

Husserl has thus discovered in categorial intuition the actual possibility of accessing an objective dimension of form, whereby the actually existing state of affairs can be "characterized as a specific relation whose members give what is articulated in them the form of subject and predicate" (p. 64). This shows that "objectivity in its broadest sense is much richer than the reality of a thing…" (p. 66) but includes also the objective and objectively given formal structures that underlie the non-sensory moments and relations of any structured state of affairs, including the structure of the copula that links subject to predicate in a predicative judgment. This confirms, according to Heidegger, that "The categorial 'forms' are not constructs of acts but objects which manifest themselves in these acts. They are not something made by the subject and even less something added to the real objects, such that the real entity is itself modified by this forming. Rather, they actually present the entity more truly in its 'being-in-itself'" (p. 70) Indeed, they "constitute a new objectivity" in the sense of letting the entity be seen in its objectivity (p. 71) As such, they point to a new "genuine form of research" (p. 71), one that is finally capable of "demonstrating the categories" and universals sought throughout traditional philosophy.

But although Heidegger thus sees categorial intuition as pointing toward the possibility of the givenness and intuitive presentation of an original and objective dimension of form, further interrogation of the

status and possibility of this givenness now lead Heidegger to what is perhaps his most decisive and central criticism of Husserl's phenomenology as a whole. Husserl's development of categorial intuition, in connection with the phenomenological theory of intentionality and Husserl's later distinction between the real, noetic and the ideal, noematic aspects of acts, has elicited the possibility of an original givenness of what Husserl understands as the "ideal," the actuality of forms and categories that are given to consciousness in categorial intuition without being, for him, in any way real or temporal. But what Husserl has fundamentally failed to do is to clarify fundamentally the relationship of this posited "ideal" realm to the real temporal flow of consciousness itself. In the 1925-26 "Logic" course, Heidegger ventures to raise the question of the ideal and the real in phenomenology in a sense more radical, and penetrating, than Husserl has been able to. In the critique of psychologism begun in the Prolegomena to the logical investigations, Heidegger suggestions, Husserl has indeed decisively pointed out the fundamental shortcomings of a "naturalism" that remains rooted in "blindness to the non-empirical" and to "propositional content as such" (p. 42), which means, for Husserl "*ideal* being"; indeed, here Husserl's critique is so successful that "Today we can hardly conceive…how anyone could believe that we could understand anything about the logical structure of what is thought as such – the "thought – by way of a psychological study of thinking." (p. 43). Nevertheless, although the critique of psychologism must certainly be deemed successful in pointing out fundamental distinctions of being wholly overlooked by naturalistic accounts, it is in fact far from certain that Husserl's understanding of the sense and structure of judgments as founded in "ideal" being is sufficient. For in order to gain actual clarity about this structure, it will be necessary for phenomenology (along with, Heidegger suggests, Marburg neo-Kantianism, which falls into similar problems) fundamentally to clarify the possibility of ideal, timeless structures being given in temporal consciousness. In fact, Heidegger follows Hermann Cohen in suggesting, the phenomenological critique of psychologism has in certain ways even *increased* the "danger" of a fundamental mis-interpretation of the multiple senses of being involved in the givenness of logical forms and structures as such:

> That is, philosophy will be forced to confront the question about what really is the case with this 'mental'. Can we simply brush off the act of judging, its enactment, or the statement, as something empirical and merely mental, as contrasted with a so-called ideal sense? Or does an entirely different dimension of being finally press to the fore here, one that can certainly be very dangerous once we glimpse it and expound it as something fundamental? Therefore we could say that although this critique of psychologism is from the outset utterly clear on the guiding distinction between empirical and ideal being, nonetheless the positive questions that now press forward from this distinction are quite difficult. These are questions that did not surface first of all in the nineteenth or twentieth centuries, but that already engaged Greek philosophy, especially Plato. This distinction is the same as the Platonic one between sensible being, the *aistheton*, and the being that is accessible through reason or nous: the *noeton*. The inquiry today takes up again the question of the *methexis*, the participation of the real in the ideal, and it is up for grabs whether or not we can get clear on the phenomenon of thinking, of the thought, and more broadly of truth, by stating the problem in these terms. (pp. 43-44).

In other words, with the fundamental distinction between real, temporal acts and ideal, non-temporal contents, which it wields against the psychologistic doctrine of logic and understands as underlying the distinction between sensuous and categorial intuition, phenomenology runs directly into the very problem of participation that Plato already faced at the very beginning of systematic ontological research in the Western tradition. This is the original problem of the givenness of form, or of the relationship between what the ontological tradition understands as the ideal dimension of the thinkable to the reality of temporal processes and events. It is, of course, far from clear that Plato ever solved this problem, or even took himself to have an adequate solution to it; rather, it palpably forms the unresolved center of several of the dialogues usually attributed to the last stage of his career.

In any case, according to Heidegger, in simply presupposing the "Platonic" distinction between the ideal realm of form as timeless and the temporal realm of the sensory, Husserl has, despite the fundamental usefulness of the methods and tools of phenomenological research that he has introduced, ultimately failed to clarify the obscure sense or senses of being that actually underlie the possibility of the kinds of demonstration that phenomenology can achieve. Accordingly, while continuing to assert his complete agreement with the Husserlian critique of psychologism, Heidegger also ventures to raise a series of "anti-critical questions" (p. 74) that directly concern the larger and underlying issue of the relationship of the "real" to the "ideal". If the ideal is to be conceptualized and thought about in real acts of thought, then must it not be present and at hand in some way alongside the real? "Do they border on each other like two regions of things – like the land and the sea?" (p. 75) Perhaps most centrally, is the relationship between the ideal and the real itself a real, or only an ideal, relationship? As Heidegger says, this is nothing other than the "old question" of participation, or the "*methexis* of the real (the sensible) in the ideal (the non-sensible)." The question that he here poses is, in fact, closely reminiscent of the notorious "third man" problem that Aristotle already found in Plato – if there is to be a relationship between the ideal, timeless being of forms and the real existence of sensory particulars, how are we to understand the status of this relationship itself? Formulated as a problem of predication, this is the problem of how the logical predicate is related or attached to the subject in a declarative, predicative sentence, or in the real state of affairs it represents. In fact, though, Heidegger suggests, it is not clear that any significant progress has been made with this problem in the two millennia since Plato.

In the context of Husserl's own project, Husserl's simple presupposition of the ideal/real distinction, which he fails along with the rest of the philosophical tradition to clarify, is in fact grounded in another failing, one which is ultimately responsible for what Heidegger sees as the decline of phenomenology into transcendental idealism, subjectivity, and an ultimately "personalistic" attitude that fails fundamentally to elucidate the very categories it presupposes. In particular, Heidegger suggests in the 1925 course, Husserl finally understands "pure consciousness" as the ultimate region of being, in which all others – the being of the real and spatiotemporal as well as that of the ideal – are constituted and given sense. But in so doing, Husserl has in fact *failed* to inquire into the "being of this region", the actual ontological status of the "ur-region" of consciousness itself. (p. 102). Specifically, in thinking of consciousness as the ultimate region of the givenness of and constitution of being, Husserl has failed to inquire into the actual possibility of the subject of such consciousness himself to exist as a "real human being," concretely and factically existing in a world. (p. 101).

This leaves the status of "transcendental subjectivity", as Husserl conceives of it, radically ambiguous. On the one hand, the consciousness of the subject appears as the transcendental, ultimate, and pure region in which all sense, being, and the world itself is constituted. But on the other, in accordance with a "personalistic" tendency that Heidegger sees as first exemplified in Husserl's 1910 essay "phenomenology as a rigorous science" and increasingly marked in Husserl's work since then, the really existing entity that is capable of this transcendent consciousness is conceived as simply a natural, biological being to which rationality and consciousness are somehow adjoined. (p. 125). This is, of course, not simply equivalent to the naturalistic position that Husserl has so adamantly opposed. But nevertheless, Heidegger suggests, it once again takes its orientation fundamentally from the traditional definition of man as the "animal rationale," the organism, in itself simply natural, to which reason, logos, or spirit is secondarily somehow added as a kind of extrinsic possession. Within this framework, moreover, the reality of the psyche and its concrete acts of intentionality, though of course rigorously distinguished from the ideality of their content, nevertheless themselves appear to have the kind of status and temporality of natural objects and processes, wherein "every entity is taken a priori as a lawfully regulated flow of occurrences in the spatio-temporal exteriority of the world." (p. 113) What is missing in this whole conception is, once again, a more penetrating inquiry into the kind of being of the being thus specified, and the "primary experience" of being-in-the-world that it enjoys.

Thus, according to Heidegger, Husserl's phenomenology of subjectivity ultimately presupposes the being of an entity – Dasein – into which it has not sufficiently inquired. In this way, moreover, Husserl has in fact failed to clarify the genuine, underlying sense of intentionality itself, or to motivate how anything like an intentional relationship is possible to begin with. In order to accomplish this clarification, it would have been necessary for Husserl to recognize that "If the intentional is to be interrogated regarding its manner of being, then the entity which is intentional must be originally given" and "the original relationship of the being to the entity which is intentional must be attained." (p. 110) In particular, according to Heidegger, it is necessary to ask about the "the entity that does not, as it were, cast a bridge over the gap between these two regions [i.e., the real and the ideal], but instead (if one has to understand it in this way) renders possible these two regions of being in their original unity?" (p. 75)

IV

As we have seen, this clarification of the original possibility for the worldly existence and disclosure of significance is just what Heidegger takes himself to have gained through his original description of Dasein and the hermeneutic method of displaying it by means of formal indication of its structures. This methodology that is itself derived from Husserl's phenomenology and in particular from the decisive innovation of categorial intuition, but in turning these methods decisively toward the question of the actual sense of being, Heidegger can suggest that Husserl himself has essentially failed to take them far enough. Heidegger's own radicalized phenomenological method, by contrast, is capable of eliciting the actual structure of the being, the entity, in whose structure the formal possibilities of meaning, judgment, and truth are originally given. As such, the methodology of hermeneutic interpretation and formal indication provides Heidegger's own answer to the problem of the givenness of form, or of the availability of the constitutive categories of meaning and truth to intuition and experience in its

concrete, temporal flow. Nevertheless, as Heidegger recognizes, all of this still leaves open the essential question of temporality itself. In particular, Husserl along with the entirety of the tradition conceive of the relationship of the ideal to the real as the relationship between two regions determinable most basically in terms of their temporality: the ideal is the region of the timeless, whereas the real is in time. The problem at the root of Heidegger's objections to Husserl's project is that of finding a way to cross the gap between these two "regions"; this is none other than the problem of finding a way for what is conceived as atemporal, ideal form really to enter into, to be given in, temporally flowing reality. And here, even Heidegger's own radicalized methodology of formal indication is no help, unless it can clarify the fundamental possibility of the givenness of form that is at stake here with respect to its own temporality.

In fact, Heidegger suggests, once we conceive of the givenness of form as a matter of the figuring of atemporal ideals within temporal reality, this problem is basically insoluble: there is no coherent way to bridge the gap between the ideal realm of form and the real realm of temporal life it shapes, once these are distinguished as distinct regions, the one atemporal and the other within time. But this does not at all mean that Heidegger wishes simply to absorb form into the temporality of empirical life or return to the psychologistic assimilation of the givenness of form to datable acts of the empirical psyche. Rather, in one of the most profound and original gestures of his thought, he undertakes instead to interrogate in a more basic sense the very givenness of time itself. This is a radicalization of the question of the givenness of form along the lines of temporality itself.

To perform this radicalization, Heidegger once again draws centrally upon Husserl's phenomenological methods, developing them in the direction of a deeper posing of the question of the very sense and meaning of being as determined by time. In the History of the Concept of Time course, Heidegger presents as the third fundamental breakthrough of phenomenology (the first two are its discoveries of intentionality and categorial intuition) the discovery of the" original sense of the a priori." Of course, the notion of the apriori as "that which already always is the earlier" (p. 73) is already marked in Plato's understanding of the distinctive mode of existence of the forms, and in Descartes and Kant this "a priori" is thought in terms of the priority of the subject, as that which comes before and forms the basis for knowledge of objects. Nevertheless, according to Heidegger, it was left to phenomenology to identify, with its distinctive invocation of categorial intuition and its essential reference to the demonstration of ideality, to discover an apriori that is "not limited to subjectivity," and indeed "has primarily nothing at all to do with subjectivity." (p. 74) In fact, Heidegger suggests, despite Husserl's own official understanding of the categories as constituted in the category of "transcendental subjectivity," the real significance of the discovery of categorial intuition is ultimately to make it clear that "something like the highlighting of ideas occurs both in the field of the ideal, hence of the categories, and in the field of the real." (p. 74) In this sense, the a priori as phenomenologically disclosed in categorial intuition is in fact "not only something immanent, belonging primarily to the sphere of the subject," but also "nothing transcendent," in the manner of Plato's forms, either. In fact, the a priori is not, Heidegger suggests, the determinant of a specific mode or region of entities but rather an exemplary indication of one of the senses of being as such: it is "not a title for comportment, but a *title for being."* (p. 74)

Heidegger thus sees in Husserl's discovery of the "original sense of the apriori" a first and leading indication of the radical possibility of something like a disclosure of the sense of being as such, one that in itself owes nothing to the being of any specific entity, including that of the subject. In particular, if the *a priori* as disclosed through categorial intuition or its radicalized form, namely formal indication, is indeed completely indifferent to subjectivity, then it also has nothing to do with epistemology or the order of knowledge, nor to the serial ordering of beings as "earlier" and "later". Rather, according to Heidegger, it indicates an essential structure feature of being in itself:

> Thus the first thing demonstrated by phenomenology is *the universal scope of the apriori*. The second is *the specific indifference of the apriori to subjectivity.* The third is included in the first two: the way of access to the apriori. Inasmuch as the apriori is grounded in its particular domains of subject matter and of being, it is in itself demonstrable in a simple intuition. It is not inferred indirectly, surmised from some symptoms in the real, hypothetically reckoned, as one infers…This leads to a fourth specification of the apriori. The "earlier" is not a feature in the ordered sequence of knowing, but it is also not a feature in the sequential order of entities, more precisely in the sequential order of the emergence of an entity from an entity. Instead, the apriori is a *feature of the structural sequence in the being of entities, in the ontological structure of being."* (p. 74)

This formally indicated "earlier" will in fact survive and find direct expression in the "always already" which characterizes the distinctive ontological modality of the formally indicated structures of Dasein in *Being and Time,* the formally indicated structures of Dasein in being and time. But first, as Heidegger makes clear, it is essential to inquire into the temporality that *it* itself involves, and in particular to reconsider the specifically Greek determination of being as presence, which constrains the *a priori*, in the Greeks and all who follow them in the ontological tradition, to understand the a priori as the constant, underlying presence of an exemplary realm of entities – Plato's ideas, the substance or substrate of the hypokeimenon for Aristotle, or the subject of Descartes and Kant. In particular, if, as Heidegger suggests, the historical "discovery of the apriori is really connected or actually identical with the discovery of the concept of being in Parmenides or in Plato," (p. 75), it is necessary in reconsidering the "prevalence of this particular concept of being" to re-open a radical interrogation into the temporality presupposed in this traditional concept of being, the concept of being as presence that has constantly been presupposed since the Greeks.

Heidegger is thus led, finally, to take up once more the question of the possible givenness of the *a priori* dimension of the formal determination of the structures of the disclosedness and meaning of being, this time along the guideline of the essential question of the original givenness of time itself. In the 1925-26 *Logic* course, Heidegger opens this interrogation by identifying the essential connection that links the problem of truth to the temporality of being in Aristotle's Metaphysics. In particular, Heidegger suggests, Aristotle's analysis in Metaphysics IX 10 shows that the being of a being is, for him, essentially a matter of the unity of a gathering that must itself be understood as a matter of co-presence or presenting:

"We ask: What does *being* mean such that *truth* can be understood as a *characteristic of being?* As we have pointed out, Aristotle in *Metaphysics* IX 10 intorduced the idea that the being of a synthetic being means presence-unto: the presence-together of something with something in the *unity* of a present being. This unity, this primary presence that precedes and grounds presence-together, must be understood as *presence, presenting* [Anwesenheit, Prasenz]." (p. 161)

For Aristotle in particular, existing beings as the subjects of predication are capable of being revealed in truth only insofar as they can be synthesized or unified on the basis of the everlasting stoichea, or simple elements whose own mode of existence is conceived as eternal and as constantly underlying all possibility of change. This synthesis or unification that makes disclosure in truth possible, however, is itself a presenting; and the ultimate sense of this presenting for Aristotle is a 'rendering present' or 'making present'that means the same as "letting a present being encounter us in a now-moment." (p. 163). This determination links the being of something disclosed in truth, in a fundamental way, to a particular determination of time: "To understand being as presence on the basis of presence-now means to understand being in terms of time." Specifically, Heidegger suggests, this is the determination of time developed by Aristotle and constantly presupposed in the tradition since he wrote. On this determination, time consists in a constantly flowing sequence of presents or now-moments and the presence of anything is basically its presence in one of these moments or in an unchanging and unchangeable constancy, its "presence-now" (p. 163). To gain clarity about the problem of being, Heidegger suggests, it is therefore necessary to inquire into its relationship to the determination of time.

This inquiry is next undertaken by turning to Kant. Despite the fact that he, too, "held firm to the traditional concept of time" determined out of the objective presence of natural objects, Kant bears a particular significance for the analysis of the linkage of being and time since he was, Heidegger suggests, the "the only philosopher who even suspected that the understanding of being and its characteristic is connected with time" (p. 164). In particular, in a far-ranging analysis that looks forward in many ways to the "Kant book", *Kant and the Problem of Metaphysics* published in 1929, Heidegger interrogates Kant's ontology as to the particular and ultimately aporeatic conception of time that it presupposes, one which ultimately points to a wholly distinct structure of original temporality that breaks with the tradition's constant understanding of being as presence. The argument is complex, and I can only recapitulate is rough outlines here. Heidegger proceeds backwards toward the temporal core of Kant's ontology through a brief consideration of Hegel, wherein he attempts to show that Hegel, in understanding time as now, limit, and ultimate "this" essentially recapitulates Aristotle's analysis in the *Physics* (p. 221): this is the characteristic determination of time within the philosophical tradition as the constantly flowing series of discrete "nows". Here, time is determined out of space: spatial presence in the sense of the linear sequence of "nows" determines the fundamental sense of time. (p. 224) Turning to Kant, Heidegger suggests that even though he, too, remains trapped within a conception of temporality that is ultimately, like Hegel's and Aristotle's, determined as "the time of nature," where "nature" in a broad sense includes "physical and mental nature", nevertheless Kant's determination *of* the subject as the transcendent source of the *a priori* also allows us to glimpse the problem of time in a more fundamental way. In particular, time has a "principled priority" for all of the analyses of the Critique of Pure Reason,

occupying a privileged place in each of the three main sections of that work. In the Transcendental Aesthetic, time appears along with space as one of the privileged forms of the givenness of sensory appearances. In the Transcendental Analytic, time is treated as giving objectivity to our experience of the world under the heading of the analogies of experience. Finally, in the Transcendental Dialectic, Kant considers the temporal status of the world, including the question of its origin and totality, in his treatment of the cosmological antinomies. (pp. 224-25).

In the Transcendental Analytic, time is a "form of intuition", and in fact the most general form, underlying the appearances of both "inner" and "outer" sense. This means, according to Heidegger, that in each and every appearance, "time is the unthematically and antecedently (i.e. pure) presented basis on which a manifold is able to meet the senses." (p. 229) This raises the question whether time, beyond simply being a form of appearance or intuition, can itself be intuited or presented, according to Kant, or more generally what kind of "presence" is involved in the formal apriority of this "unthematic and antecedent" basis. In fact, Heidegger suggests, Kant here obscurely suspects an original givenness of time as a "pre-viewed basis-on-which," a givenness which, if correctly understood, would have pointed directly back toward a more original determination of temporality itself. However, because Kant still, following Descartes, conceived of the *a priori* as primarily the realm of the subject and the representations immanent to it, he misses this original givenness of time and the incipient phenomenological demonstration gets "mixed up" with the dogma of a subjectivism that will "later smother it." (p. 231)

Similarly, in turning toward the deduction and availability of the categories of the understanding in the Trascendental Analytic, Heidegger argues, Kant's understanding of the pre-formation of the conditions of the possibility of objective understanding again points to the problem of the givenness of time. Here, Kant understands knowledge as essentially arising from the "two stems" of sensibility and the understanding: this carries forward the traditional distinction, already present in Aristotle, between aesthesis and noesis, what is given directly to the senses and what is thinkable by the mind, as separable types or factors of knowing. In order for what is sensorily given to be knowable as an object or objectivity, it is necessary that what is given in sensibility be further determined by the categories of thought. In the Transcendental Analytic, according to Heidegger, Kant understands this determination essentially as an ordering and a synthesis, the synthesis of a "manifold" of appearances which can give unity to the objects thus understood. This requires, beyond the "forms of intuition" that space and time themselves are in the Aesthetic, an original ordering of this manifold by means of what Kant calls a "formal intuition" that yields an ordering and determination of the object. In connection with this it is possible, as Kant says, for both space and time to be present as "infinite given" magnitudes (p. 246-47), and so the presentation that the formal intuition makes possible also gives space and time as unlimited wholes (p. 249). Furthermore, in the analogies of experience, Kant understands the formal ordering of the manifold of appearances into time as an aspect of the unification of appearances and judgments, which is ultimately determined by the unity of transcendental apperception, the unity of the "I think." (p. 255). This raises a fundamental question about the way time is given for Kant: "What is the condition of the possibility of the determinability of time as such in an "I think"? Or even more precisely: What is the condition of the possibility that time as such and an "I think" can be together?" (p. 255). The answer

points in the direction of a primordial givenness that Kant figures as the synthetic action of the subject, without, however, being able to further clarify its fundamental structure. More generally, for Kant, "Givenness as such is possible only in a 'for' that is constituted by an original synthesis that is expressed as the "I think." (p. 275). But this a priori givenness is itself possible only insofar as the understanding, in the "I think", is directed toward appearances given in the original form of time.

In each of these cases – the pre-given basis of the forms of intuition of inner and outer sense, the formal basis of the synthesis of the manifold to produce temporally ordered objectivity, and the formal combinability of representations in the transcendental unity of the "I think" – Heidegger interrogates the possibility and necessity of the givenness of form and finds it to lie in a more original givenness of time. In each of these cases, form is the "pre-viewed basis on which" entailed by the very idea of ordering, what renders coherent the possibility of any appearance or understanding. But the ultimate basis of this ordering for Kant, Heidegger suggests, remains the spatialized time of the tradition, the linear succession of present moments or "nows". This time is itself, Heidegger now suggests, drawn from Kant's understanding of nature and from the kind of ordering appropriate to it. Kant's question, though, is not ultimately about the temporality of nature and natural laws, but about the sense of the "a priori" which must in fact be able to answer to the guiding question of the first Critique, that of the possibility of *synthetic a priori knowledge* (which is in no way drawn from nature).

In fact, Heidegger now ventures to suggest, the synthetic character of this knowledge points the way to a more original givenness of time that is implicit in Kant, a kind of time that is not at all drawn from natural relations or the schematization of their order. In this original time, what Kant determines as the a priori of the transcendental subject reflexively provides to itself the very forms which themselves make possible all givenness; that is, time in this sense, is an "antecedent letting a pre-viewed basis-on-which be given." That is, it is the reflexive movement in which the self supplies itself with its own formal basis, the very condition of givenness. This is, in other words, time as "original, universal, pure self-affection." (p. 280)

In this analysis of how time is presupposed in each of the major parts of Kant's project, Heidegger thus recapitulates the decisive question of the givenness of form he discovers his answer in the original givenness of time, in such a way to elicit original time as the ultimate formal basis of givenness itself. In each case, moreover, Heidegger rejects Kant's tendency to think of this ultimate form in terms of the action of a subject itself conceived as *a priori* in the sense of existing in a mode of simple exteriority to time; rather, the possibility of the a priori of the subject is itself to be conceived more radically in terms of auto-affection as the reflexive (self-)givenness of time *itself* in supplying the formal conditions for any possible making-present. Here, as Heidegger emphasizes, time is no longer understood as Kant does, as a quasi-spatial form of mathematical order, a succession of present-nows, but is rather understood as the very constitutive structure of presenting that makes anything like a present (in a spatial or a temporal sense) possible at all. But to understand time in this way is simply, once more, to understand it from out of the formally indicated structure of Dasein as the being whose meaning is to make-present (p. 333). Thus, in final answer to the question of the relationship of the "I think" and time in Kant,

The difficulty is resolved with one blow once we take seriously time as making-present. The "I think" is not *in* time (Kant is completely right to reject that) but *is* time itself, or more exactly, one mode of time – that of pure making-present. As pure making-present, human existence itself is the "for-which" of whatever it might happen to encounter; and making-present is human existence's way of letting-something-encounter-it. (p. 335)

To understand time in this radicalized way as pure auto-affection is to comprehend the possibility of all givenness of form and structuration from out of the primary structure of dasein and the pure structure of its reflexive relation to itself, the auto-affection in which it gives itself time. But as Heidegger says here, the basic structure of Dasein in its capability of disclosing beings is itself presenting or making-present. Thus, in a determination which will survive long after *Being and Time* itself, Heidegger will understand the possibility of the disclosure of being from out of the basic reflexive structure of a givenness that gives the possibility of the present in general from out of the self-givenness of time. This structure will remain essential in Heidegger's thought about truth, time, and disclosure long after he turns from the "preparatory" analytic of Dasein to the later project of the "history of being" , yielding the disclosive structure of what he later characterizes as the "clearing" in which beings can appear in the light of intelligibility and of the "there is" – the "es gibt" that ultimately points to the givenness of time and being themselves.

Thus, if Heidegger ultimately sees, behind the traditional categorial understanding of the givenness of form in the privileged atemporality of the a priori, a more original and universal self-givenness of time, this self-givenness nevertheless remains formally/hermeneutically indicated as the very giving of presence, the form of presenting as such. It is from out of this formally indicated structure that all disclosure and presenting of beings is possible, but insofar as what is thereby formally indicated is the self-givenness of time, it also makes possible the disclosure and light of Being itself. For time, radically understood, is not "the being of some entity" but rather "the condition of possibility of the fact that there is being (not entities)" at all (p. 338). In the original reflexivity of the self-givenness of time, Heidegger thus comes to perceive an exemplary formal determination of the very possibility of presenting as such. But here, presenting is no longer limited to the disclosure of beings or to the priority of the present. It is, rather, simultaneously, the radically conceived formal ground for anything like the light of intelligibility from and in which all beings emerge, something like the form of Being as such.

V.

I have argued that Heidegger's development of the existential structures of Dasein in the years leading up to Being and Time, as well as much of his increasingly radical understanding of the guiding determinations of the ontological and metaphysical tradition in those years, is best understood as the outcome of his penetrating pursuit of the problems of the givenness of form. In his development of the methodology of formal indication, in his deepening and radicalization of Husserl's discoveries of categorial intuition, intentionality and the a priori, and in his penetrating analysis of the ultimate temporal basis for Kant's determination of the synthetic activity of the subject in representing, thinking,

and judging, Heidegger relies again and again on the dimension of form to provide an answer to the question of the basis for the structurally unified basis of presenting itself . In each of these cases, the appeal to form points to the unity of determinative structure, the "one" of a unified structural basis that subsumes and unites the plurality of the phenomena. This is a sense of "form" that need not be understood primarily in the sense of the Aristotelian form/matter distinction, but rather points toward the older Platonic sense of the "one over many" and to the ancient problem to which it answers. This, in turn, raises the old question of the basis of the one, of the kind of being capable of unifying the plurality of appearances into the unity of what can be thought, or the link between the one and Being itself that figures in the Platonic discussion of participation and in the characteristic Platonic designation of the idea as "the thing itself." Quite apart, then, from his rigorous and decisive critique of the Plato's determination of forms as timeless, eternally present entities, Heidegger will have suggested nothing more than that the ontological tradition understands time and the possibility of the being of beings in terms of this unifying function of form, the obscure capacity to gather the many into the unity of a one, which is at least one of the problematic senses of the Platonic "methexis". Indeed, in his critique of Husserl and his radicalized development of the methods of phenomenology, Heidegger ultimately suggests, as we have seen, that the formally indicated structure of Dasein as original temporality is to be understood precisely in terms of a self-givenness of time that reflexively produces the temporality of the world from a position within it.

But if, as I have argued, the question of the obscure givenness of the unity of form plays a determinative role in leading Heidegger to his breathtakingly radical reconsideration of the structure of time itself, it must nevertheless be admitted that the question of form as the unity of the one, does not actually predominate in the analytic of Being and Time; instead, the formal determination of the existential structures of Dasein from out of the existentiell tends there to be effaced or obscured under determinations such as "primordiality," "ontic-ontological" priority, originality, or the authentic. However, if these determinations indeed continue to capture the modified sense of a priori that Heidegger still understands basically in terms of the unity of form,

This is the question of the extent to which the great Heideggerian project of the determination of the sense and truth of Being can be understood as itself determined through the unifying dimension of form, or put in other terms, how the One of form measures and determines Being itself. The answer to this originally Parmenidean question is far from clear on the basis of Heidegger's text, and it is not at all clear that it even *can* be answered on its basis. But along these lines it seems at least possible that the Heideggerian inquiry into Being could itself be recovered and even radicalized by renewing this original Parmenidean question.

More humbly, I conclude by posing three questions for future research. They are meant as both hermeneutically directed toward what may be new possibilities for reading the Heideggerian text, and substantively directed toward the matters themselves.

1) **With respect to the structure of presenting:** In *Being and Time*, Heidegger famously asserts that truth in the original sense of disclosure remains dependent on Dasein -- thus "there is truth, only insofar as Dasein is," -- and furthermore specifies the possibility of all intelligibility and

disclosure as dependent on the holistic context of Dasein's worldly involvements, for instance its actual activities of coping and handling in a world. One way to understand this is as asserting a thoroughgoing dependence of all phenomena of significance on the activities or structure of Dasein. Thus Heidegger is read as a "temporal" (Blattner) or "linguistic" (Lafont) idealist; alternatively, those who emphasize the situatedness of practices and practical contexts of disclosure understand Heidegger as an "ontic" realist along the lines of the avowed embodied and cultural reality of practices and communities (Carman, Dreyfus). Elsewhere (Braver, Meillassoux), Heidegger is read as what is today sometimes called a "correlationist:" one who ultimately joins with idealism and humanism in submitting being in itself to the dictate and law of human thought or action.

But as we have seen, in *each* of the cases where Heidegger draws on phenomenological methods, he emphasizes that their whole value lies in their capability to elicit the possibility of pointing to Being in a sense that is *in no way* subjective or determined by the being of the subject. Rather, these are objective structures and ontological orderings of being *in itself*, and their significance for eliciting the real structure of disclosure and truth does not lie in their accidentally being taken up by historically specific individuals or cultures, but rather in the way they point to the structure of Dasein, which is itself understood as the structure of presenting *as such.* And here, Heidegger avoids absolutely any implication of idealism, humanism, or the subjective determination of the categories of objectivity: thus "Presenting is absolutely not subjective or subjectivistic or idealistic in the usual, epistemological meaning of those words. Rather, it is simply being unto the world, wherein the world can show itself in its in-itself-ness in terms of its various levels of approximation and determination." (p. 343)

Therefore, *is there to be found, along the lines of Heidegger's radical confrontation of the problem of the givenness of form, an understanding of the being of Dasein and the disclosure of Being itself that has nothing to do with the human as such and is thoroughgoingly realist?* If so, the question of form would apparently point the way to a Heideggerian realism that is not merely "ontic" but actually, in a proper sense, "ontological" as well – a formal realism of the disclosive structure of time that makes all disclosure and presence possible, and in which alone, as Heidegger says, anything like the Being of beings can come to light. This realism would, again, apparently specify the ontological conditions of this disclosure as something that has nothing to do with specifically human cultures, attitudes, activities, individual or collective practices, shared attunements, and the like, but can only be understood formally from out of the completely formal reflexive structure of Dasein – being-there—itself.

2) **With respect to "Being itself:"** – As we have seen, Heidegger's interest in categorial intuition and Husserl's other innovations is first and foremost that they provide ways of pointing to what is in fact *intrinsic* to the sense of Being as it gives itself, quite independently of the being of objects *or* of subjects. Thus, for instance, the whole importance of Husserl's categorial intuition lies in its ability to elicit an ideal realm that is neither objective in the mode of nature, nor subjective in the sense of being the result of the activities of the thinking subject; and the importance of Husserl's discovery of the "original sense" of the *a priori* is itself that it elicits the

absolutely non-subjective but nevertheless determinate dimension of the "always already" of Dasein's own structure. Indeed, the formal indication of this structure is itself ultimately directed toward not toward bringing into view not beings or subjects, but toward the source of the presenting and intelligibility of all beings in Being itself. This basic structure of this disclosure and sourcing remains much the same even when Heidegger abandons the analytic of Dasein for his later inquiry into the historical epochs of Being, in which, in each case, Being determines the Being of beings by revealing itself and holding itself back.

In light of the formal indication of the structure of being as the source of the possibility of disclosure and ultimately as correlative with the self-givenness of time, how, then, should we understand the prospects for a formal disclosure of "Being itself"? Must we understand Being simply as the obscure and formless, if inexhaustible, "source" of all intelligibility, about which we cannot (further) speak, and which therefore can only be pointed out indirectly by means of art or poetry, or else cloaked within a mystical, mute piety? Or is there then a formal or meta-formal determination of Being itself precisely in the structure of its donation of sense, even as it can never be understood as a being, and even as it itself, within the historical tradition of metaphysics, constantly withdraws?

3) **With respect to logic, language and time:** – One of the most important registers of "form" in contemporary philosophical thought is the one inaugurated by Frege's radical discovery of quantificational logic and the constitutive forms of logic and language that it demonstrates. Frege's own tendency, of course, was to see the basis of formal logic in Platonistic terms, as evidencing the transcendent structure of a timeless "third realm" accessible to pure thought. In the further development of the analytic tradition, the question of form has been developed most deeply as an investigation into the structure and nature of language, and recent discussion has privileged what some see as the intersubjective, culturally specific and pragmatic structure of language or its naturalistic determinants in the empirical biology and neurophysiology of language processing. To the (limited) extent that he reckoned with them at all, Heidegger understood or would have understood all of these developments simply as further expressions of the reigning metaphysical tradition in its constant assumption of presence and in line with the dominant, technological and nihilistic understanding of Being characteristic of the age. But upon closer examination, as I have argued elsewhere, the forms that are elicited by the analytic tradition's ongoing inquiry into the structure of language (forms of language and of life as well as of logic in a narrow sense) cannot be understood simply as further entities simply present at hand, and in fact the dimension of the formal that emerges in modern formal/symbolic logic simply cannot be reduced to the empirically or anthropologically described structure of human biology or intersubjective practice.[11] Rather, as I have suggested elsewhere, this is the original dimension of form that Wittgenstein figures, in its constant but itself groundless presupposition, as the primary givenness of "forms of life."[12]

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[11] *Philosophy and the Vision of Language.*
[12] *The Politics of Logic* (see especially chapter 1).

Despite Heidegger's constant and often ill-informed attacks on the project of using formal-logical results or methods as a guideline or basis for ontological thought, it is therefore worth asking whether some of the formal devices and structures demonstrated in the course of the analytic tradition might help, in ways that Heidegger himself did not suspect, to point toward the complex formal situation that Heidegger is indicating in the analytic of Dasein and beyond. I can do no more than point to possibilities here, in very broad terms. But it is notable, in particular, that the analytic tradition possesses a sense of the temporal structure of language that is quite different from Heidegger's, as well as a correlative formal schematization and thinking of language's limits and structure, including its reflexive capacity of figuring itself. This is, essentially, the structuralist conception of the linguistic sign as a formal element, capable of infinite repetition yet always appearing materially in concrete instances. But it may be that the reflexivity of language that this elicits bears an intimate relation with what Heidegger understands as the reflexivity of time, the original structure of its giving of itself.

In particular, as we saw in connection with Kant, Heidegger ultimately radicalizes the question of the givenness of form, the givenness of unity, as the question of the givenness of time and answers this with an original reflexive structure of self-giving. *Is there, then, a formal determination of primordial time that specifies or schematizes its self-giving?* Does there remain such a determination even when Heidegger understands the givenness of time not simply in terms of the structure of Dasein but also in terms of the epochs of the disclosure of the being of beings? Is there a schematism or a formal indication of reflexive temporality that determines this self-giving that originally gives the unity of a present? To what extent do the formal features of reflexivity *as such* determine essentially, or manifest indicatively, the original structure of time as it gives itself?

The Logic of Sense and Transcendental Truth: Heidegger, Tugendhat, Davidson

(Chapter 3 of Draft MS: *The Logic of Being: Heidegger, Truth, and Time*)

In his last, posthumously published book, *Truth and Predication*, Donald Davidson suggests that the application of Tarskian truth-definitions for particular languages within the scope of radical interpretation depends upon a pre-existing grasp of a *general* concept of truth. This concept is to be distinguished from particular Tarskian definitions of the truth predicates for particular languages that Davidson conceives as offering specific "theories of meaning" for those particular languages, for these do not by themselves indicate what the various truth-predicates have in common. Davidson puts the matter this way:

> My own view is that Tarski has told us much of what we want to know about the concept of truth, and that there must be more. There must be more because there is no indication in Tarski's formal work of what it is that his various truth predicates have in common, and this must be part of the content of the concept. It is not enough to point to Convention-T as that indication, for it does not speak to the question of how we know that a theory of truth for a language is correct. The concept of truth has essential connections with the concepts of belief and meaning, but these connections are untouched by Tarski's work. (*Truth and Predication*, pp. 27-28)

In particular, while particular Tarskian theories for specific languages point to a general structure which must be fulfilled by any systematic account of meaning for a particular language, showing the "kind of pattern truth must make, whether in language or thought," (p. 28), neither the particular Tarskian truth-definitions nor this general pattern suffices to exhaust the general concept of truth as it must be presupposed in actual interpretation; what is needed to supplement these, Davidson suggests, is an account of how the systematic pattern of truth shown by the Tarskian structure is actually identified "in the behavior of people." Although Davidson argues strenuously, here and in other late publications, that it is quixotic to attempt to provide a *definition* of this *general* concept of truth -- and in particular that any definition of it in terms of any notion of correspondence, coherence, assertibility, or any other notion (whether of a "realist" or an "anti-realist" character) must fail – it is thus nevertheless to be seen as requisite to the very possibility of interpretation, and thus deeply linked to the constitutive structure of linguistic meaning or sense.

In this chapter, I consider whether and to what extent Heidegger's understanding of truth as unconcealment or *aletheia* can underwrite a general understanding of the basis of truth and predication in such a way as to be capable of synthesis with Davidson's Tarski-inspired picture. I argue that there is significant initial negative ground for such a synthesis, insofar as Davidson and Heidegger agree in rejecting: i) correspondence theories of truth; ii) the idea of timeless propositions as truth-bearers; and iii) "epistemic," verificationist, subjectivist, coherence, communitarian, or pragmatist theories of the

basis of truth[1]. Furthermore, there is positive ground for a synthesis of Davidson and Heidegger's views in that both claim that the phenomenon of truth plays a constitutive and normative role in the interpretation of language and the linguistic intelligibility of entities. Nevertheless, if Davidson's and Heidegger's views are to be synthesized, there is prima facie a major obstacle which must first be overcome. This obstacle is posed by Heidegger's thoroughgoing rejection of an assumption that is in many ways foundational for Davidson's theory as well as most conceptions of truth in the analytic tradition, the assumption that the basic *locus* of truth is the sentence or proposition. This assumption is basic for "truth-conditional" accounts of language and meaning such as Davidson's, which hold that the meaning of a sentence is given by giving its truth-conditions, but it is rejected by Heidegger in holding that the truth of assertions has its "ontological" foundation in the more basic phenomenon of truth as *aletheia*, or unconcealment. In his habilitation, *Der Wahrheitsbegriff bei Husserl und Heidegger*, Ernst Tugendhat articulates a series of objections to this conception of truth as *aletheia* or unconcealment from a perspective informed by the truth-conditional and propositional approach. These objections include: i) that Heidegger's picture makes truth an ontic event rather than an ontological structure; that ii) it fails to grasp the aspects of logical structure that yield inferential relations among concepts and judgments; and iii) that it provides no ultimate basis for distinguishing between true and false statements about the same entities.

I argue that Heidegger's conception can be defended against all three objections by recalling and developing the specific features of what he conceives as the basic "existential-hermeneutic" "as-structure" of unconcealment. According to this conception, the basic structure underlying the possibility of truth is the disclosure of "something as something" in practical comportment, and this basic structure is *hermeneutic* in that it supports the interpretive intelligibility of any entity whatsoever.[2] Developing this conception further in connection with Davidson's late views, I argue for a two-dimensional hermeneutic conception of the structure of truth, which has propositionally articulated logical/linguistic intelligibility as one dimension and non-propositional, disclosively articulated intelligibility as another. On the picture, neither dimension is more "basic" than the other, but both point toward the unitary phenomenon of world as the formally indicated horizon of their possible application. This has some further interesting consequences, as I argue in the final section, for the structure of sense and the relationship of paradox to truth.

I

In pointing to the existence of a general concept of truth, not specific to a particular language, and necessarily (as Davidson argues) presupposed in the course of actual interpretation and understanding, Davidson gestures toward a concept of what I shall call *transcendental* truth.

- Is there something to say about truth in general (not just truth-in-L for a particular language L)?

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[1] For Heidegger: truth is the locus of us rather than the other way around ; and it is Being involving so can't be specified in terms of any simply ontic structure.

[2] NB this structure is explicitly 'intensional' – remember this for later.

- Is there something to say about the *non-sentential* preconditions for the truth of sentences? (including the preconditions for the possibility of (sentential) predication)

An understanding or grasp of such a concept, it is reasonable to hold, preconditions both the explicit provision of a Tarskian truth-theory (or, as Davidson calls it, a theory of meaning) for a particular language and (because this explicit provision models the usually *implicit* structure of a competent speaker's understanding of a language) the everyday possibility of understanding it. In a direct sense, it will thus underlie as well the possibility of understanding the sentences that describe situations and make assertions about situations and facts, as well as the singular terms that refer to particular entities. And along with this, it will also underlie the intelligibility or significance of entities and our engagements with them, at least insofar as this intelligibility can be linguistically articulated. This intelligibility of entities will in turn be connected to the structure of (true or false) predication, insofar as to speak truly about an entity is to predicate something truly of it, and insofar as what is truly predicable of an entity characterizes what it is (in the "predicative" sense of "is").

This threefold connection among truth, entities, and predication is classically formulated by Aristotle in his famous 'definition' of truth and falsity in *Metaphysics*, book 4:

> "To say of what is that it is not, or of what is not that it is, is false, while to say of what is that it is, and of what is not that it is not, is true…"
>
> Metaphysics IV, 7, 1011 b 26

On Aristotle's conception, in particular, the characterization of falsity and truth is linked both to predication (in the formulation "to say of…") and to the being and non-being of entities ("what is" and "what is not"). Without prejudice to the question of whether the underlying phenomenon of truth that underlies the intelligibility of (non-linguistic) entities and the structure of (linguistic) predication is itself to be understood as basically language-dependent, I shall characterize any theory on which a general (non-language-specific) concept of truth preconditions the intelligibility of entities and the structure of predication in this way a *transcendental* account of truth.

Tarski (as D'son reminds us) offers his Convention T as an interpretation of Aristotle's remark, and Heidegger himself gives a (partially critical) phenomenological interpretation of it in sketching his own account of the possibility of truth and falsehood.

It is clear that Heidegger's account of truth as unconcealment, as developed in *Being and Time*, is a transcendental account in this sense. Throughout much of his career, in fact, Heidegger seeks to account for both propositional and non-propositional truth as ontologically grounded in the phenomenon of *aletheia* or unconcealment [*Unverborgenheit*]. In *Being and Time*, this account largely takes the form of a description of the "original" phenomenon of truth as uncoveredness [*Entdeckendheit*].[3] Thus, in section 44 of *Being and Time* (the section that concludes Division I's

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[3] Heidegger (2006) *Sein und Zeit* (Tübingen: Max Niemeyer Verlag; henceforth: *S&Z*). Translated by John Macquarrie and Edward Robinson (1962) as *Being and Time: A Translation of Sein und Zeit* (Harper and Row). Page numbers are as in Heidegger's original German text.

"Preparatory Fundamental Analysis of Dasein"), Heidegger defines the truth of assertions as their uncovering or disclosure of entities:

> To say that an assertion "*is true*" signifies that it uncovers the entity as it is in itself. Such an assertion asserts, points out, 'lets' the entity 'be seen' (*apophansis*) in its uncoveredness. The *Being-true* (*truth*) of the assertion must be understood as *Being-uncovering* [Entdeckend-sein] … "Being-true" ("truth") means Being-uncovering. [Wahrsein (Wahrheit) besagt entdeckend-sein].[4]

This uncovering is itself grounded, according to Heidegger, in the structure of Dasein as well as that of the world itself. In particular:

> Uncovering is a way of Being for Being-in-the-world … What is primarily 'true' – that is, uncovering – is Dasein …

> Our earlier analysis of the worldhood of the world and of entities within-the-world has shown … that the uncoveredness [Entdecktheit] of entities within-the-world is *grounded* in the world's disclosedness [Erschlossenheit]. But disclosedness is that basic character [Grundart] of Dasein according to which it *is* its "there". (SZ, 220).

Heidegger is here concerned with a "most primordial" phenomenon of truth as uncoveredness that has two holistic aspects. First, the most primordial phenomenon of truth is grounded in (or even identifiable with) disclosedness as the "basic character of Dasein." Second, this basic character – the disclosedness of Dasein – is also identifiable with the disclosedness of the world, what underlies the possibility of any unconcealment or showing of entities within the world.

Although it does not itself directly involve an account of linguistic predication, Heidegger's defense of this account of the most basic and general phenomenon of truth is nevertheless closely linked with the sophisticated phenomenological theory of predication that he had developed in the lecture courses *Plato's Sophist*, *History of the Concept of Time*, *Logic: The Question of Truth*, and other courses from the early to mid-1920s, and which Heidegger briefly outlines in sections 32 and 33 of Division I of Being and Time. According to this theory, the possibility of assertive predication in language itself has its condition of possibility in a more basic and essentially non-linguistic phenomenon of interpretive disclosure.[5] The most basic underlying structure of linguistic assertion is characterized as that of an "apophantical as" which is itself ontologically founded on a more basic "as" structure of hermeneutical understanding or interpretation [*Auslegung*]. This basic and fundamental "'as'- structure," whereby any entity is disclosed *as* something or other, always characterizes, in a fundamental way, any possible understanding or interpretation of entities. This is the case, in particular, already when entities are disclosed in "concernful circumspection" [*besorgenden Umsicht*] as ready to hand, prior to any explicit thought or linguistic assertion about them. In such circumspection, for example in handling a hammer,

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[4] S&Z, pp. 218-219.
[5] In this sense, in particular, "Assertion and its structure…are founded upon interpretation and its structure" (S&Z, p. 223).

there need not be any explicit judgment or linguistic assertion, but it is nevertheless possible for an entity to be interpretively disclosed *as having* a particular character (for instance, the hammer as "too heavy"). (p. 157) Nevertheless, the original, primordial "as"-structure of hermeneutic understanding can under certain conditions become transformed into the *explicit formation* of an assertion. In particular, by way of a transformation in our way of being "given" the object. the "fore-having" which already characterized the hermeneutical disclosure of the hammer as hammer is changed over into the "having" of something present at hand, which can now be the "about which" of an explicit assertion.[6] The primordial 'existential-hermeneutical 'as'' of circumspective interpretation is thus modified into the 'apophantical' 'as', which makes it possible to formulate any explicit assertion about the object.

The more basic existential-hermeneutic "as" structure, as it operates in "everyday circumspective interpretation" (with or without an explicit, thematic focus) itself breaks up into three "fore"-structures that jointly connect the individual entity to the total context of involvements that articulate, for Heidegger, its basic character. First, there is a "fore-having" whereby this totality of involvements is always already (in some sense) "understood." Second, there is a "fore-sight" which begins to separate from this total context of involvements the specific entity in question and makes it capable of being conceptualized. Finally, there is a "fore-conception" which "decide(s) for a specific way of conceiving" the entity, and thus "can be drawn from the entity itself, or …can force the entity into concepts to which it is opposed in its manner of Being." (p. 150). The threefold fore-structure of understanding is itself "existentially-ontologically" connected to the basic phenomenon of projection, whereby entities are "disclosed in their possibility" by Dasein. This involves that entities are "projected upon the world"; "that is, upon a whole of significance, to whose reference relations concern, as Being-in-the-World, has been tied up in advance." (p. 151) In particular, it is the projective relation of Dasein to this totality of significance that allows entities to to be understood with respect to their distinctive kinds of Being. Meaning or sense (Sinn) is itself "that wherein the intelligibility [Verstandlichkeit] of something maintains itself" and the "upon-which" [Woraufhin] of "a projection in terms of which something becomes intelligible as something." (p. 151) Given that it has this structure, according to Heidegger, ""meaning" must be conceived as the formal-existential framework of the disclosedness which belongs to understanding"; that is, in formal terms, meaning or sense is the general form of the kind of disclosure that allows understanding and interpretation to take place. The characteristic fore-structure of understanding and the basic hermeneutic as-structure of interpretation thus are themselves unitarily grounded in the structure of projection whereby Dasein projectively maintains the intelligibility of entities.

Heidegger's understanding of the most basic precondition of assertoric and non-assertoric truth thus involves a general phenomenon, that of the "existential-hermeneutic as," which is not specific to any particular language (or indeed, to language at all) and which is further characterized both as the foundation of the possibility of interpretation of the being of entities and as the ultimate underlying basis of the structure of linguistic predication. Turning, now, to Davidson's remarks on the general concept of truth, it is clear that they can also be characterized, in the setting of Davidson's interpretive project, as gesturing toward a "transcendental" conception of truth in this sense. Familiarly, on

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[6] SZ, p. 158

Davidson's conception, a "theory of meaning" for a natural language[7] recursively embodies a compositional structure of assignments of meaning to the language's primitive predicates and singular terms. This structure of meaning can be embodied, Davidson suggests, by a theory which yields as consequences all of the true "T-sentences" for a particular language, the structure described by Tarski in "The Concept of Truth in Formal Languages" as the one that must be exhibited by any extensionally adequate definition of the term "true" as it is used in a (formal or natural) language.[8]

According to Tarski, any such definition will be adequate only if it implies all sentences of a certain form, what he calls form (T):

X is true, if and only if, p.

Here, 'p' stands for any sentence of the language and 'X' is to be replaced with a name for that very sentence, formed by enclosing the sentence itself within quotation marks, or by some other naming device.

Thus, for instance, a Tarskian theory of truth will imply that

"Snow is white" is true (in English) if and only if snow is white.

Tarski suggests, in "The Concept of Truth in Formalized Languages" and "The Semantical Concept of Truth", that a definition of the truth predicate that implies all the instances of the T-schema will be both "materially adequate" and "formally correct"; that is, it will capture the actual behavior of the truth-predicate for the language and will do so in a way that reveals its underlying formal structure. And as he goes on to show, such a definition can in fact be constructed from that of a more primitive "semantic" relationship, that of "satisfaction". The relation of satisfaction coordinates primitive singular terms of a formal language to particular objects, and primitive predicates to sets and sequences of objects; intuitively, the relation is that of "reference" in the case of the singular terms and the sets and sequences that a predicate is "true of" in the case of predicates. Given the specification of the satisfaction relations, the definition of the truth-predicate can be built up recursively[9] from them; in this way it is possible actually to define the truth-predicate (which must characterize an infinite number of possible sentences) from a finite set of axioms (the specification of the satisfaction relations for the (finitely many) basic terms of the language). The result will be a definition of truth for the particular language that, since it yields all instances of the T-schema, in an intuitive sense formalizes the underlying structure of the particular "concept" of truth characteristic of that language. And as Tarski himself suggests, indeed, it is plausible that it exhibits the central constraint that any more specific

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[7] Following standard practice in the "analytic" literature, I here use "natural language" to indicate a contrast with "formal" or "artificial" languages, and thus actually to refer to what Heidegger, by contrast, generally calls "historical" languages. This usage should not be taken to indicate, however, any judgment at this point as to whether the character of these languages is in fact deeply "natural" or deeply "historical" (or neither).

[8] Tarski, A. (1944) "The Semantic Conception of Truth", *Philosophy and Phenomenological Research*, 4 (3), pp. 341-75.

[9] Or, in fact, non-recursively, exploiting a method due to Hilbert [?] for converting recursive definitions into explicit ones.

theory of the "nature" of truth will have to respect, the constraint that it "get right" the truth-conditions of the sentences of which we *can* predicate "truth."

In Davidson's project of analyzing the semantical structure of natural languages, the order of explanation that characterizes Tarski's truth-definitions is, in a certain way, reversed. Rather than beginning with primitively specified satisfaction relations for particular formal languages in order to build up the recursive structure of truth for the language, Davidson, following Quine envisages the radical interpreter beginning with the project of interpreting an already existing natural language at first completely obscure to her, and working to reconstruct its underlying structure from the attitudes of holding-true and rejection of particular sentences exhibited by its speakers. Nevertheless, the recursive structure underlying the true T-sentences remains the primary object of investigation, and Davidson argues that (as for Tarski) this compositional structure, in turn, must be adequate in the sense that it yields as deductive consequences the whole *corpus* of T-sentences for the language in question. A speaker's understanding of the language may then be considered equivalent to her knowledge of this recursive structure, and an interpretation of it in another language may be considered to be a precondition for successful understanding of speakers of the first language by speakers of the second.[10] In particular, where what is at issue is the interpretation of an unknown language (as it is in the situation of "radical interpretation"), the theory of meaning will, in yielding the T-sentences for the language under consideration, specify truth-conditions for each sentence of the considered language by means of the interpreter's own distinct language, thus yielding a systematic translation or interpretation of the alien language as a whole.

In *Truth and Predication*, Davidson emphasizes the utility of the Tarskian framework for resolving some of the problems involved in the ancient problem of predication, as well as the virtues of Tarski's conception of truth in its own right. Chief among these virtues, according to Davidson, is the *complete* extensional match between Tarski's conception, when applied to a particular language, and what is involved in our intuitive notion of truth; it is this match that makes it plausible, according to Davidson, that Tarski's structure has captured central aspects of the concept of truth as we employ it in everyday discourse and communication, and has not simply stipulated a new or wholly distinct notion for formal purposes. Moreover, in the setting of radical interpretation, it is the capacity of a recursive truth-definition comprehensively to match truth-conditions with sentences that qualifies it to be considered to embody a systematic theory of meaning for the language at all. This is because, as Davidson says in *Truth and Predication*, a theory of truth in accordance with Tarski's convention T provides the only way finitely to specify the "infinity of things the [successful] interpreter knows about the speaker" under interpretation. In particular – though it is certainly not necessary, as Davidson emphasizes, to demand that an interpreter know the Tarskian theory explicitly – it is the only way to capture the systematic structure of the truth-conditional *meaning* of the infinite number of sentences that the speaker can produce and the interpreter can understand, and which thus manifest in their actual speaking and understanding of the language.

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[10] "Truth and Meaning," p. 17; "Radical Interpretation," pp. 125-26

Even if Tarski's definitions provide an extensionally adequate characterization of truth in a particular language, in this sense, though, this is not to say, as Davidson admits, that they capture "all there is" to the concept of truth itself. First, there is the obvious point that Tarski's definitions (whether applied to formal languages given a satisfaction relation, as Tarski does, or applied to the structure of a natural language only under an interpretation) define truth only for *specific* languages L; the general concept of truth (in an arbitrary language) is not explained or defined by them, and it is not clear from the Tarskian structure alone where or even whether we should look for such a definition. (In particular, in radical interpretation we must *use* a general concept of truth in characterizing utterances in an alien language as those held true, so we must presuppose it in interpretation). Second, as a number of commentators have objected, neither the specific Tarskian definitions of truth-predicates nor their general pattern suffice by themselves to define the general *sense* of truth in a way that goes beyond their extensional adequacy in each case. For example, as Dummett has objected, Tarski's definitions provide no guidance in *extending* the concept of truth to the case of a new language, and as Field has objected, they provide no guidance, even in the case of a single language, in extending the concept of truth to apply to sentences involving concepts or terms introduced *de novo* and thus not provided for in the original truth-definition. Both objections are related, moreover, to Dummett's suggestion that in an important sense, Tarski's definitions fail to capture the "point" of the introduction of a truth-predicate into a language to begin with.

Admitting the trenchancy of these objections, Davidson agrees that in an important sense, Tarski has not provided a definition of the concept of truth, even as applied to particular languages. In particular, there is a clear sense in which the Tarskian definitions, though they provide the *extension* of the concept of truth in each case, do not provide its meaning. Their failure in this respect can, according to Davidson, is a result of the fact that they can provide the extension and reference of basic predicates and terms only by listing (finitely many) cases; in particular, the specification of the satisfaction-conditions for basic terms and predicates, on which each Tarskian truth-definition structurally depends, does not and cannot provide any guidance for how to go on in applying either satisfaction or truth to new cases, or any useful characterization of the point or purpose of doing so. This is what leads Davidson to suggest that, while Tarski's theory does provide an essential formal guide to the contours of any truth predicate, it is nevertheless reasonable to suppose that the truth predicates have further essential properties, not captured or reflected in the Tarskian language-specific definitions or in Convention T itself. In particular, for Davidson, these further properties can come into view when we consider (as we necessarily do in the course of radical interpretation) whether a particular T-theory actually applies to a given natural language, and in this way consider how the type of pattern embodied in a particular T-theory is identifiable in the actual *use* of a language by its speakers.

For Davidson, though, the insight of Tarski's structural approach to truth is not limited to its essential use in the practice of radical interpretation or to the way it supports the project of giving a theory of meaning for a natural language; in it is to be found, as well, the essential ingredients for an actual solution to the ancient problem of predication. As Davidson presents it, this is the problem of how the separately meaningful elements of a predicative sentence come together to produce something unified and evaluable as true or false. In the second part of *Truth and Predication*, Davidson considers a series

of historical attempts, beginning with Plato, to explain the truth-evaluable unity of a predicative sentence by accounting for the way in which its separately meaningful parts compose a unified structure. Davidson considers attempts by Plato, Aristotle, Hume, Leibniz, and Russell; each of these fails, he argues, either by failing to explain the actual basis of the unity of the sentence or by doing so in a way that does not account for how this unity is evaluable as true or false. On Davidson's telling, though, Tarski's structural conception of truth provides the essential structure that is needed to account for the unity of the proposition without inviting the problems of infinite regress and explanatory idleness that seem recurrently fatal for the earlier theories; in particular, Tarski is able to succeed where others have failed by providing a systematic way, through his recursive truth definitions, of linking the meanings of the smallest meaningful parts of sentences (the individually referring terms and predicative expressions) systematically with the truth-conditions of those sentences as wholes. In so doing, Tarski accounts for how the provision of semantic roles for finitely many basic sentential elements can provide compositionally for the infinite range of possible sentences with distinct truth-conditions; and he does so without requiring that the (infinitely many) sentences of a language themselves correspond to distinct entities or objects. (p. 155).

The crucial idea underlying the possibility of the solution is simply that "predicates are *true of* the entities which are named by the constants that occupy their spaces or are quantified over by the variables which appear in the same spaces and are bound by quantifiers." (p. 159). The solution, thus stated, has an appearance of truism, in that it turns on the obvious-seeming observation that predicates have a role in the truth-evaluable unity of sentences only in that, and because, they are possibly true or false *of* individuals. But the appearance of obviousness is misleading; as Davidson explains, a solution of this form is uniquely able to account for the unity of the assertoric sentence and for the infinite production of sentences without inviting an infinite regress. The key concept underlying this possibility of solution is Tarski's concept of satisfaction. It is this concept that allows the theorist to characterize the circumstances in which entities or sequences of entities are assigned to the variables in an open sentence which would make the sentence true if the variables were replaced by names for those entities and sequences. In this way, the systematic truth-conditional structure of the language becomes accessible to theoretical reconstruction in the form of a Tarskian truth-theory; as Davidson suggests, indeed, there is no other structure that could systematically elucidate the essential structural relationship of predication with truth, in such a way as to account for the infinite possibility of forming truth-evaluable predicative sentences that every natural language affords.

But this does not mean, as Davidson emphasizes, that a privileged relation of satisfaction, or any other reference-like relationship, holding between singular terms and particular objects is presupposed. Rather, the application of the Tarskian pattern to natural languages aims to discern how the systematic pattern of truth-evaluable sentences itself involves that singular and other terms have semantic roles that require them to be satisfied by particular objects. In making this application, the theorist does not presuppose a specific concept of satisfaction, or any other reference-like relationship, but rather the general concept of truth. This general concept is, Davidson suggests, the "most basic semantic concept that we have;"[11] while it is idle to hope for a definition of *it* in terms of satisfaction or any other relation,

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[11] P. 160.

we can *use* the general concept to illuminate the structure of predication. The result is a general method that allows us to characterize, for any predicate, the conditions under which it is true of any number of entities; nothing more (but also nothing less) can be expected, as Davidson suggests, of a theory of meaning for a language. The result is thus an illumination of the predicative structure of a language which also, by systematically characterizing the satisfaction-conditions of predicates, also makes it clear what objects and type of objects the language discusses. In particular:

> …[T]he key role of Convention-T in determining that truth, as characterized by the theory, has the same extension as the intuitive concept of truth makes it seems that it is truth rather than reference that is the basic primitive. [This] is, I think, the right view. In his appeal to Convention-T, Tarski assumes … a prior grasp of the concept of truth; he then shows how this intuition can be implemented in detail for particular languages…The story about truth generates a pattern in language, the pattern of logical forms, or grammar properly conceived, and the network of semantic dependencies. There is no way to tell this story, which, being about truth, is about sentences or their occasions of use, without assigning semantic roles to the parts of sentences. But there is no appeal to a prior understanding of the concept of reference.[12]

Like Heidegger, then, Davidson points to a general concept of truth, not specific to a language, and necessarily presupposed in any interpretation of the meaning and structure of utterances. Given that both Davidson and Heidegger discuss transcendental truth in this sense, the question arises whether their accounts can be squared with one another, and also whether they can be seen as pointing in the same direction. I shall argue that they can, even though Davidson argues that truth is indefinable and (for reasons to be explained) Heidegger's description of generic truth as *aletheia* or unconcealment is itself not best seen as offering anything like general "definition" of it. In particular, as we shall see, Heidegger and Davidson can be jointly read as pointing toward a structurally unified *hermeneutic* conception of transcendental truth as jointly conditioning the truth of sentences and the intelligibility of objects. This is not to deny, of course, that there are major differences between the two accounts; most obviously, Heidegger's is a theory of a phenomenon – unconcealment or aletheia – that is not necessarily linguistic, while Davidson's, in line with Tarski, takes sentences to be the characteristic truthbearers. We shall discuss this difference in the next section; for now, it is sufficient to note a few suggestive points of agreement. To begin with, there are at least three significant and general *negative* points of agreement in the conceptions of transcendental truth to which Heidegger and Davidson gesture. First, both philosophers reject *correspondence* theories of the basis of truth. Second, both philosophers reject *coherence, anti-realist, and other epistemically based* theories of truth. Third, both philosophers reject the existence of propositions, Fregean thoughts, ideal contents, or other *timeless* entities as the primary truth-bearers.

1. Against correspondence:

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[12] Davidson, D. (2005) *Truth and Predication* (Cambridge, MA: Harvard U. Press), pp. 34-35.

In *Being and Time* and elsewhere, Heidegger presents his account of truth as an alternative to what he sees as a still-dominant "traditional conception of truth." The traditional conception, as Heidegger describes it, has two main substantive components: first, the claim that the *primary* "'locus' of truth is the assertion or judgment;" and second, the claim that "the essence of truth lies in the 'agreement' [or correspondence] of the judgment with its object."[13] Both components are captured, according to Heidegger, in the scholastic motto according to which truth is *adequatio intellectus et rei*, which has its ultimate roots in Aristotle's description of the soul's experiences (*pathemata*) as *omoiomata* or "likenesses" of things (*pragmaton*), and continues to characterize conceptions of truth such as Kant's and those of nineteenth-century neo-Kantians.[14] Heidegger asks after the "ontological character" of this supposed "truth-relation" of agreement: "With regard to what do *intellectus* and *res* agree?" On one view,[15] the requisite agreement is one between an ideal content of judgment and a real thing about which a judgment is or can be made. This relationship, like the relationship between ideal contents and real *acts* of judgment, may be said to "subsist." But Heidegger asks whether such "subsisting" has ever been clarified ontologically and what it can, basically, mean; this is, as he points out, nothing other than the question concerning the actual character of the relationship of *methexis* (or participation) between the real and the ideal, with which "no headway has been made … in over two thousand years." (p. 216).

More broadly, Heidegger considers how the relationship of agreement which is supposed by correspondence theories to hold between entities and judgments about them actually becomes manifest phenomenologically. In judging or asserting that "the picture on the wall is hanging askew," Heidegger argues, one is not related primarily to "representations" or psychological processes, but rather to the picture itself. And in the act of perception that confirms the truth of the judgment, there is again no matching of representations to objects, but rather the phenomenon of the picture revealing itself "*just as*" it (truly) is. (p. 218). This is not, as Heidegger points out, a relation of representation between the picture and a representation of it; nor is it a comparison of various representations with each other. Rather, in the demonstration, the picture *itself* is uncovered as being a certain way; in the perceptual confirmation of the judgment, the entity that was judged about *shows itself* as being a certain way (indeed, just the way it was judged to be). If what takes place here is indeed the most basic and primary phenomenon of truth, it is clear that truth cannot be theorized as having a basis in the correspondence of subject and object, or of the psychical with the physical, or in any other relation of representation or agreement. As Heidegger explains in Logic: The Question of Truth, it is rather to be described as a phenomenon of entities and Dasein that is not essentially relational at all, unless the "relationship" in question is something like a relationship of Dasein to the world.

> Truth is not a present (*vorhanden*) relationship between two beings that are themselves present – for instance between something psychical and something physical, and also it is no "coordination" (as one often says these days). If it is in any sense a relationship, it is one with

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[13] S&Z, p. 214.
[14] S&Z, pp. 214-215.
[15] Heidegger appears to have in mind Husserl's view, though he does not say so explicitly here, and it is also not clear that the view that is sketched captures accurately all the aspects of Husserl's actual discussions of the "synthesis of fulfillment" between the content of an significative intention and the content that may fulfill it (see chapter 2, above).

has no analogy with any kind of relation between beings. It is – if one may say so – the relationship of Dasein as Dasein to its world itself, the world-openness of Dasein, whose being toward the world itself is disclosed and uncovered in and with this being toward the world. (*Logic: The Question of Truth*, p. 137)

That the basis of truth is not any relation between beings suggests that it is *ontologically grounded* in the difference between Being and beings.

Davidson's arguments against correspondence theories are differently motivated and situated, but their upshot is, in important ways, structurally similar, despite the linguistic setting of Davidson's theory. In particular, Davidson has essentially two reasons for holding that there is no tenable relation of "correspondence" between language and the world to be found at all, for "there is nothing interesting or instructive to which true sentences correspond." (p. 39). The first is that, as Davidson argues drawing on an argument made in different forms by Frege, Church, Gödel, and Neale, if a sentence is said to correspond to one entity in the world, it must ultimately be said to correspond to *all* of them.[16] The argument, the so-called "slingshot," demonstrates on relatively straightforward (but not entirely unproblematic) assumptions[17] that any two true sentences, if they each correspond to anything, both correspond to the *same* thing; similarly, any two false sentences also correspond to the same thing.[18] It is thus possible to hold that true sentences correspond to something only if all true sentences correspond to some maximal object, perhaps the totality of reality or the world itself. The resulting

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[16] The argument for this, though already at least implicit in Frege's arguments for the claim that the "reference" of a sentence is always one of the two truth-values (True or False), is sometimes called the "slingshot" and is given in (slightly different) classic forms by: Church, A. (1956) *Introduction to Mathematical Logic, vol. 1* (Princeton: Princeton U. Press) and Gödel (1944) "Russell's Mathematical Logic," in P.A. Schlipp (ed.), *The Philosophy of Bertrand Russell*, (Evanston, Ill.: Northwestern U). For the discussion and further references, see Davidson, *Truth and Predication*, pp. 126-30.

[17] The first assumption is that if a sentence corresponds to something, substituting a co-referring noun phrase will not change what it corresponds to; the second is that two logically equivalent sentences correspond to the same thing if they correspond to anything at all.

[18] Assumptions:

   i)   if a sentence corresponds to something, substituting a co-referring term won't change what it corresp. to.
   ii)   Logically equivalent sentences corresp. to the same thing.

G= Grass is green.

S = The sun is 93 million miles away.

   1)   G
   2)   The x such that [x=Socrates and G] = The x such that [x=Socrates]
   3)   The x such that [x=Socrates and S] = The x such that [x=Socrates]
   4)   S

These ALL correspond to the same thing. 1 and 2, and 3 and 4, are logical equivalents

3 just substitutes a co-referring term into 2.

picture evokes, in some ways, the Eleatic thesis according to which all that exists is the One of a total and ultimately undifferentiated reality; however, as Davidson notes, it is no longer in any important sense a picture of truth as *correspondence* at all.[19]

Davidson's second reason for rejecting correspondence accounts of the truth of sentences turns on the problem of predication, and in particular on the problem of accounting for the unity of sentences. As Davidson convincingly argues by rehearsing a series of failed solutions to the problem of what gives an assertoric sentence unity, we cannot understand predication or the unity of the sentence by taking predicates or the copula to have their own, separable, representational reference or by taking there to be special kinds of composite entities for sentences to correspond to. The underlying argument for this is related to the classical problem discussed by Aristotle as the "Third Man." In particular, the assumption that the separate terms of a predicative sentence, including predicate terms such as verbs and adjectives, name separate and distinct objects leads directly to the question of what binds or ties the separate elements thus named together into a unity. One theory of such a bond is provided by Aristotle in his discussion of the predicative "is" as the "copula" and his suggestion that all sentences structurally include such a binding element, even if only implicitly. But this leads directly to the question of what binds the copula to the other parts, both in the sentence itself and in the object (perhaps a "fact" or "state of affairs") to which it is supposed to correspond, and we are off on an infinite regress. As Davidson notes, the problem of this kind of infinite regress is very closely related to the problem of predication itself, so much so that "the difficulty of avoiding one infinite regress or another might almost be said to be *the* problem of predication…".[20]

It was Frege who, according to Davidson, provided the first important clue to the way of overcoming this general problem. His distinction between concept and object, and the correlative distinction between terms for functions and terms for objects on the level of sentences, provided the first real breakthrough with the problem of predication since Plato and Aristotle by making it possible, for the first time, to consider that the linguistic predicate need not be endowed with its own distinct representational object in order to account for the structure of predication. In this, Frege was also the first, according to Davidson, to account adequately for how both singular and predicative terms contribute to the status of sentences as truth-evaluable; in this respect, Frege's theory forges a closer and more revealing connection between the meaning of terms and the truth of sentences than any before him.[21]

As we have seen (chapter 1), Frege's distinction between concept and object is in fact strongly motivated by his own argument against correspondence truth. This argument suggests that any account of truth as correspondence will result in an infinite vicious regress, and so can be seen as an ancestor of Davidson's Tarskian argument in *Truth and Predication.* Nevertheless, according to Davidson, Frege's

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[19] Davidson had earlier suggested in "True to the Facts" that the Tarskian truth-theory is understandable as a (special kind of) correspondence theory owing to its employment of a concept of reference or satisfaction; later on, he also called this "correspondence without confrontation." In *Truth and Predication* (pp. 38-41), however, Davidson explains clearly and directly that to call the Tarskian theory a "correspondence" theory in any respect was a mistake.

[20] P. 79.

[21] Pp. 133-34.

picture still threatens to open the door to infinite regresses, and raises significant additional problems of its own. First, there is the notorious problem of reference to concepts: the attempt to say anything about a concept immediately demands that it have the logical type of an object, and thus involves a crossing of levels which Frege must rule out by fiat. Second, Frege's assumptions about the compositional structure of sentences lead him to hold that both the sense and reference of sentences must be determined by the sense and reference of their individual parts; and this leads him to the claim that predicative terms have functions or function-like objects as referents. Frege's metaphor for such objects is that they are "unsaturated"; but as Davidson points out, it is obscure what can be meant by the existence of objects that are inherently "gappy" in this sense. One can identify the "semantic value" of functional expressions with their semantic role rather than their reference, as Dummett essentially suggests; but this represents an important departure from Frege's original picture, and makes the reference itself redundant.

It is here, according to Davidson, that recursive picture improves over Frege's. In particular, in characterizing truth-conditions of a language's sentences as systematically dependent upon satisfaction conditions for predicates and singular terms, Tarski can account for the compositional structure underlying these conditions without invoking unsaturated entities or shadowy referents for predicates and functional expressions. More generally, the Tarskian structure avoids all of the various kinds of regresses that have recurrently problematized correspondence and other theories by conceiving of truth as a *unitary* predicate of sentences, to be illuminated ultimately in terms of the overall truth-conditional structure of a language, rather than in terms of the *relation* of any particular sentence to anything else. As Davidson emphasizes, it is, here, the fact that the predicate "true," as applied to sentences, is essentially a one-place predicate that here provides an important clue to the emptiness of correspondence theories:

> We explain the application of a one-place predicate by reference to a relation only when there is an indefinitely large number of distinct entities to which the relation bears. There are no such entities available in the case of sentences, beliefs, judgments, or sentential utterances. It is important that truth, as applied to things in the world (utterances of sentences, inscriptions, beliefs, assertions), is a unitary property, for it is this that ties it so closely to the problem of predication. A large part of the problem of predication is, after all, just the problem of specifying what it is about predicates that explains why the sentential expressions in which they occur may be used to say something true or false. (p. 130)

As Davidson here suggests, any theory of the truth of sentences that treats it as a *relational* property will ultimately fail to account for the kind of truth-evaluable unity that sentences exhibit. This is because any such theory will advert to a relationship between a true sentence and some entity (be it a fact, state of affairs, situation, or whatever) that makes it true; and it will then be necessary to explain the unity of the sentence in terms of the unity of *this* entity. But this does not solve the problem of unity, but only reiterates it; and given the Slingshot argument, the only entity in terms of which it will be possible to explain the truth of any sentence will be the "maximal" entity, the True. Though this might be treated as a kind of correspondence explanation, if there is indeed at most one thing for true sentences to correspond to, "we say no more when we say 'corresponds to the truth' than we say by the simpler 'is

true'". (p. 130). The appeal to correspondence, or indeed to *any* relation between sentences and entities as the basis for truth, is shown to be idle and useless for its intended explanatory purposes.

Thus Davidson, like Heidegger, is led by a systematic reflection on the contours of transcendental truth to reject the usefulness of any correspondence theory, or any theory that treats truth as essentially a *relation* between beings. For both philosophers, this rejection is the result of consideration of the systematic way in which the truth of sentences is conditioned by a broader and more general structure, one that also determines the presentation or availability of objects and the structure of possible predication with respect to them. For both philosophers, the rejection of correspondence theories gives shape to a more general anti-representationalist attitude which (following one strand of anti-psychologistic arguments made by Hussserl and Frege) rejects the explanatory utility of internal, mental, or subjective representations or phenomena in accounting for the phenomenon of truth, and looks instead to the systematic structure of possible predication. But in both cases, it is worthy of note that this attitude is not motivated simply by a general distrust of representation or of the psychological or subjective, but rather emerges from a structural reflection on the basic phenomenon of transcendental truth, in relation to the structure of possible predication, itself. Such a reflection looks to the structure of possible (true) predication as a privileged, and primitive, *guide* to the nature of truth, and looks for this to be systematically illuminated through reflection on the kind of "pattern" that truth makes in ordinary utterances and judgments.

2.   Against timeless truthbearers:

As we have seen, both Heidegger and Davidson apply arguments against correspondence and representationalist pictures of truth that resemble and descend from arguments made by their respective forebears, Husserl and Frege. Davidson's application of the Slingshot, in particular, develops a line of thought that some have seen as at least implicit in Frege, and his more general argument linking correspondence truth to a problematic infinite regress echoes Frege's own argument in "Thought" against correspondence theories. Somewhat similarly, at least one strand of Heidegger's anti-correspondence position in *Being and Time* echoes Husserl's own criticisms of "picture theories" of meaning and emphasizes the implications of the type of anti-representationalist direct realism that Husserl had long advanced.[22] However, there is an important difference between the positions of both

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[22] In fact, as Tugendhat points out in his own critique (Tugendhat, E. (1967) *Der Wahrheitsbegriff bei Husserl und Heidegger* (Berlin: Walter de Gruyter &Co.) (Henceforth: *DW*), p. 331), Husserl himself had actually given a similar argument against "picture" theories already in the *Logical Investigations*, some 25 years before Heidegger's writing of *Being and Time*, which makes the basis for some of Heidegger's occasional criticisms of Husserl as a "correspondence" theorist rather mysterious. One version of Husserl's own argument is given in *Logical Investigations,* vol. 2. See Husserl, E. (2001) *The Shorter Logical Investigations* (transl. by J. N. Findlay, ed. and abridged by Dermot Moran. London: Routledge), Investigation V, pp. 238-41. Husserl's formulation of the argument also bears close comparison to Frege's: "Since the interpretation of anything as an image presupposes an object intentionally given to consciousness, we should plainly have a *regressus in infinitum* were we again to let this latter object be itself constituted through an image, or to speak seriously of a 'perceptual image' immanent in a simple percept, *by way of which* it refers to the 'thing itself'." (p. 239)

Davidson and Heidegger, and one hand, and Frege and Husserl on the other, for while both of the latter were led by what they saw as the consequences of their shared opposition to psychologistic and individualist-subjectivist accounts of meaning to embrace "ideal" contents as the ultimate bearers of truth, Davidson and Heidegger clearly reject any appeal to *timeless* or *a priori* entities or phenomena such as propositions, Fregean thoughts, extra-temporal "senses", ideal contents, or the like. Instead of maintaining the privileged link between sense and such timeless phenomena that traces back to Plato, both theorize the nature of truth and the meaning of sentences as inherently *temporal* phenomena of actual human life. In Heidegger's case, this rejection is motivated by the larger critique he undertook over a period of several years prior to *Being and Time* of Husserl's failure to pose the question of the *ontological basis* of the distinction, presupposed by Husserl and contemporary neo-Kantians alike, between the ideal and the real, a question whose most important aspect is the question of the temporality of both "realms" and their supposed interrelation.[23] In Davidson's case, suspicion of ideal and extra-linguistic contents such as Fregean propositions is motivated largely by his inheritance of Quine's devastating arguments against the intelligibility of any such notion of content; this inheritance has the consequence that Davidson, like Quine, insists upon the availability in principle of the evidentiary basis for a systematic theory of the meaning of a language in the empirical evidence available to a radical interpreter. These motivations are differently situated, both theoretically and programmatically; but in the context of the project of illuminating the transcendental phenomenon of truth, their upshot is in each case similar. For both philosophers, it is not ultimately helpful to posit extra-temporal entities as the bearers of truth; instead, truth must be explained in terms of the actual temporal phenomena of assertion, utterance, disclosure and unconcealment as these underlie the phenomenon of sense.

But although both philosophers thus reject timeless entities as truth-bearers, and substitute for these an account of the actual phenomena of linguistic and non-linguistic meaning as they are manifest in the actual life of speakers, this does not mean that either philosopher abandons the concept of sense itself or its essential link to the phenomenon of truth. As we have seen, for Heidegger sense becomes the interpretive projection of Dasein upon possibilities; according to this conception, sense retains a privileged structural connection to the world-disclosive essential structure of Dasein but nevertheless characterizes the very being of entities, both individually and collectively. Davidson's project of radical interpretation, similarly, retains the goal of theorizing what is known, at least implicitly, by a competent speaker in knowing a language by structurally characterizing the pattern of truth-conditions exhibited by the language's sentences as a whole. It is because of the privileged link between this pattern of truth-conditions and the compositional structure of sentences that such a theory can justly be characterized as a "theory of meaning" for the language, and to insist upon the holistic interdependence of truth-conditions and compositional structure in this way is essentially to insist upon a dimension of sense that is essentially linked to the structure of truth and is independent (as we have seen) of the dimension of reference. Once again, the key concept in illuminating or characterizing the structure of sense is that of truth, and in particular of the total "pattern" that truth must exhibit in the utterances, judgments, and practices of speakers. But that this pattern is exhibited in the actual utterances, judgments, and

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[23] See chapter 2, above.

practices of speakers does not prevent it from embodying, as well, the real structure of the properties and relations of objects, insofar as they can figure as the subject matter of sentences, judgments and beliefs that are true.

If, for both philosophers, sense thus remains linked to the *temporal* phenomenon of truth, there here arise deep questions about the temporal *constitution* of sense, so conceived. In particular, if both philosophers point to a temporal phenomenon of truth that is not in any sense subjectivist or psychologistic, it is necessary in the context of both philosophers' theories to ask how this phenomenon is temporally structured and how this structure is linked to the structure of sense. If, in particular, the pattern of meaningfulness exhibited by a successful Tarskian meaning theory, for Davidson, is essentially linked in each case to the structure of a particular language, then the question arises of how the interpretation of natural languages, as phenomena arising in historical time and capable of historical change and transformation, nevertheless presupposes (as Davidson has argued) a transcendent and non-language-specific concept of truth that is *not* conceived as arising anew with the institution or adoption of each new language. And if, for Heidegger, the phenomenon of truth is always linked with the sense of entities in terms of the specific possibilities of disclosure that are at any time afforded to Dasein as a historical being, then the question arises of how the various historical transformations of these possibilities of sense are in each case, again, linked back to the more general and transcendent phenomenon of truth as unconcealment. But crucially, this structure is itself not simply independent of time; rather, it is, in a way that still must be clarified (see chapter 1 and 3 (?) of part II), conceived as a structure in which is tied up the ontological givenness of time itself. We are not yet in a position to address these questions, though we will return to them in Part II. As we shall see there, their adequate formulation requires first a temporal and being-historical posing of the question that Heidegger sometimes describes as that of the "being of language" – that is, the question of the specific kind of temporality that "natural" or "historical" languages exhibit in their institution, transformation, and everyday practice. For now, it suffices to note simply that the privileged structural link that both philosophers maintain between the structure of sense and the phenomenon of transcendental truth raises questions of temporality and precedence that cannot simply be answered, as both philosophers recognize, by reference to an *a priori*, timeless, or transcendent realm of contents simply independent of historical time.

3. Against epistemic, anti-realist, warranted assertability, or coherence theories

If truth cannot be defined in any explanatorily useful way in terms of any relation of correspondence or any other relation between beings, there is also good reason, in the context of the structurally unified approach to truth and sense that both Davidson and Heidegger exemplify, to believe that it is not definable in terms of knowledge, verifiability, assertibility, or any other aspect of human epistemic or pragmatic abilities. The basic reason for this is that the concept of truth, as it operates in structuring sense, is linked more deeply conceptually and ontologically, to *being* than it is to *knowing*, or indeed to any concept of practice or knowledge grounded in, and limited to, the contingent reach of human abilities. Davidson makes the point clear in the course of a trenchant critical discussion of recent anti-realist theories such as Dummett's, which holds that the truth of sentences in a language is to be

understood in terms of the possibilities of their verification, and Putnam's "internal realism," which characterized truth as warranted assertibility in an idealized sense:

> We should not say that truth is correspondence, coherence, warranted assertability, ideally justified assertability, what is accepted in the conversation of the right people, what science will end up maintaining, what explains the convergence on final theories in science, or the success of our ordinary beliefs …

Davidson's basic reason for opposing all of the family of "anti-realist" accounts on which truth is dependent on standards of ascertainability, assertibility, or actual practice is that "antirealism, with its limitation of truth to what can be ascertained, deprives truth of its role as an intersubjective standard." (p. 48). According to Davidson, it is constitutive of this role as a standard that truth cannot be "lost"; that is, it cannot be correct to hold that a sentence that is true at one time can ever become untrue later. But on an account like Dummett's, which links truth to justified assertibility in the sense of the actual capabilities of an individual or community to verify or assert sentences, truth *can* be lost in this sense, for actual abilities develop in historical time and may also diminish or vanish. In this way a sentence that was formerly false or neither true nor false could become true simply by virtue of the contingent conditions of justification or assertibility changing; and a sentence formerly true could become not true with the waning of the requisite abilities or practices. The only alternative, while maintaining a constitutive link between truth and "human" practices or the epistemic abilities they are seen as embodying, is to *idealize* the requisite abilities; this is the alternative taken by Putnam with his "internal realist" account, which identifies truth with idealized justified assertibility, or what reasonable belief would converge upon ultimately, given "good enough" epistemic conditions. The problem with this alternative is that the idealization deprives the appeal to abilities of any distinctive force; in particular, if we idealize away from *any* possibility of error, we are simply no longer making any important use of a concept of human *abilities* at all. In this way, according to Davidson, all anti-realist theories, in making truth dependent upon a constitutive conception of human abilities, capacities, or practices, fall prey to a fatal dilemma: either they must hold that truth can be lost, or they make the epistemic concept of truth essentially empty.

Heidegger's grounds for opposition to any theory of truth as grounded in epistemic (or any other) human abilities, capacities or practices may seem, initially, more obscure; for Heidegger, as we have seen, recurrently identifies truth as, in a basic way, a structure *of* Dasein; and (despite Heidegger's own usual practice in *Being and Time* and significant internal evidence to the contrary) it has become usual to interpret or identify Dasein as it is discussed in *Being and Time* with a "human" way of being. Along similar lines, Heidegger's discussion of Being-in-the-World and of the way that entities are primarily disclosed as ready-to-hand or *zuhanden* in contexts of everyday practice has suggested to some that he intends a conception of truth as grounded in a fundamental way in the contingent structure of social practices, or individually or socially maintained abilities or skills. Nevertheless, Heidegger's attitude toward the view that truth "presupposes" human abilities or practices is well expressed in a passage from The Basic Problems of Phenomenology:

> It is not we who need to presuppose that somewhere there is "in itself" a truth in the form of a transcendent value or valid meaning floating somewhere. Instead, truth itself, the basic constitution of the Dasein … is the presupposition for our own existence. Being-true, unveiledness, is the fundamental condition for our being able to be in the way in which we exist as Dasein. Truth is the presupposition for our being able to presuppose anything at all. For presupposing is in every case an unveiling establishment of something as being. Presupposition everywhere presupposes truth." (Basic Problems, p. 221)[24]

Here, it is clear that truth does not presuppose any abilities, capacities, or contingent practices; rather, the phenomenon of truth as unveiledness is the basic phenomenon that conditions *our* "being able to be in the way in which we exist as Dasein" at all. In *Being and Time*, this preconditioning takes the form of the basic structural relation of Dasein to unconcealedness or disclosure, in terms of which Dasein is "primordially" structured by truth, and is "equiprimordially" both "in truth" and "untruth". In later texts, for instance in the *Beitraege*, this conception of truth as a precondition for *our* being Dasein is further radicalized, in the context of the deepened problem of the truth of being/beyng (Seyn), into the problem of *attaining* Dasein by means of attaining a standing in the ontologically privileged region of what is now thought of as the "clearing". Though to do full justice to this point will require a deeper investigation (part II) into what is involved in the very concept of a human ability, or of a "practice" structured by such an ability, in a real or idealized sense, it is clear that in neither case is it trenchant to suppose that Heidegger simply ascribes the phenomenon of truth to individual or social abilities or practices (or to suppose that the definition of Dasein only accidentally leaves out the concept of the "human"). (provided the underlying ontological situation is seen clearly).

As Davidson emphasizes, the primary motivation for many anti-realist theories of truth is the felt desire to avoid a "metaphysically realist" account in terms of metaphysical correspondence, mind-independence, or a "God's-eye view" that threatens to make the availability of truth to human knowers mysterious. If, however, correspondence accounts can be resisted by recourse to the Tarskian structure in the way Davidson has argued, then this motivation lapses and it is possible to begin to see the contours of an account of truth that is neither anti-realist nor "metaphysically" realist (in the "correspondence" sense). On such an account, truth is constitutively related to sense, not because sense is itself rooted in human abilities or practices, but because sense is in turn linked to the *being* of beings, to their being in the sense of existence and to their being the ways that they are. These linkages are manifest in the general logical structure underlying the possibility of predication, which is not specific to any particular language, and which exhibits the structure in virtue of which linguistic predicates are *true of* objects and entities, without necessarily ascribing this structure to any (ontic) domain of beings. In this way it is possible to see truth, resisting the anti-realist arguments, as

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[24] Cf. S&Z, pp. 227-228: "It is not we who presuppose 'truth'; but it is 'truth' that makes it at all possible ontologically for us to be able to *be* such that we 'presuppose' anything at all. Truth is what first *makes possible* anything like presupposing… The truth which has been presupposed, or the 'there is' by which its Being is to be defined, has that kind of Being – or meaning of Being – which belongs to Dasein itself. We must 'make' the presupposition of truth because it *is* one that has been 'made' already with the Being of the 'we'".

essentially a *realist* structure touching on the very Being of beings itself (without construing this realism as "mind-independence," correspondence, or any other ontically specified relation).

What, then, of Heidegger's insistence that "there is truth only as long as, and because of, Dasein," and Davidson's declaration that "Nothing in the world, no object or event, would be true or false if there were not thinking creatures?" (p. 7) Both declarations can be upheld, if the specific phenomenon of truth is seen in its genuinely *ontological* structural relationship to Dasein and to the structure of thought. It is not that the structure of Dasein, or the existence of thinking creatures itself, is for either philosopher intelligible quite independently of the link between these phenomena and truth; rather, as Heidegger says, both Dasein and the characterization of any creature as "thinking" depends upon the structure of truth in its specific linkage with truth. The result of construing the dependence this way is that while, as Heidegger and Davidson both emphasize, it is incoherent to suppose truth to be completely and constitutively independent of the actuality of life and practices, it is also not the case that truth can simply be seen as an outcome of these.

These negative points of agreement between Heidegger and Davidson do not by themselves establish the positive possibility of a comprehensive theory of truth that is consistent with both philosophers' accounts. But there is a further negative point of agreement, this time on a methodological level, that begins to point the way toward such a comprehensive picture. To see this point, it is important to note that both philosopher's rejection of various types of traditional theories of truth that attempt to define it, whether of a correspondence, coherence, or a priori nature, has its methodological ground, in both cases, in a motivated suspicion of the very possibility of providing any definition of truth in terms of simpler or more basic phenomena. Davidson, for instance, argues that truth, as our "simplest semantic notion" cannot and should not be *defined* in terms of correspondence, knowledge, reference, or any other notion or phenomenon; indeed, it appears likely that any such definition will fail to respect the pattern already exhibited by Tarski's extensionally adequate structure, and will hence fail to capture truth, even *extensionally*. Moreover, truth is a notion that we already understand, and indeed *must* understand if we are to interpret any language (even our own) at all.

The connection exhibited in the course of radical interpretation between truth and sense is so deep and basic that it is idle to expect one to be defined in terms of the other, or either one to be defined in terms of more simple or basic notions. Nevertheless, what we can do, according to Davidson, is to reflect on the relations *among* maximally basic concepts such as truth, meaning, and intention in order systematically to illuminate the pattern of their interconnections. This illumination is provided in part by reflecting on the Tarskian structure, and on what it suggests about the structure of predication in a language as a whole; as we have seen, this reflection illuminates, in particular, how the two structures are interrelated in producing the truth-conditional structure of a language that can be understood and learned by finite creatures, and thus how this possibility is itself linked back to what is true and false.

As we have seen, for Heidegger as well truth is an ontologically basic concept, one that is not explained on the presupposition of some other phenomenon but is, in a sense, itself presupposed to the intelligibility of *any* phenomenon as such. For this reason, the *interpretive* situation with respect to it is just as Davidson says: it is not explained or defined in the course of interpretation, but is rather

presupposed to the possibility of any interpretation, and hence to the very intelligibility of phenomena and beings as well. Moreover, since the kind of depth that is relevant here is ontological rather than ontic, the hermeneutic situation with respect to truth is directly analogous (or even homologous) with that of the concept of Being itself. As Heidegger makes clear in *Being and Time*, though it would be idle to search for an explicit definition of Being, we already stand in a hermeneutic situation determined by a certain "understanding" of it, albeit a vague and inexplicit one; what we can do to gain ontological clarity is to practice a kind of hermeneutic reflection that aims to make it intelligible and fixate in explicit concepts what we already implicitly understand. The analogies here between the ways that Davidson and Heidegger describe our hermeneutic position are telling, for they suggest that when the attempt to define truth is left behind, what remains is the possibility of clarifying it by reflection on its relation to equally deep concepts or phenomena, among them the phenomenon of sense itself. In the reflection, the underlying phenomenological structure can become gradually more and more visible, though always only on the essential basis of the inexplicit understanding of the phenomenon that the investigator already has. Heidegger's term in the 1920s for this sort of reflection, which makes explicit the underlying structure of a phenomenon already in some way known by means of our own reflection on it, is *formal indication* (cf. chapter 2). The evident hermeneutic parallels between Davidson's way and Heidegger's way of describing the reasons for the indefinability of truth suggest that the Tarskian structure of convention T, as well as Heidegger's own identification of truth as unconcealment, suggest that both might be seen as formal indications in this sense.

II

Thus far, I have argued that there are several initially suggestive similarities between Heidegger's and Davidson's respective discussions of transcendental truth. Both situate their accounts of truth within the broad context of interpretation, both understand transcendental truth as pointing to a broader holistic structure that preconditions the intelligibility of specific concepts of truth in particular languages, both connect this structure closely to that of meaning or sense, and for both the connection involves, in large part, an account of how the structure of transcendental truth illuminates the structure of possible linguistic predication (and the availability of objects). Moreover, as we have seen, both reject in common many common accounts of truth, including correspondence accounts, coherence and epistemic accounts, and accounts on which propositions or timeless senses are ultimate truthbearers. Finally, the resistance of both philosophers to all of these types of theories may be seen as connected negatively to their shared resistance to the project of *defining* truth, and positively to the methodology of formal indication that both effectively adopt. However, there is at least one large-scale and obvious difference that must be overcome before any serious unification of Davidson's and Heidegger's accounts can be considered. Drawing as it does in detail upon Tarski's structure of truth-definitions for well-defined languages, and arising in the context of the kind of broadly "truth-conditional" accounts that are characteristic of much theorizing in the analytic tradition, Davidson's consideration takes assertoric *sentences* to be the primary locus of truth and the structure of a *language* to be the primary one to which a systematic consideration of truth is applicable. Views of this sort, on which sentences are the primary locus of truth and sentences or sentential structures articulate logical form in a way that is

essential to any consideration of truth, gained predominance at an early stage in the analytic tradition; without prejudice to whether sentences, sentence-types, or propositions are taken as the relevant units of analysis, we shall call them *sentential* views.[25] By sharp contrast with them, as we have seen, Heidegger recurrently criticizes a "traditional" conception of truth according to which the "assertion" [*Aussage*] is its primary locus and characterizes the basic phenomenon of truth (as aletheia or unconcealment) as a phenomenon that does not necessarily involve explicit judgment, linguistic predication, or assertion. This criticism involves Heidegger repeatedly in challenging the actual possibility of giving an adequate account of truth if one begins with sentences or their linguistic interrelations; while from the other side, given the basic and essential connection, within the practice of a language, between the structure of sentences and the possibility of *saying* something true or false, it can be questioned whether any account of truth can succeed *without* a structural basis in the logical structure of sentences (of the kind that Tarski's account captures).

This difference points in obvious ways to broader methodological and thematic differences in the traditions and lineages in which the two philosophers have most often been located. In particular, Davidson's sentential approach fits centrally within the tradition of which both of his most important antecedents, Tarski and Quine, are unquestionably located, that of analytic philosophy in the wake of the "linguistic turn"; whereas Heidegger's approach, developing from Husserl's phenomenology, does not accord the linguistic turn, at least in the form inspired by Frege and first taken by Russell and the early Wittgenstein, any central methodological priority. Some recent scholarship has emphasized the ways in which Heidegger's own commitments, particularly with respect to truth, can be seen as embodying a critical position with respect to those of much of the mainstream analytic tradition; for example, Dahlstrom has recently suggested that a major basis for Heidegger's positive views is his critique of a "logical prejudice" which is both historically dominant and also characteristic, according to Dahlstrom, of the analytic tradition of Frege, Quine and Davidson. On the position that Dahlstrom presents Heidegger as criticizing, the sentence, proposition, or assertoric utterance is the basic locus of truth, and the structure of truth can only be understood through a systematic reflection on the structure of language. Conversely, from a position methodologically influenced by the "language-analytic" tradition, Ernst Tugendhat in the 1960s articulated a by-now-classic critique of Heidegger's conception of truth in his *Habilitation*, *Der Wahrheitsbegriff bei Husserl und Heidegger*, and in a related shorter article, "Heidegger's Idea of Truth." In both pieces, Tugendhat argues that Heidegger's aletheiac or

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[25] A good example of a propositional conception is the view that comes powerfully to the fore in the first remarks of Wittgenstein's *Tractatus*:

> The world is all that is the case.

And

> The world is the totality of facts, not of things.[25]

Here, the contrast is drawn explicitly between a conception of the world as inherently *structured* in such a way that it can only be adequately revealed or described by means of sentences or propositions and a conception (to be rejected) on which it does not have this kind of structure, but is instead simply a collection or totality of *individual* things or objects.

disclosive conception cannot account for important specific features of the phenomenon of truth, among them the basic difference between truth and falsity itself, and suggests that only a conception that takes the truth of sentences or sentence-like structures as basic can account for truth in its close connection to predication. In this section, I will consider Tugendhat's objections and argue that Heidegger can be defended against them; the basis for the defense is a consideration of the implications of Heidegger's conception of the phenomenologically basic structure of the "existential/hermeneutic as". On the other hand, considering the genuine methodological grounds for Tugendhat's critique allows us to see the appropriate place of a consideration of sentential structure in the context of a more comprehensive general picture of transcendental truth, one that does not accord either the disclosure of objects or the truth of sentences a simple priority, but rather presents both kinds of priority as equally real and significant, although articulable along different dimensions.

In considering the relationship of Heidegger's views to the analytic tradition, it is important first to note that the "traditional conception" that Heidegger criticizes fits many analytic sentential conceptions of truth only poorly. First, Heidegger generally characterizes the traditional conception as one on which the "assertion" [*Aussage*] or "act of judgment" is accorded primacy; but because of the anti-psychologistic basis of the sentential accounts of truth that originate with Frege and gain prominence in the analytic tradition, these accounts generally distinguish (as Husserl himself in fact did) distinguish sharply between individual, datable acts of assertion, judgment or utterance and their contents, and so do not accord primacy to any individual linguistic act of assertion or psychological event of judging. Even in the context of a picture like Davidson's, where the interpretation of meaning is the interpretation of the utterances of the speakers of a language or the speaker of an idiolect, these utterances are seen as having a significant logical structure of contents, shown in the recursive structure of the axiomatized T-theory, which is conceived as independent of (and productive of) these actual utterances. Second, and perhaps more significantly in the context of considering the actual nature of truth, Davidson's account and some other analytic accounts combine a sentential conception of the *locus* of truth with a *non-correspondence* conception of its nature.

It is not that Heidegger ever explicitly argues against just this kind of view. Rather, his own discussions recurrently *identify* sentential theories with correspondence theories under the unified heading of the "traditional" conception of truth. As we have seen, in *Being and Time*, Heidegger discusses the "traditional" conception as committed to both the claim that the primary locus of truth is assertion or judgment, *and* the claim that truth consists in 'agreement', adequation, or correspondence.[26] Heidegger does distinguish between these two components of what he sees as the "traditional" account of truth, but throughout *Being and Time* and in other texts dating from both before and after its composition, Heidegger repeatedly assumes that these two components *must* go together.[27] In fact, Davidson and

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[26] S&Z, p. 214.
[27] Other places where Heidegger makes this assumption include: GA 19 (1924-25), pp. 23-28; GA 21 (1925), pp. 127-28; GA 24 (1927), pp. 294-95; GA 26 (1928), pp. 154-58; GA 34 (1931), pp. 2-4. Heidegger's explicit concern with what he takes to be the roots of the "traditional" view in interpretations of Aristotle seems to have entered his thought as early as 1921; see Kiesel, T. (1995) *The Genesis of Heidegger's Being and Time* (Berkeley: U. of California Press), p. 230ff.

other philosophers in the analytic tradition have indeed often adopted a view of truth that holds that it is primarily sentential while clearly *rejecting* a correspondence account of (sentential) truth.[28]

This suggests that accounts of the sort that Davidson gives, which (as we saw above) clearly and decisively rejects any type of correspondence or any other ontic relation as the basis of truth while maintaining the primarily sentential form of truth, may capture important features of the phenomenon of truth that neither the "traditional conception" nor Heidegger's own picture can capture as adequately. This suggestion is the basis of Tugendhat's critique. At the heart of Tugendhat's argument in the shorter article "Heidegger's Idea of Truth" is the suggestion that Heidegger's account of truth as unconcealment in section 44 of *Being and Time* fails to account for the central difference that all theories of truth must account for, if they are to be considered adequate at all: that between truth and falsity itself. For in reducing truth to the unitary phenomenon of unconcealment, Heidegger can consider it only as an event that either occurs or does not, and cannot therefore provide any basis for a distinction between true and false unconcealments. In particular, Tugendhat suggests, it is reasonable to suppose that we understand the claim that something is true only if we are also able to understand, as well, the claim that it is false: that is, if we have the actual concept of truth in view, it must include, as part of its basic structure *both* the possibilities of truth and falsehood. However, on the view that Heidegger argues for, the truth of an assertion consists in its disclosure or uncovering of an entity; it is this uncovering or disclosure that deserves the name "truth" in the *primary* sense.[29] This "being-uncovered" (*Entdeckend-sein*) of the entity or entities thus appears to be simply something that either *happens* or *does not* happen [30] As Tugendhat argues, if Heidegger indeed considers truth to consist in uncovering, then he must apparently consider *all* uncovering to be in itself "true," and thus must consider even a false proposition to depend on the uncovering of the entities involved in it.[31] Indeed, Heidegger himself says that in a *false* assertion "the entity" is "already in a certain way uncovered."[32] But if this is right, and the concept of uncoveredness does not include or support a bivalent distinction between truth and falsehood, then it is also clearly insufficient to account for the bivalence of propositions, one of the key defining features of propositions on any reasonable view.

Heidegger's formulation at the beginning of section 44b, that "Being true (truth) means being-uncovered" ["Wahrsein (Wahrheit) besagt entdeckend-sein"] therefore appears to be inadequate. Tugendhat suggests that Heidegger can reach this formulation, in fact, only through a crucial equivocation. In section 44a, he has moved from the claims that an assertion is true when it "uncovers the entity as it is in itself" to the simple claim that the assertion's truth is simply its "uncovering" of the

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[28] Thus, whereas the scholastic motto which Heidegger most often mentions in discussing the "traditional" conception of truth, according to which truth is the *adequatio intellectus et rei*, calls on its face for correspondence or "adequation" between the intellect and a *thing* or *object (rei)*, and so does not immediately suggest a propositional conception of truth at all, on the other hand the conceptions of those twentieth-century philosophers who have held a propositional conception of truth can almost universally be separated from the idea of truth as correspondence or adequation, and indeed in many cases involve conceptually devastating critiques of this idea.

[29] S&Z, pp. 217-19.

[30] "Heidegger's Idea of Truth", p. 253.

[31] "HIT," pp. 253-54; *Der Warheitsbegriff*, p. 333.

[32] S&Z, p. 222.

entity (full stop).[33] With the first claim, we still have a bivalent distinction between truth and falsity; for an assertion can presumably disclose an entity (or perhaps, as Tugendhat suggests, a state of affairs) as it is in itself *or otherwise*; in the first case, it will be true, and in the second, false. But with the slide to the third claim, we have lost the possibility of any such distinction; uncovering either occurs or it does not, and we no longer have any ground to distinguish between a "true" and a "false" kind of uncovering. In failing to draw this distinction, according to Tugendhat, Heidegger has in fact equivocated between two concepts of "uncovering" or pointing out; according to the broader of the two, "uncovering" means pointing out or indicating entities in general, and includes true as well as false instances, while according to the second, narrower concept, it is limited to cases of truth and a false assertion is, instead, a case of covering-up or concealing. Thus, although Heidegger has (quite rightly, on Tugendhat's account) further developed the central strand of Husserl's thought, already in fact hinted at by Plato and Aristotle, according to which truth is at bottom to be understood in terms of the phenomenon of givenness, he has nevertheless continued it in such a way that the particular differentiation that makes for a specific concept of truth as such becomes unavailable.

Although Tugendhat argues that Heidegger, in defining truth as unconcealment, has thus crucially failed to capture essential features of the actual concept of truth, he does not simply reject Heidegger's project in all of its aspects. Both in "Heidegger's Idea of Truth" and in *Der Wahrheitsbegriff*, Tugendhat emphasizes the significance of Heidegger's continuance of the classical "ontological-transcendental" project that begins with Kant and also characterizes Husserl's phenomenology, and moreover suggests that Heidegger's inquiry deepens radicalizes this project in an important respect by turning its attention away from the subjective conditions for possible knowledge of objects and toward the broader "ontological" question of the structural conditions of givenness in general. In the first part of *Der Wahrheitsbegriff*, Tugendhat shows how Husserl's transcendental phenomenology, especially in connection with the problem of "constitution", drives toward a systematic consideration of the modes of givenness of different types and regions of objectivities (pp. 184), culminating in the idea of a kind of "phenomenological aletheiology" that systematically elucidates the transcendental conditions for truth in the sense of the various kinds and modes of subjective givenness (p. 259). But as Heidegger suggests, Husserl could not fully carry out the project of such a systematic inquiry because of his presupposition of subjectivity as an absolute region of *self*-givenness and his consequent failure to inquire radically into the underlying sense of givenness itself, in a way that does not simply presuppose the subject-object relationship. There thus arises, beyond Husserl's inquiry into the specific conditions of intentional givenness of objects, the more general "ontological" question of the "dimension of ways of givenness" of beings as beings; Heidegger develops the question, in *Being and Time*, as the analysis of facticity and in determinative connection with the phenomenon of world (at which Husserl had hinted, again without being able fully to treat it, with his late concept of "lifeworld"). Here, in particular, the givenness of phenomena in general is characterized in terms of their liability to be encountered *as beings* and with this the question of their truth in the sense of their "disclosure" is intimately linked to the question of the meaning of Being itself.[34] This widening of the question represents a real deepening of the

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[33] S&Z, p. 218.
[34] P. 270; cf. also being and time p. 31, p.44.

transcendental problematic, according to Tugendhat, in that it amounts to posing the question of the very constitution of the horizon within which beings are given as meaningful at all, a question which is, Tugendhat suggests, unprecedented in the history of the tradition. In this respect, in broadening the concept of disclosedness beyond the intentional relation or the relationship between subjects and objects, Heidegger has thus made real progress ("Idea of Truth p. 258); but by simply identifying truth and disclosedness *tout court*, he has also lost track, as we have seen, of the specific possibility of differentiating between truth and falsehood, and hence of the possibility of a "critical consciousness" grounded in responsiveness to this difference. It remains possible, as Tugendhat suggests briefly at the end of "Heidegger's idea of truth," that the "transcendental" problematic of the ultimate horizons of givenness might itself be developed differently, and even in such a way that the bivalent distinction between truth and falsity itself is itself preserved, and even illuminated, at this level.

It is against this possibility that Tugendhat's more specific objections to apparent consequences of Heidegger's picture of truth as disclosedness should be measured, and to its further development, both in ways actually suggested by Heidegger and also in ways supplementary to his official account, that they may perhaps be seen as pointing. In particular, in *Der Wahrheitsbegriff*, Tugendhat instructively offers three more specific articulations of the underlying objection that Heidegger's identification of truth with disclosedness *tout court* must fail to account for the specific difference between the truth and falsehood of assertions. First, since Heidegger wishes to identify truth with what transpires in *acts* of disclosure or unconcealment rather than the *contents* of these acts, he essentially makes truth into the result of an (factual and "ontic") *event*. But this results in seemingly implausible consequences about truth itself, including its *ontic* relativity to human acts of inquiry and discovery. For example, Heidegger says near the beginning of section 44c that " 'There is truth only in so far as Dasein is and so long as Dasein is", that Newton's laws, like other truths, "are true only as long as Dasein is", and that "Through Newton [his] laws became true…" (pp. 226-227). This suggests, according to Tugendhat, that according to Heidegger a being can *become* 'true' when and if it is factually indicated or pointed out. But:

> If a state of affairs, so long as it is unrecognized, is not true, then it would indeed seem appropriate to say as a consequence of this that it ceases being true when it is no longer recognized by anyone, and that its truth grows greater the more people recognize it.[35]

Similarly, according to Tugendhat, Heidegger's identification of truth with acts or events of disclosure leaves mysterious the status of a sentence or proposition that is understood but not yet verified; such a sentence would seem indeed to disclose the entities treated by it, but would not by that token seem to be automatically characterizable as true. More generally, Tugendhat suggests:

> Insofar as one can assume that Heidegger indeed has in mind in this section the specific sense of truth, the ontical and ontological levels are simply confused: on the ground of the indubitable ontological relativity of truth as such to the Dasein, the ontic independence of the occurent truth from its factually being known is denied.[36]

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[35] *Der Wahrheitsbegriff*, p. 344.
[36] *Der Wahrheitsbegriff*, p. 345.

-The objection is essentially the same as the one that Davidson makes against epistemic conceptions of truth. Since Heidegger also wants to avoid such theories, we should not attribute to him the implications of these kinds of views. In particular, since (as he says) the phenomenon of truth is a more general one that preconditions our possibility of *being* Dasein…

Second, as Tugendhat suggests, when Heidegger does characterize the truth of assertions, "the assertions of which Heidegger is thinking are primarily simple predications of individual objects … Only here is the talk of indication, uncovering and concealing clear without further ado."[37] That is, if the truth of assertions is itself to be characterized in terms of the uncovering of *entities*, it is not immediately clear *which* entities should be thought of as uncovered (etc.) in any case but that of the attribution of a single property to a distinct individual. For instance, if we begin with sentences such as "Socrates is tall" simply predicating a property of an individual object, we may indeed readily be led to an account of the truth of this sentence as consisting in the uncoveredness of Socrates as he is in himself (namely as tall). However, it is not at all clear from this account what we are to do with even a simple relational sentence such as "Socrates is older than Plato." Should we think of the truth of this as grounded in the disclosure only of Socrates (since he is the grammatical subject)? But then we must think of his being disclosed in terms of a relational property (being older than Plato) as his being disclosed as he is in himself. This would threaten to make all relations into internal properties of an individual, and since each object is related somehow or other to all others, it would imply that the full disclosure of an individual object also discloses the whole universe. Or should we think of the relevant disclosure here as that of Socrates and Plato jointly, as they are in themselves? But this too is inadequate, since in addition to the disclosure of Socrates, and that of Plato, we evidently need the disclosure of the relationship between them as well. And this relationship can hardly itself be attributed to either of the "things" as they are "in themselves."

Finally, as Tugendhat suggests in passing, an even harder case is that of (true) negative judgments of existence, for instance the judgment "Santa Claus does not exist" or "there are no unicorns." It is not at all clear how the truth of these judgments can be grounded in the "disclosure" (uncovering, etc.) of the entities mentioned, since these entities do not even exist. Here, as Tugendhat suggests, it is accordingly unclear what it could mean to speak of the "thing itself" or of the true proposition as disclosing it as it itself is; rather, the problem of accounting for the basis of (true or false) negative existential assertions evidently demands a much more complex accounting for the relationship between their possible truth and the meanings of their constituent terms, including terms such as "not," and "being" itself. This is not to say that such an account could not be given, but only to suggest that it would necessarily pass through an ontological development of the transcendental problematic that would at the same time be requisite to clarifying the relevant sense of the availability of beings *in general* and as a *whole* on the basis of which the truth of such a negative assertion is possible.

Taken together, Tugendhat's objections suggest that neither Heidegger's account, nor any account that sees the linguistic truth of assertions or sentences as secondary to a more basic kind of truth "of beings", can succeed in capturing the actual contours of the concept of truth, including the important distinction between truth and falsity itself. As Tugendhat emphasizes at the end of "Heidegger's idea of

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[37] *Der Wahrheitsbegriff*, p. 342.

truth," however, this does not prevent Heidegger's extension of the question of truth from representing a genuine advance over earlier transcendental pictures such as Kant's and Husserl's. In particular, in extending the question of the basis of givenness beyond intentional relations of subject and object, Heidegger's account can encompass the dynamic and temporal character of the unconcealment of entities in the horizon of world and formulate the essential question of the way in which the opening of the world as such already conditions the possibility of assertoric truth. Nor does it exclude the possibility that Heidegger's advanced transcendental picture might in some way be *reconciled* with assertoric or sentential theories that emphasize the specific features of assertoric truth which seem to go missing on Heidegger's explicit account in section 44 of Being and Time (pp. 257-259).[38] Can Heidegger's picture be defended or supplemented without modifying its basic structure, but in such a way as to respond adequately to Tugendhat's objections? I shall now argue that it can, and that the defense indeed points the way to a reconciled, more comprehensive picture that can accommodate the best features of Heidegger's "transcendental" position with respect to the givenness of entities *as well as* those of sentential theories such as Davidson's.

To a large extent, such a defense can be formulated by considering the far-reaching implications of Heidegger's development of the hermeneutically basic "existential-hermeneutic" "as-structure," which Heidegger treats as the most basic structure underlying any possible understanding and unconcealment, including (but emphatically not limited to) that which occurs in explicit assertion. The structure and implications of this basic "existential-hermeneutic as" are sketched only quickly in *Being and Time*; but Heidegger gives a much more detailed account, in extensive deconstructive dialogue with Aristotle, in the 1925-26 course "Logic: The Question of Truth". Here, Heidegger pursues a detailed and penetrating analysis of the basis of the structure of the assertoric *logos* in Aristotle, including importantly the possibility of a *logos* being *false* (section 13).

Heidegger finds that, for Aristotle, the possibility of truth as well as falsehood in a logos depends on its instantiating a structure of *synthesis* and *diaeresis*; in virtue of this structure, a simple predicative sentence both synthesizes the subject with the property or determination expressed by the predicate, and also separates out from the many possible determinations of that subject the one that is explicitly expressed in the particular sentence. Aristotle sees this structure of synthesis and diaeresis in the predicative sentence as characteristic of the actual meaning of the "copula" or of the "is" of predication, although it is also present, for Aristotle, in sentences which do not include the copula explicitly. At the same time, though, this possibility of combination and separation in the sentence has an ontological basis, for Aristotle, in intrinsic possibilities of synthesis among *objects*; thus, for the synthetic/diaeretic

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[38] "In Heidegger's metatranscendental position – in which the most primordially given is neither substance nor subject, but instead, an open region – critical consciousness could have been able to find its proper balance. Here, at the point at which transcendental not only takes in history, but also opens itself to it and renounces the support of an ultimate ground, arose the possibility of radicalizing and developing anew the idea of critical consciousness; yet also thereby the danger of surrendering this idea and giving preference to a new immediacy. But in fact the open region did not yield that proper balance; for without the depth dimension of truth, it was thought only as a region of *immediacy* …for the moment of reflection, which is constitutive for the question of truth, remained from the outset on the margins." (pp. 262-63).

structure to characterize the possibilities of truth and falsehood in the sentence, "the being itself must have an ontological structure such that, on the basis of its being [Sein] and as the being [Seiende] that it is, the thing offers the possibility of synthesis, indeed demands synthesis with another being." In this respect, for Aristotle, "the thing must be what it is only within the unity of such a synthesis." (p. 156). The synthetic/diaeretic structure which Aristotle thus discovers in the assertoric sentence has its historical basis in Plato's conception of the logos as a synthetic structure in the *Sophist*, which was possible for him only in that "he posed anew the problem of being," thereby achieving a concept of synthesis that is, in a "chameleon-like" way, both logical and ontological. Aristotle, however, "pressed further ahead" in discovering how this structure could show that the possibility of falsehood lies "within beings themselves and in the possible ways they can be." As Heidegger shows through a detailed reading of *Metaphysics* IX 10, in particular, Aristotle's synthetic/diaeretic conception, in accordance with the way that "the question of truth in the Greeks is primarily oriented to knowledge as intuition," (p. 143) is itself dependent on Aristotle's claim for the *necessary* existence of certain non-composite beings about which falsehood and deception are impossible; these beings, the *eide*, are "always already in every being that is there" (p. 152) and thus are "constitutive for all beings in their being".[39] Thus Aristotle determines the possibility of truth and falsehood only on the basis of a privileged determination of the *aei on* – the beings that always are – and the possibility of a mode of uncovering that has no opposite. In this special kind of uncovering, "the being is present simply in and of itself and 'as' itself". (p. 152)

In this sense, *for Aristotle* (as Heidegger reads him), an ultimate basis for assertoric truth and falsehood is indeed to be found in the phenomenon of a privileged disclosure which itself does not admit of any possibility of falsehood, and thus does not provide an ultimate basis for the bivalence of assertoric truth. This determination, as well as the need to characterize the structure of the logos as synthesis and diaresis founded ultimately on the presence of necessarily existing eternal entities, result from Aristotle's understanding of the synthetic unity of the logos as expressing an ontological state of co-presence, or presence-together. But this understanding itself has its root, according to Heidegger, in Aristotle's interpretation of being (in its most basic and general sense) as *presence*. (Cf. chapter 1 above). *By contrast* with this, Heidegger aims to show that the apparently synthetic structure of the logos has real ontological and hermeneutic basis in the primary structure of the "existential-hermeneutic as," which *cannot* be basically characterized as any synthesis of already existing entities.[40]

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[39] "If this concluding clarification of being is also to be the most proper one, then it must also take for its theme the being [Seiende] that is constitutive for all beings in their being. This being [Seiende] that, in every being, *is* the being [Seiende], or its being [Sein] (this oscilattion of terms is characteristic) – this being [Seiendes] that makes every being be what it is, is the essence, the what, from which everything that is has its origin. That which from the outset always already is in every being that is there (and which therefore is there in an entirely special way) must be investigated as and in terms of being [Sein], if being is to be understood in its most proper sense. The question about being must be finally directed to essence and its being. In effect, it is the question about the being of beings." (pp. 151-152)

[40] "This synthetic showing is a showing on the basis of, and is preformed within, a focus on something else. The act of showing something by focusing on something else that has the feature of "can be together-with," is what we

This more general hermeneutic "as" structure is, as Heidegger argues, the actual *foundation* of the more specific possibility of the kind of synthesis that occurs, according to Aristotle, in the explicit *logos*. It conditions the specific possibility of falsehood, as Heidegger goes on to say, through three structural conditions that it has as inherent aspects. First, there is a basic "tendency toward the uncovering of something" which amounts to a prior "meaning and having" of the subject matter [das Woruber], or an "always already prior disclosure of world". Second, "within" this comportment of uncovering, there is a letting-be-seen [Sehenlassen] of the subject matter "from another;" it is on the basis of this moment, that there arises the "possibility of something's giving itself out as something". Third and finally, the encountering of something through the basic "as" structure always involves a possibility of the "togetherness" [Beisammen] of something with something; this possibility is itself always determined by the context of a particular "range of indications" that constrain what possibly *can* appear in a particular environment. It is through this threefold structure that the possibility of error and illusion first arises, even in cases that do not involve anything like explicit assertion, as Heidegger illustrates by considering a simple case of mistaking a bush for a deer while walking in a dark forest. In this case, the first condition is fulfilled in that I indeed have something coming before me that I regard in some way; the second is fulfilled in that I encounter something *as* something (indeed, in this case, as a deer); and the third is fulfilled in that I understand in advance that something like "a deer" *can* indeed be present in this environment.

In Being and Time, (section 32, p. 150) Heidegger replicates these three constitutive structures precisely, albeit more briefly and without explicit connection to the possibility of falsehood, as the three structural moments of *fore-having* [*Vorhabe*], *fore-sight* [*Vorsicht*] and *fore-conception* [*Vorgriff*]. These moments, together, found everyday circumspective interpretation [*alltäglichen, umsichtigen Auslegung*] and thus structure, in an inexplicit way, the "whole of involvements" [*Bewandtnisganzheit*] from which the ready-to-hand is itself understood. Meaning or sense [Sinn], as the "upon-which" [Woraufhin] of a projection through which something becomes understandable as something, is essentially structured by these three moments. (p. 151). [as discussed above] In this way, the threefold "fore-" structures articulate the underlying "hermeneutic-existential as" and also provide a concrete basis for the general possibility of falsehood – not limited to the kind of falsehood exhibited by assertions – in Dasein's concrete comportment and relation to world. This provides, as Heidegger suggests in *Logic*, a real basis for understanding the possibility of falsehood as arising, not simply from the structure of sentences or representations, but from "the very beings about which statements are possible" and from the underlying structure of truth as unconcealment or uncovering (p. 141).[41] More broadly, the basic

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have already characterized as the determining act of speaking about something as something – logos as a statement that determines something. This brings to light an inner connection between the ontological structure of synthesis and of the as-structure, which we earlier characterized as the basic hermeneutical structure." (pp. 157-58)

[41] "**If we understand the phenomenon of truth (as uncovering) more radically – from Dasein itself and what we characterized as its basic hermeneutical structure – then we can understand from the beginning that falsehood necessarily depends on the very beings about which statements are possible.**" (p. 141)

figuring of the "hermeneutic-existential" as structure in *every* instance of interpretation or unconcealment clarifies that *all* such instances can be characterized in terms of the basic distinction between truth and falsehood. In particular, the underlying structure of the hermeneutic as ensures that it is a *basic* and irreducible feature of the disclosure of entities that they can be disclosed as they are *or* otherwise. In the second case, Heidegger indeed sometimes says that the entity or entities are "partly concealed" or "covered-over"; but this is itself to be understood as a *mode* of disclosure. In being disclosed as it is or as it is not, an entity is shown in its *being* or otherwise; accordingly, the difference between "true" and "false" disclosure already implicates the specific way in which the being is available (or not) to Dasein in relation to its own particular way of being. It should not be taken as an implication of this, though, that *whether* a being is disclosed as it is or otherwise is always or even generally known to the individual discloser. Rather, because the distinction between truth and falsehood is here *ontologically* (rather than epistemically) basic, there is no reason to suppose that it must be transparent to the individual knower.

Because of the closeness and exhaustiveness of Heidegger's readings of Aristotle in *Logic* and other courses of the early and mid-1920s and because of Heidegger's suggestion that Aristotle himself sees, at least implicitly, something of the disclosive structure that underlies the possibility of propositional truth, Heidegger's own thinking about the ontological foundations of the distinction between truth and falsity are not always clearly separated from Aristotle's. However, at the outset of part 2 of *Logic*, Heidegger makes it clear that, if the synthetic structure of the logos is, for Aristotle, rooted in the primary and assumed *a priori* existence of objects about which falsehood is ultimately impossible, an assumption itself based on the assumed primacy of the continuous and enduring present, a phenomenological investigation which replaces this assumption with a grounding in the existential-hermeneutic "as" structure must necessarily replace this with a deeper investigation into the underlying temporality that this structure demonstrates.[42] In particular, Heidegger here calls for a radicalization of the question of truth and the intimately related phenomena of "falsehood, synthesis, …statement," and being itself are essentially related to the constitution of time. Thus it is necessary to investigate the basic temporal determinations of these interrelated phenomena. Temporality (*Temporalität*) in this sense is to be distinguished from intratemporality (*zeitlichkeit*), or the mere fact of something's running its course *in*

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[42] What does *being* mean such that *truth* can be understood as a *characteristic of being*? As we have pointed out, Aristotle…introduced the idea that the being of a synthetic being means presence-unto: the presence-together of something with something in the *unity* of a present being. This unity, this primary presence that precedes an grounds presence-together, must be understood as presence, presenting [Anwesenheit, praesenz]. Why? If being means and (mostly implicity) is understood as presenting or presence, then the genuine and corresponding act of relating to beings as beings is one that, qua relating, also has a pres-ential character. But an act of relating is pres-ential not insofar as it is merely present the way a mental event is, of which (it is commonly held) I am immediately aware. …" (p. 162)
"Plato already characterizes being as presence-now. And the word *ousia* (which gets peddled around absurdly in the history of philosophy as "substance") means nothing other than "presence" in a sense that we still have to specify. But in all this it is necessary to emphasize that, yes, the Greeks (Plato and Aristotle) do determine being as ousia, but they were very far from understanding what is really entailed in defining being as presence and as presence-now. Presence-now is *a characteristic of time*. To undertand being as presence on the basis of presence-now means to understand being in terms of time." (p. 163)

time; what is sought is rather an investigation of how these phenomena themselves are essentially related to time; Heidegger calls this a "phenomenological chronology."

With respect to the ongoing analysis begun with the reading of Aristotle, this means that "the analysis of the proposition is now oriented toward time." Its provisional thesis is that "truth, being, and consequently falsehood, synthesis, and statement are, in some kind of (for the time being) obscure sense, connected with the phenomenon of time…" (pp. 168-69) This investigation is, in particular, explicitly directed toward an analysis of the underlying temporality of the basic "as-structure;" this analysis will itself, Heidegger says, provide an analysis of the deepest underlying temporal conditions of the possibility of propositions and of the mode of synthesis that they represent.

> We need to work out an analysis of the conditions of the possibility of propositions and of synthesis in terms of their ur-temporality. We led synthesis back to the as-structure, and that means we now have to explain the ur-temporality of the as-structure. We have characterized this as-structure as a basic hermeneutical structure of existence. We likewise showed how the 'as' of this basic hermeneutical structure gets leveled down to the 'as' which is used to determine things that are merely there. …. (pp. 174-75).

In particular, since the possibility of explicit assertion is not primarily determined as the possibility of synthesis, but rather from a "leveling-down" of the more basic as-structure, the investigation of temporality must consider how the "leveled-down" temporality of propositional assertion is itself constituted by the more basic temporality of the underlying "as"-structure. This involves a consideration, in particular, of the underlying temporality of care, in terms of which any network of comportments available to Dasein is constituted.

As so described, the underlying hermeneutic "as"-structure has several logically significant features, which I now briefly adumbrate. First, as we have seen, although the structure underlies the possibility of sentential predication, it is more *general* than the structure of predication itself. In particular, it is operative already in *various* kinds of circumstances of uncovering that possess a dimension of "veridicality" or truth-evaluability, including perception and engaged practice, whether or not there is any explicit conceptual articulation of a judgment or linguistic articulation of a sentence. Second, the structure is nevertheless fully (and irreducibly) 'intensional'. That is, if, in accordance with the structure, an item is uncovered as having a certain trait or characteristic, this does not generally imply that the substitution of co-referential terms would preserve the truth of the statement that the item is thus uncovered (for instance, if a particular apparent celestial object is uncovered as the morning star, there is no implication that it is thereby also uncovered as the planet Venus). In this sense, what is unconcealed through the basic "as" structure is always "under" a "mode of presentation," though we should not think of this as equivalent to being "under a conception" (since there need not be any *explicit* conception at all). Third, the structure is irreducibly *holistic*: the uncovering of a particular entity as being a particular way in general depends on the whole surrounding structure of its relations of significance to other entities. This irreducible holism is captured, in particular, in the "fore-having" that amounts, according to Heidegger, in an "always already prior disclosure of world."

With this, we are now in a position to see how Heidegger's development of the underlying "as-" structure provides at least the elements for satisfactory responses to each of Tugendhat's objections to the general picture of truth as unconcealment. First, Heidegger's account of the way that the possibility of falsehood is involved in this basic structure through the three fore-structures confirms that the distinction between truth and falsehood is itself a basic and irreducible feature of *any* unconcealment, on this account; in particular, the essential difference between something's being uncovered *as* it is and its being uncovered otherwise is always coherently grounded, through the fore-structures, whenever it is possible to speak of a thing's being uncovered at all. To say, as Heidegger does, that the apparently synthetic structure of the proposition depends ontologically upon the more basic and *non*-synthetic phenomenon of unconcealment is not to deny that a distinction between truth and falsehood is coherent and characteristic even at this more basic and non-synthetic level. In particular, since the basic structure of disclosure always is the structure of "something *as* something" the possibility of something's being uncovered *as it (actually) is* or *otherwise* always characterizes it in a basic way. In this respect, *all* levels of the specific phenomenon of truth, whether propositional or non-, retain the basic feature of bivalence for Heidegger.[43]

it seems at least possible, given the actual bivalence that characterizes disclosive truth on Heidegger's account 'all the way down", that this kind of truth can also be a site for the kind of "critical consciousness" that Tugendhat worries about the loss of (though this doesn't say HOW the critical consciousness gets a grip in the case of horizons, etc.)

It is also possible, on this basis, to respond to the more specific objections formulated in Tugendhat's *Der Wahrheitsbegriff*. While it is true that, as Tugendhat suggests, the formulation that a truthful disclosure discloses something "as it is in itself" applies most directly only to cases wherein only one entity is obviously in question and one feature or property attributed to it, the broader hermeneutic "as" structure is nevertheless sufficiently general and structurally articulated to handle more complex cases of predication, as well as relational and multi-part predicates. In a case such as that of the relational "Socrates is older than Plato," for example, the disclosure involved, if true, will be, in an obvious sense, characteristic of the beings involved, not necessarily "as they are in themselves" but nevertheless "as they are" (full stop). And since there is always a significant contextual and holistic dimension involved in every instance of the "as"-structure and thus in every disclosure, there is no problem with considering such a disclosure to be significantly co-determined by the relevant broader context, up to and including the "fore-having" of a world in which relations take place and are articulated. In other cases, for instance that of Newton's laws and other universally quantified statements, it will not necessarily even be clear that there *are* specific entities involved; but because of the holistic dimensions of the fore-having of world and the fore-conception which involves the availability of a *totality* of indications, these cases too can be treated at the level of the specific kind of generality they possess. The case of negative existentials, while difficult on anyone's account, might be handled the same way or similarly (in fact, the cases are logically identical, since negative existentials ('there does not exist…') are equivalent to universally quantified negative statements ('for all x, x is not

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[43] It is true that the formulation at the beginning of 44b, according to which – besagt --, is from this perspective somewhat elliptical, and omits the necessary qualification. But this does not mean it represents an equivocation.

a…')): while it is plausibly impossible meaningfully to formulate a statement such as "there are no unicorns" without some antecedent grasp of the *totality* of the world, the holistic complexity of the fore-structure which underlies the hermeneutic "as" gives us ample structural resources to characterize the disclosure underlying the statement as involving just such a grasp.

Finally, it is now possible to turn to the objection that Heidegger makes truth an "ontic" event, and hence must deny the actual independence of a truth from the factual occurrence of its becoming known? On the basis of the objection, Tugendhat suggested that it would be necessary for Heidegger to hold, absurdly, that a truth grows more true when more people recognize it, or that something that is true can become false when everyone forgets it (despite Heidegger's more or less explicit denial of the latter), were he not "protected" from these consequences by his vague use of the *singulare tantum* "Dasein". Significantly, the objection in this form is just the one brought by Davidson against epistemic theories of truth: if truth is directly dependent upon acts of discovery or verification, it must be possible for it to wax and wane, and in particular for truths, once established, to be lost. Alternatively, we can *idealize* the relevant sense of epistemic dependence, speaking (for instance) not simply of verification but of idealized "verifiability conditions;" but if we idealize sufficiently, the satisfaction of these simply coincides with *truth* on a non-epistemic conception. If Heidegger should be seen as an opponent of epistemic theories, as I have argued on the basis of his claims about the structural dependence of Dasein's kind of being *on* truth rather than vice-versa, then his position should also not be interpreted as falling prey to this objection. In particular, it is essential to remember here the grounding of all unconcealment in the *structure* of the hermeneutic-existential "as", and the further indication that this *structure* points to an ontologically deeper and more complex underlying temporality than that of individual, "ontic" events.

We are not yet in a position fully to understand this indicated temporality; we will return to the question of the deep linkage between truth and underlying temporality in part II of this work. For now, though, it is sufficient to note that the dependence of concrete disclosure upon the broader structure of the hermeneutic "as" verifies that any actual event of disclosure has several temporally *distinct* elements (including the "always already" availability of the world as such) and so cannot simply, in any case, be identified with a specific, datable factual *event*. Moreover, since the structure is explicitly one that essentially involves beings in their being, it is never *simply* an "ontic" or ontologically specifable one, but one that is always in a certain way ontic-ontological. Indeed, more broadly, as Heidegger emphasizes, in this it shares or even exemplifies the characteristic twofold ontic-ontological "priority" of Dasein, and is to be traced ultimately to Dasein as a formally indicated structure. In this respect, the Dasein involved need not simply be an individual actor, nor is disclosure to be understood as always simply a result of individual acts or actions; it is rather an explicitly ontic-ontological structure, one with its own distinctive temporality which is not the same as that of factual events. In this respect, Heidegger is right to use Dasein as a *singulare tantum*; the logical status of the term reflects the formal indication of a structure that is indeed formal but singular, a structure that must still be gone into and understood in its own distinctive kind of temporality. Though this is not an idealization (but rather formalization in Heidegger's specific sense of formal indication), it has something of the structure of the idealization of verification (or other epistemic) conditions to the point where there is no longer anything distinctively

epistemic about them at all; this is the point at which they become genuinely ontological (or ontic-ontological), expressing the real structure that must be responsible for presencing in order for us to speak of "being in the sense of truth".

What, then, of the broader motivational dispute that gives Tugendhat's criticisms their conceptual and motivational point? Even with the actual structure of Heidegger's account of the ontological basis of propositional assertion now in view, an opponent more sympathetic to the project and method of linguistic analysis as practiced in the analytic tradition might still hold that the linguistic structure of assertoric sentences in a language cannot reasonably be seen as "founded" on disclosure in Heidegger's sense. Here, though, it is important to consider that, as Heidegger himself suggests, truth may be a phenomenon with "more than one kind of foundation"; in particular, it is not obvious that an *ontological* foundation in disclosure and in the more ultimate structure of the "as", which is indeed, as we have seen, a structure characteristic of the "being of beings," is not compatible with a different kind of structural *semantic* foundation for the truth of sentences in a language, one that comes into view much more clearly through structural accounts such as Davidson's. Along these lines we shall consider, in the next section, how Davidson's and Heidegger's specific accounts might indeed be seen as supplementing one another within the context of a broader hermeneutic account of truth as the formally indicated horizon of interpretive understanding and intelligibility; for now, it is sufficient to note the obvious sense in which, one one hand, the truth or falsity of sentences can be seen as dependent upon the ways of *being* of the entities involved in them, whereas, on the other, particular entities are only intelligibly available, even in unthematic *praxis* and everyday dealing, to those who possess "concepts" of them or of their features, and so would not be available to an animal simply lacking any linguistic or rational capacities whatsoever.

We can also begin to see how the availability of this structure complicates the underlying methodological dispute that forms the basis for Tugendhat's critique of Heidegger, that of propositional vs. "object"-based theories of truth and meaning. In *Traditional and Analytic Philosophy* (1976), Tugendhat contrasts contemporary "language-analytic philosophy" with an "object-orientated" conception typical of the modern philosophy of consciousness in both its (Cartesian) epistemological and (Kantian) transcendental modes. On this object-oriented position in either of these modes, the primary question for a philosophical discussion of objectivity to address is that of the way in which objects are given or made accessible to conscious subjects. In particular, while in the first (Cartesian) mode of the philosophy of consciousness, this question of accessibility is primarily conceived as the question of the *certainty* with which I can know external objects on the basis of internal presentations, on the second (Kantian) mode the accessibility of objects is regarded as transcendentally *constitutive* of their objecthood, so that (as in the famous Kantian statement) "the conditions of the possibility of experience … are at the same time conditions of the possibility of the objects of experience." (pp. 58-59).

Although Tugendhat's main focus in these lectures is not on Heidegger or on ontology in Heidegger's specific sense, he nevertheless treats Heidegger as continuing the object-oriented conception of the philosophy of consciousness in its transcendental mode, albeit while "substituting" for the older, narrower, concept of consciousness the "broad concept of consciousness" that he characterizes as

"disclosedness."[44] He then contrasts this transcendental mode of philosophy in general to the language-analytical one, which seeks to answer all of the relevant questions about the categories and givenness of objects on the basis of an investigation of the structure of language, and in particular finds in the analysis of linguistic structure an alternative to the Kantian conception of the synthetic a priori. From the analytic perspective, Tugendhat argues that the idea of a "pre-linguistic" basic relationship of consciousness to objects must be rejected as illusory. In the tradition, the idea of such a relationship depends upon a representational model based ultimately on sensuous awareness, and even Husserl's sophisticated conception of intuition (including the possibility of non-sensuous "categorial" intuition) is ultimately founded on the idea of such a direct consciousness-object relation.[45] However, Tugendhat argues, all of the supposedly non-propositional or pre-propositional types of relationship of this sort can in fact be shown to be logically dependent on "propositional modes of consciousness" involving attitudes toward propositional contents. In this way, all forms of the object-directed philosophy of consciousness, including the transcendental one that Heidegger continues, on Tugendhat's account, can be shown to be dependent upon attitudes and judgments that are linguistically articulated. This demonstrates the greater comprehensiveness of the language-analytical approach and shows that the "transcendental" inquiry into the givenness of objects must henceforth be taken up within it rather than remaining within the primarily "object-oriented" attitude.

Although Tugendhat is right to see Heidegger as continuing the Kantian transcendental inquiry into the conditions for the possible givenness of objects (although in a sense that, significantly, does not any longer construe these conditions as those of givenness *to* a subject, or construe the conditions for givenness as simply equivalent to the conditions for spatiotemporal objecthood), we are now in a position to see that this analysis of the differences between linguistic-analytic and transcendental approaches is misleading with respect to Heidegger in at least two respects. First, Tugendhat effectively assumes that the only way that the "transcendental" problematic of the accessibility of objects can be pursued, if it is not transferred to the purportedly superior methods of linguistic analysis, is through the conception of a *direct* and not further articulated relationship between an individual subject and an individual object. By marked contrast with this, as we have seen, Heidegger's conception of the primacy of the hermeneutic "as" structure allows for a basic kind of articulation, relevant to truth and falsity, in

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[44] Tugendhat recognizes (p. 60) that Heidegger at least *attempts* to broaden this concept beyond one simply characterizing the consciousness of objects. He does so, according to Tugendhat, by allowing the "broadened" concept of disclosedness to include the specifically non-objectual phenomena of the disclosedness of world and Dasein as co-constitutive of the disclosure of objects. Nevertheless, according to Tugendhat, Heidegger falls back into an object-oriented position because of his neglect of the specific structure of sentences:
"In contrast to the disclosedness which is expressed in sentences [Heidegger] sought to exhibit a pre-logical, pre-linguistic disclosedness as more basic (but for the analysis of which he nonetheless took the statement-structure – the 'as', ss. 32 – as his clue). This exclusion of sentences from the core-area of the analysis which results from the rejection of the logical contradicts the central importance which Heidegger attributed to language ('Language is the house of being'). In his statements about language Heidegger therefore reverted to the level of the most primitive theories of language, in that he emphasized the significance of the *word* for the disclosedness of beings. Because Heidegger restricted the notions of objecthood and objectification to the level of statements, objects could once more gain access through the backdoor of another terminology (that of 'beings' and 'things') and take up a dominant and analytically uncontrollable position." (p. 415)
[45] Pp. 62-63.

every phenomenon of unconcealment as such, and it is to *this* basic ontic-ontological structure, rather than any simply bipolar relation between consciousness and object, that the phenomenon of truth is to be transcendentally traced. This structure, as articulated by the three fore-structures, is moreover inherently holistic and always, as Heidegger emphasizes, involves the disclosure of Dasein and world; and this implies as well, as we have seen, that not only every kind of representational relationship, but even the "intentional relation" between subject and object itself must be seen as a *specification* of the more basic phenomenon of unconcealment rather than as a basis for it. Second, Tugendhat underestimates the extent to which such an explicitly ontic/ontological analysis of the transcendental conditions for the accessibility of objects, both individually and in their overall categorical structure, is not only not at odds with a "language-analytic" approach to linguistic predication, but in fact actually implied by it as an essential component of any successful analysis. In particular, while Tugendhat is surely right to suggest that the idea of a "basic" and otherwise inarticulate "pre-linguistic" intentional relationship between subject and object does not survive on the linguistic-analytic approach, there is, conversely, an obvious sense in which it is a precondition for the meaningful utterance of *any* predicative sentence, or for its understanding, that the various objects and phenomena mentioned or described in it be accessible in some way, and a thorough analysis of the structural basis of the possibility of meaningful predication (and hence of the truth or falsity of sentences) cannot be successful if it simply ignores this precondition. Heidegger's analysis, in particular, gives, as we have seen, an account of how the possibilities for the uncovering of objects may themselves be conditioned, in part, by the accessibility or possession of various relevant "concepts" by an individual thinker *as well as* – and herein lies its strength – such other conditions (involving, for example, the existence of collective and social practices, that of a language shared by others, or one's whole inexplicit relationship to an entire surrounding context of significance or the world itself) as may *also* be reasonably considered to precondition any phenomenon of unconcealment with an veridical (i.e. true or false) dimension. For Heidegger, these conditions are in fact no longer linked to consciousness in any essential way; nor are they (as we have seen) exclusively linked to any *individual* subject in its relations to objects (but rather to the structure of Dasein in relation to world).[46] Although most of these conditioning phenomena are not "pre-linguistic," in the sense that they could probably not be accessed by an individual consciousness (such as that of an animal or infant) incapable or innocent of articulate language, neither the linguistic analysis of meaning nor an account of the general conditions of linguistic predication (and hence of the specific nature of truth) cannot afford wholly to ignore the dimension of accessibility that is illuminated by Heidegger's account.

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[46] This appropriation of a being in a true assertion about it is not an ontical absorption of the extant entity into a subject, as though things were transported into the ego. But it is just as little a merely subjectivistic apprehending and investing of things with determinations which we cull from the subject and assign to things. ... Assertion is exhibitive letting-be-seen of beings. In the exhibitive appropriation of a being just as it is qua uncovered, and according to the sense of that appropriation, the uncovered entity's real determinativeness which is then under consideration is explicitly appropriated to it. We have here once again the peculiar circumstance that the unveiling appropriation of the extant in its being-such is precisely not a subjectivizing but just the reverse, an appropriating of the uncovered determinations to the extant entity as it is in itself."

What comes into view here, specifically, is the possibility of a broader and expanded picture of transcendental truth, the elucidation of which is not possible from the perspective of either the "object-oriented" or the "linguistic-analytic" approach alone (as Tugendhat describes them) but to which they can both be seen as, necessarily, joint and *complementary* contributors. On this picture, in particular, the truth and falsity of sentences is not founded *simply* (as the linguistic-analytic approach has it) in the structure of language or *simply* (as Heidegger's approach has it) in the givenness of objects, for there is not just *one* dimension of foundedness; rather, both presuppose each other and thereby found the phenomenon of predication in *different* ways and from different directions. The debate between the linguistic conception of the foundations of sentential truth and Heidegger's disclosive conception is therefore to be resolved as a draw, or rather replaced by a broader and more comprehensive picture in which they are not in competition to begin with.

III

I have argued that Heidegger's disclosive approach to transcendental truth can be brought together with a "linguistic-analytic" conception that bases itself on the analysis of the structure of language, and that there need not be any competition between the two approaches provided that they are seen as "founding" the phenomenon of truth in *different*, though complementary ways. This contention can be tested by consideration of what is in many ways the most fully worked-out example of the linguistic-analytic approach to truth, Davidson's Tarskian account. As I will argue in this section, Davidson's picture of transcendental truth can indeed usefully be supplemented with Heidegger's disclosive account, yielding a more comprehensive picture that illuminates the phenomenon of truth in ways that neither picture can do alone. In particular, Heidegger's disclosive picture supplements Davidson and Tarski's description of the systematic structure of languages by illuminating the *ontological* and ultimately *temporal* foundations for the specific phenomenon of linguistic structure, on which the Tarskian-Davidsonian picture of truth and predication turns.

As we have seen, there is good reason to think that the Tarskian truth-theory for any specific language does not, by itself, suffice to capture "all there is" to the concept of truth. To begin with, as Davidson points out, the truth-definitions that Tarski shows us how to provide are truth-definitions for particular, well-defined languages, and do not by themselves provide a definition or even an account of the *general* (and non-language-specific) concept of truth, which must nevertheless itself be presupposed in successful Davidsonian interpretation. Relatedly, as commentators have pointed out and Davidson agrees, the Tarskian truth-definition for any particular case, since it treats the language as fixed, does not provide any kind of guidance for new cases, either new terms or concepts that are added to an existing language or wholly distinct languages. Nevertheless, Davidson's radical interpretation project attempts to provide a model for *any* linguistic understanding, including the understanding of arbitrary natural languages and languages changing over time. In particular, Davidson's *application* of the general Tarskian structure to the problem of the provision of a "theories of meaning" for a natural language means that the understanding and applicability of this general concept of truth is itself, in each case, intimately linked to the possibility of interpretive understanding of sense that is modeled in the radical interpretation of a natural language, and seen as capturing what a competent speaker comes to know in mastering such a language to begin with. Furthermore, as Davidson argues, it is plausible that the

general *pattern* of relationships that the Tarski shows us how to discern in particular languages is itself closely connected with the structure of *predication*, and that a general (and non-language-specific) understanding of this pattern is therefore needed to understand the structure of predication (again in a non-language-specific sense). Such an understanding is again yielded, according to Davidson, only by reflection on the *general* (or transcendental) concept of truth in relation to the various related notions of reference, satisfaction, truth-functionality, etc., which articulate the very idea of a logical or grammatical structure of (a) language.

As we have seen, Davidson's radical solution to the ancient problem of predication in *Truth and Predication* turns on the implications of Tarski's "ingenious use" of the idea of satisfaction, and in particular of the "idea that predicates are *true of* the entities which are named by the constants that occupy the spaces or are quantified over by the variables which appear in the same spaces and are bound by quantifiers." (p. 159). This idea allows Tarski to gesture toward the general "relationship" of satisfaction, which applies equally to open as well as closed sentences and thus amounts to a more "basic" (in one sense of "basic") relation in terms of which the (non-relational) truth of sentences can be defined for a particular language. As Davidson in fact points out, however, this leaves the "nature" of the satisfaction "relation" itself unclear; it is not clear, for example, from what independent perspective *it* could be specified or how it might be possible, independently of the pattern of truth-values exhibited by the sentences of a language as a whole, to "fix" the satisfaction relations themselves. In fact, as Davidson argues, in the context of the interpretation of a natural language, it is actually impossible to "fix" these relations in advance of developing an interpretation of the language as a whole (for the interpreter does not have independent access to "primitive relations" between words and objects, or general terms and their extensions) and such an interpretation itself depends on discerning the systematic pattern of the truth-values of sentences in the language as a whole. This is why Davidson suggests that in working out an actual interpretation, the "satisfaction relations" must be seen as an outcome of the systematic pattern of truths, rather than as a substantive basis for them. In adopting this practice, rather than "building up" the concept of truth, as Tarski does, for a particular language from particular, specified satisfaction-relations, we are rather using our *general* concept of truth (according to Davidson, the "most basic semantic concept we possess") to provide an explicit reconstruction of the structural basis of meaning for the particular language at hand, including the particular "satisfaction" or other reference-like relationships we interpret it as involving.

Without disputing the actual hermeneutic utility (and even necessity) of this general picture of what is involved in interpretation (on which truth is primary and reference-like (or subsumption-like) relations such as satisfaction are secondary), one must note that it is actually in substantial initial tension with Davidson's solution to the problem of predication, which turns (as we have seen) on Tarski's use of the general idea of satisfaction as the *basic* explanatory notion in characterizing the structure of a language overall. The solution Davidson draws from Tarski is (recall) to characterize the truth of a predicative sentence as consisting in the predicates being *true of* the entities named by its constants or "quantified over" by its variables. Here, "true of" is simply a formulation of the general relation of satisfaction as it applies to predicates in relation to entities or sequences of entities, and Davidson's idea is that it is the specification in terms of this relationship that is alone capable of avoiding the problems to which

historical theories of predication are recurrently prone. But for all Davidson says, it remains in a certain sense obscure what is meant by a predicate's being "true of" an entity; in particular, because of the way that this is, for Davidson, conceptually dependent on the primitive and unanalyzed notion of truth (rather than conversely), we have no specific characterization (nor, Davidson suggests, could we have one) of the *actual* relationship to which the formulation points, and which is clearly at the basis (in one sense) of the possibility of predication itself. (even as central a matter as what it is a relationship *of* – whether of words to words, or words to things, or things to properties, is not clarified!)

A way of putting the issue, using terminology that is not Davidson's, is that despite its obvious structural merits, the suggested solution leaves the basic relationship, and hence the actual structure of predication itself, *phenomenologically* (or ontologically) unclear. We have from Tarski the basic idea that we illuminate the structure of predication by saying that a sentence is true if its predicates hold of, or are true of, its objects; but what can we say, guided by the *general* concept of truth, about what it is for this to be the case? My suggestion is not, here, that a specific relation or kind of relation between words and objects would have to be specified or determined, quite independently of a specific or general idea of truth, in order for Davidson's solution to the problem of predication to be successful. indeed, Davidson has given us good reason to think that there is no such relation to be found. Nor is the point that, in order for any specific Tarskian truth-theory for a particular language to be verified as holding of that language (as it is actually spoken), we would somehow need access to the word-object relations of that particular language (access which, as Davidson has successfully argued, we cannot generally have) independently of our interpretation of its distinctive pattern of truths.

It is rather that, even agreeing with Davidson that we have no access to the "satisfaction relation", in particular cases or in general, independently of our grasp of the pattern of truths, the general idea of this relation nevertheless plays an essential role in producing the *general* form of solution to the problem of predication that Davidson draws from Tarski. And this idea of something's being *true of* something, to which Davidson's solution essentially appeals, needs further illumination in terms of the *general* concept of truth if the solution is going to provide a significant illumination of the *nature* of predication (rather than just a structural placeholder for such an illumination). Here, it is in fact unavoidable that what must be appealed to in illuminating the nature of predication is the *general* concept of truth, rather than just the specific truth-predicate for a particular language. For it is, on Davidson's account, *this* idea which must ultimately be appealed to if we are to illuminate the nature of predication itself in general; and it is clearly this notion that is the one to which we must relate predication if we are to illuminate the *general* structure of predication itself, across new cases and changes in language.

What, then, has Tarski actually shown us in showing that the idea of something being *true of* something, the general form of the "relation" of satisfaction, is the *central* idea which allows us to understand the structure of predication, in such a way as to avoid replicating the question-begging assumptions and vicious infinite regresses that vex the history of attempts to explain it? In fact, the outlines of a partial answer can be found in Heidegger's disclosive account of truth as founded on the most basic underlying "as" structure of interpretive understanding. In particular, if Heidegger is right, the phenomenon that is ultimately at the basis of the possibility of *any* linguistic predicates being "true of" their objects (as well

as any other phenomenon of disclosure) is the phenomenon of unconcealment, itself founded on the existential-hermeneutic "as."

In a passage from *The Basic Problems of Phenomenology*, Heidegger specifies how the hermeneutic "as" can be understood as the underlying basis for the "is" of predication, and indeed for the structure of linguistic predication generally, in light of the general conception of truth as disclosure or (here) unveiling:

> So far as the "is" in assertion is understood and spoken, it already signifies intrinsically the being of a being which is asserted about as unveiled. In the uttering of the assertion, that is to say, in the uttering of exhibition, this exhibition, as intentionally unveiling comportment, expresses itself about that to which it refers. By its essential nature, that which is referred to is unveiled. So far as this unveiling comportment expresses itself about the entity it refers to and determines this being in its being, the unveiledness of that which is spoken of is *eo ipso* co-intended. The moment of unveiledness is implied in the concept of the being of the entity which is meant in the assertion. When I say "A is B," I mean not only the being-B of A but also the being-B of A as unveiled. …The extant entity itself is in a certain way true, not as intrinsically extant, but as uncovered in the assertion. …(Basic Problems of Phenomenology, pp. 218-19)

On Heidegger's account, it is therefore the basic way in which an entity, in being disclosed, is shown *as* something that provides the ultimate phenomenological basis for the explicit "is" of predication, or indeed the inexplicit structure of predication when no form of the predicative "to be" is present in the sentence. It is thereby possible, as we have seen, to see the predicative structure as phenomenologically grounded in the more basic "as" structure, which is in a fundamental way *not* relational or synthetic. One the one hand this can be seen as providing a concrete basis for the claim, basic to Davidson's account of the most important reason why Tarski's account of predication succeeds where all others have failed, namely that it (almost uniquely) refuses to treat the structure of a simple predicative sentence logically as the synthesis of two or more separate and individually referential elements. On the other, it extends the non-synthetic form of the solution to the more *general* structure of all truth-evaluable phenomena of disclosure, whether or not they yield explicit, linguistic assertions.

Returning to the explicit form of the solution that Davidson finds in Tarski, what kind of illumination of the notion of being "true of" does this provide? As we have seen, it provides an account of the conditions for the possible availability of entities to be understood, conditions that must be seen as aspects of their sense. And it is plausibly requisite to any full picture of predication that we give some such account; otherwise it would be just mysterious how we should conceive of entities as *becoming* possible subjects for true or false predication, or what general, transcendental conditions must be met in order for them to be able to be the subject of true or false assertions by the speakers of a particular language. These are issues on which Davidson's account of the basis of predication, as far as it goes, is simply silent; Heidegger's picture, by contrast, gives a phenomenologically motivated basic clarification of both. In so doing, it a fortiori also speaks to other questions about predication that are not and cannot be answered by Tarski's structure of language-specific truth-definitions alone, such as questions

about diachronic changes and the extensibility of the notion of truth across *all* languages with a minimal kind of predicative structure.

From a Davidson perspective, it can seem at first that such a supplementation of the general picture of truth and predication that we can draw from Tarski's structure must be either unhelpful or incorrect. Given, in particular, the plausibility of the claim, which Davidson emphasizes, that a Tarskian truth theory for a language *must*, by virtue of the way it is constructed, be extensionally correct in picking out just the true sentences of the language, provided it is in fact applicable to the language in question, it can seem that there is no further room for any substantive explanation of truth beyond that which is already given in whatever structure determines the totality of the T-sentences for a language. But the kind of supplementation that the Heideggerian account provides is not to be conceived as affecting the pattern of linkages of sentences to truth conditions given by a Tarskian truth-theory, or as modifying the range or truth-values of the T-sentences thereby generated. Rather, leaving the pattern of T-sentences entirely in place, it simply clarifies or further explicates the general *feature* or *phenomenon* of truth which the determination of truth predicates for particular languages must have in view. It is true that, as Davidson emphasizes, the provision of any further general and substantive *criterion* for truth – for instance a criterion couched in terms of correspondence, or some epistemic notion – would necessarily imply a divergence from the pattern of T-sentences and so be incorrect from the Tarskian perspective. But the conception of truth as disclosure is not intended to operate, here, as a further substantive criterion in this sense. It is, rather, intended just as a further *explication* of the concept of truth at which all of the systematic developments of specific truth-predicates in accordance with the Tarskian pattern are directed.

Nevertheless, even if it thus need not actually be seen as incorrect from a Tarskian perspective, it might seem that the suggested supplementation should still be rejected as unnecessary. Recall that, on Davidson's own view as expressed in *Truth and Predication*, although the pattern that Tarski points out avowedly does not show us "all there is" to the concept of truth in that it does not exhibit the essential connections between this concept and the concepts of belief and meaning, what is needed in order to exhibit these is simply to supplement the general Tarskian pattern with an account of "how to identify the presence of such a pattern or structure in the behavior of people." (p. 28). In particular, a Tarskian theories must be supplemented, in the context of the radical interpretation of a particular language, by a determination that the theory in question *does* characterize the language as it is actually spoken. This determination is itself to be worked out in radical interpretation, and as Davidson emphasizes, the *evidence* for it must lie in publically available "facts about how speakers use the language" (p. 37), where the "public" availability of these facts means that they must be "available in practice to anyone who is capable of understanding the speaker or speakers of the language." (p. 37) As Davdison points out, to say this does not amount actually to giving a *criterion* for the correctness of a Tarskian truth-theory as applied to any actual language. It is only to constrain the form of the evidence on which any such application must rest. Nevertheless, it may seem that, given that such evidence is generally available whenever a language is interpretable at all, the actual possibility of interpretation is by itself sufficient to provide the requisite supplementation of the Tarskian structure to provide the "full" or general concept of truth.

How, though, are these facts about the "behavior of speakers" and their "use [of] the language" themselves to be understood? The particular theory is determined as holding of, or descriptively correct of, the "behavior" of the speakers of the object language, in the sense of the facts about their meaningful "use of language." But these facts about usage are not, as Davidson emphasizes, capable of characterization as such independently of, or prior to, a systematic interpretation of the language in question, and as we have seen, the very possibility of such an interpretation depends on an essential appeal to the *general* concept of truth as it can be seen as invoked in the attitudes and assertions of the language's speakers. This leaves open, and in fact seems to positively suggest, the possibility that the content of the interpretive determination *that* the utterances of the speakers of a language are in fact correctly characterized by a Tarskian truth theory can be further characterized, and indeed that it can be further characterized by a further positive elucidation of the concept of truth of the sort that Heidegger's account provides.

Such a characterization can take place within the context of a broadened conception of the linkage between the concepts of truth and interpretation, now not restricted to the narrow (Davidsonian) idea of the interpretation of a language by an interpreter already possessing all of the concepts that figure in the language under interpretation, but extended to encompass as well the further issue of the *availability* of these concepts (and hence the intelligibility of the beings falling under them). From the perspective of this suggested Heideggerian supplementation, although what Davidson says here about the need to apply Tarskian theories of truth by determining the fit of these theories to the facts about use is not incorrect, it *is* incomplete. In particular, Davidson says *that* the individual Tarskian theories must be supplemented by more general considerations that emerge in the context of interpretation – yielding ultimately a determination that a particular theory applies to a particular language as spoken – and he says something about the necessary form of the *evidence* upon which such a determination must rest. But he does not specify in any basic way *what it is* that an interpreter determines in making this determination of applicability. It is here that the Heideggerian conception of truth as disclosure can provide a basic phenomenological elucidation and clarification bearing both on the general phenomenon of truth and its link to predication. In particular, as I have argued, it illuminates the structure of predication that shows up in the distinctive pattern of truths of a particular language, under interpretation, insofar as *this* pattern has general conditions involving the *availability of objects* and of the *concepts* under which they fall.

Elsewhere, Davidson has sought partially to account for the linguistic availability of *objective* concepts and reference through the idea of "triangulation." On this account, the objectivity of concepts, including the basic distinction between (possibly false) *belief* and truth, depends on the availability of a communicative link between at least two speakers in relation to a common object of concern. In sharing a public language, Davidson suggests, interlocutors possess the "concept of a shared world," and it is this concept that allows their concepts and reference to be understood as objective. Only through intersubjective language, and the sort of communicative distance it makes possible, does the structure of objective concepts, with an inherent distinction between true and false application, gain a bearing on objects of the public world at all. Thus, it is necessary in order for concepts to have bearing on the world that a language exist and be shared between at least two speakers.

From the perspective of the suggested Heideggerian supplementation, what Davidson says about "triangulation," is, again, not false, but incomplete. In particular, it is an important aspect of the account in terms of disclosure that many specific phenomena of disclosure are possible only *given* a horizon of intelligibility that is available in advance (even if only inexplicitly) as a "totality" or "whole" of references. Although Heidegger himself, especially before the mid-1930s, does not always emphasize the point sufficiently, it is clear that the availability of such a horizon, even inexplicitly, *to* an individual speaker or thinker depends in general on the availability of a language which is itself available, as well, to others. This is a consequence of the way in which the whole structure of disclosure is dependent upon the structural openness of Dasein to the world, and is at the same time world-disclosure. While on the one hand, Dasein in the sense of the structure of disclosure is clearly and repeatedly distinguished by Heidegger from any individual subject or subjectivity, on the other, it is also clearly impossible to consider most aspects of the world as a "totality of significance" without implicit or explicit reference to the structure of a shared language. This makes it clear that the Heideggerian picture of disclosure, though extending more broadly than the specifically linguistic phenomena of utterance and assertion, is not in competition with a picture, such as Davidson's, on which objectivity depends on a shared language, and thus can usefully supplement such a picture. Specifically, what the supplementation does, in this connection, is make sense of how particular concepts and the objects that they fall under can emerge together in the temporal course of the development of a language or its historical alteration and how the whole process unfolds the larger and global phenomenon of truth, both topics which are not addressed by Davidson's account.

Indeed, far from being superfluous or unneeded in the context of a Davidsonian approach to interpretation, we can in fact see the positive need for such a supplementation (which illuminates the availability of concepts and objects "in" something with the structure of an (intersubjective, shared) language) in at least two ways. First, as has already been noted, interpretation on Davidson's account requires constitutive appeal to a *general* idea of truth which is not completely determined by any specific interpretation of a particular language, but is presupposed to the possibility of any successful interpretation. This general idea of truth operates as a kind of transcendental condition on the possibility of interpretation, and is closely connected to what Davidson, in various places, characterizes as a "constitutive idea" of rationality. But this general idea of truth needs further illumination if it is to be used to clarify the preconditions of interpretation, in such a way as to illuminate the structure of linguistic predication, and in particular to clarify the way in which this structure is rooted in the availability (whether through explicit assertion or not) of objects and the concepts under which they fall.

 A second reason concerns the structural form of Davidsonian theories of meaning themselves. Such a theory of meaning, as we have seen, is intended to capture what a competent speaker of a language knows (in some sense of "knows") in being able to speak the language. Knowledge of the theory of meaning for a foreign language on the part of an interpreter, moreover, is conceived as giving the interpreter a comprehensive grasp of the language, akin to that possessed by native speakers. However, how should we understand the conceptual preconditions on the part of the interpreter for a translational theory of meaning to be understood and used to grasp the meaning of all of the native speakers' utterances? Following Dummett, we can distinguish between two ways of understanding

these preconditions. If knowledge of a theory of meaning can yield a grasp of the meaning of native utterances only when, in general, the interpreter *already possesses* the concepts that the theory portrays the natives (under translation) as possessing (i.e. the concepts figuring on the right-hand side of the theory's T-sentences), then the theory of meaning can be termed "modest". If, on the other hand, learning the theory of meaning can be conceived as *equipping* an interpreter initially innocent of some of these concepts with them, Dummett terms it "full-blooded".

In "What is A Theory of Meaning?" Dummett argues that theories of meaning must indeed be "full-blooded," in this sense, if they are to serve the purpose of specifying, not only of what someone has to know in order to possess a mastery of language, but also of "what it is" to have this knowledge. This further specification is itself requisite, Davidson suggests, if an theory of meaning is actually to give the *meaning* of each of the sentences of a language, and not simply translate them; Dummett also suggests that the further specification is to be given in terms of "what we are taking as constituting a manifestation of a knowledge of those propositions" which are expressed by the sentences of the interpretation theory. Against this, McDowell has argued that Davidsonian theories of meaning can and must be construed as "modest" in Dummett's sense, and thus as presupposing (in their characterization of what is known in mastering an interpreted language) a mastery of the relevant concepts on the part of the interpreter. For there could not be, McDowell argues, a *unique* description of a speaker's linguistic behavior as manifesting implicit knowledge of (e.g.) the concept "square" unless the description is given from "inside content," that is, from a position in which we count ourselves as entitled to the assumption that the speaker possesses a concept which is analogous in its conditions for application to *our* relevant concept (e.g., in this case, our concept of squares). [47] It is thus necessary both in working out an interpretation and in understanding it as embodying knowledge of a language that we presuppose the various concepts used on the right-hand side of the T-sentences in any description of the speakers under interpretation as *using* language in such a way as to be interpretable at all.

McDowell's argument appears to be confirmed by Davidson in *Truth and Predication*; as we have seen, Davidson emphasizes that the facts "about speakers' use of a language" which provide the evidentiary basis for a theory of meaning for that language are simply those which can be understood and ascertained by anyone capable of understanding the language. There is no necessity, or reasonable expectation, of describing them from a position "outside content," that is, a position that does not presuppose the applicability of the interpreter's own concepts (of the things they are interpreted as talking about) to their description. But if McDowell's position is correct, it is clear that a Davidsonian

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[47] Can implicit knowledge that that is how square things are to be treated be manifested in behavior, characterized 'as from outside' content? It may seem that nothing could be simpler: the manifestation would be someone's treating a square thing in whatever way is in question. But any such performance would be an equally good manifestation of any of an indefinite number of different pieces of such implicit knowledge. (Consider implicit knowledge to the effect that that is the way to treat things that are either square or . . . .) If we assume a stable propensity, guided by an unchanging piece of implicit knowledge, we can use further behavior to rule out some of these competing candidates. But no finite set of performances would eliminate them all; and finite sets of performances are all we get.

truth-theory for a particular language does not (as Dummett actually points out) by itself provide an *explanation* of either the speakers' or the interpreters' grasp of these concepts. In particular, it does not account for how these concepts *come to be* possessed or how they may change over time, or how their possession is related to the structure of the language as a whole, on one hand, and actual pieces of propositional knowledge, on the other. It is here that the Heideggerian supplementation in terms of disclosure again proves relevant, and provides a kind of illumination of the basis of truth and predication that the Davidsonian theories by themselves cannot give. In particular, it illuminates the "transcendental" or general conditions for the possibility of linguistic predication, and hence of linguistic truth, insofar as these conditions characterize not only the possibility of interpretation of languages narrowly speaking, but also the sense of beings themselves. (i.e something like how the beings "enter" language) .

Given commitments that Heidegger and Davidson share (see section II above), there are strong constraints on the kind of illumination that this can provide. For example, for reasons that have been discussed, it cannot portray truth as any kind of correspondence relation, so that objects would count as discovered or discoverable only insofar as they are correlated one to one with names or other referential terms of a language. Such a picture of correspondence perhaps captures one of the intuitions on which Tarski relied in his original construction of truth-definitions for formal languages, but as we have seen it cannot figure, and also has no point, in theories of meaning for natural languages constructed in the Davidsonian way. Just as importantly, it cannot portray truth as dependent upon assertibility, verification, epistemic practice, or any other "epistemic" notion. As Davidson argues, any such portrayal, if not empty, will make truth dependent on actual epistemic abilities or practices, and so variable as these abilities and practices wax, wane and vary; and this variation is to be rejected as at odds with what is involved in the general idea of truth itself. It has perhaps not been obvious, either to interpreters of Davidson or, especially, of Heidegger, that Heidegger's conception of truth as disclosure can be understood in such a way that it, too, does not violate this constraint. In particular, as we have seen, though Heidegger's picture of truth as disclosure *does* offer to significantly illuminate the structural (and ultimately temporal) "accessibility" of objects *and* the concepts under which they may fall in explicit predication, it is not to be construed as a contribution to the *epistemology* of objects. Nor is the illumination it here gives dependent on exploiting any prior idea of epistemic (or other) practices, abilities, or activities of actual individuals or societies. The idea of truth is here, rather, understood essentially and constitutively as an issue of the uncovering of beings *in their being*, including essentially (as I have argued) the constitutive possibility of false as well as true uncovering. The hybrid Davidsonian-Heideggerian picture that emerges is thus one in which any relevant description of the "use" of language by a speaker or a community thereof includes this specific structure of disclosure at the most basic level. In the Davidsonian jargon, this is just the requirement that epistemic considerations not be imported into the basis of a theory of truth for a language; in the Heideggerian one, it expresses the requirement that assertoric truth be traced back to the basic ontological structure of *Dasein* whereby it is "originally" and equiprimordially in truth and untruth. Either way, it is sharply to be contrasted with verificationist, coherentist, anti-realist, and pragmatist accounts, which attempt to

base a substantive conception of truth on one or another notion of "use", practice, or behavior that is not itself already characterized in terms of this basic structure.[48]

I have tried to indicate how the phenomenon of transcendental truth, and hence the basis of linguistic predication, can be clarified by the supplementary addition of a Heideggerian account of disclosure, bearing not simply on linguistic structure but also on the uncoveredness of beings in their being, to the Tarskian-Davidsonian structure of truth theories for languages. But it should be obvious that the supplementation suggests, as well, a complementary broadening of the concept of interpretation as it is constitutively linked to the nature of sense. In particular, with the Heideggerian emphasis on the ultimate grounding of truth in the sense of disclosure on the interpretive and hermeneutic structure of Dasein in relation to the world, the concept of interpretation is broadened beyond that of the interpretation of a natural language in Davidson's sense. In the broadened picture, the two kinds of interpretation – what we can call the "existential-hermeneutic" one (Heidegger) and the "linguistic-semantic" one (Davidson) – should again not be seen as in competition with one another, but rather as complementary, if orthogonal, aspects or directions of an essentially unified hermeneutic structure. On this picture, the (Davidsonian) interpretation of a natural language, taking concepts of familiar phenomena as fixed, is, in other words, just one dimension of a unified activity of which the (Heideggerian) circumspective or explicit interpretation of phenomena, within a broader horizon of intelligibility constituted by a particular language, is another. As we have seen, both depend essentially on constitutive appeal to the holistic and horizonal presupposed structure of world, and the developments of the implications of this appeal in both Davidson and Heidegger involve an essential appeal to an inherent dimension of universality (as we shall see more fully in part II) in both cases equally implicit in the hermeneutic structure, and so presupposed to the possibility of interpretation in both senses. When our focus is restricted to the kind of intelligibility that is structured by language or languages, as we have seen, while Davidson provides a logical/semantic structure that links the intelligibility of linguistic expression to the constitutive idea of transcendental truth, Heidegger provides something like a general picture of the conditions for the temporal entry and continued figuring of beings "in" language, a picture that supplements Davidson's formal-logical picture with the kind of substantive account of beings and their categories that was once called a "transcendental" logic. The Heideggerian supplementation, in particular, points to the essential and constitutive way in which truth, in this sense, cannot simply be treated as a phenomenon of language considered as a human artifact or construction, but is more basically to be treated as an aspect of beings in relation to being itself. For this reason, as well as the reasons mooted in the last paragraph (and as we shall see more fully in part II) it is not illuminating of this conception to see the possible figuring of objects in language as just an aspect of historical languages' embodying "cultural" constructions or amounting to "repositories of tradition" where "cultures" and "traditions" are taken in an anthropological or factual-historical sense; rather, it is essential to recognize the ontologically basic way in which beings themselves enter, through their

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[48] The standard error, which Davidson aptly diagnoses, is to think that the facts about usage to which a truth-theory must be matched can be independently described in such a way as to yield substantive criteria for the fit. This is the mistake Dummett makes, in particular, when he supposes that

uncovering, into the structural possibility of linguistic falsehood or truth.[49] As we have seen, it is also not sufficient, in clarifying this way in which being enter into the possibilities of linguistic falsehood and truth, to treat languages themselves simply as static factual structures of reference to a fixed totality of pre-existing objects; rather, the disclosive dimension of truth, as it allows beings to figure in language, points toward the more complex temporality of the origin and dynamic temporal structure of language in relation to the totality of a world with which it is correlative. There is thus indicated here a real question about how the structure of language (or a language) is to be temporally characterized – how we should think of it as arising, how enduring, and how we can consider it to change or be transformed over time. This is a question that Heidegger himself does not raise explicitly until after the "turn" of the 1930s, when he comes, on the one hand, to see the historical truth of the being of beings as captured in the series of epochal configurations identified with historical languages, and, on the other, to see the origin and temporal character of language as intimately linked with the problematic of the unconcealment of being itself. The twofold hermeneutic picture of truth and interpretation which I have attempted to sketch here points, in a natural way, to a logical/temporal intensification of this problematic that draws as well on the farthest-reaching results of linguistic analysis, such as Davidson's radical interpretation picture; I shall attempt to develop this intensification in further detail in part II.

IV

I have attempted to sketch, at least in its rudiments, a hybrid picture of truth on which it is understood both in terms of a linguistic-structural dimension that is articulated through the development of Tarskian truth-theories and in terms of an ontological-hermeneutic dimension that is articulated as disclosure, and yields the more specific phenomenon of uncovering. The picture is not intended as anything like a *definition* of truth; it is reasonable to think, especially in light of arguments given both by Heidegger and by Davidson, that no such definition is possible. Nevertheless, it is intended as a logical and phenomenological clarification of the underlying phenomenon as it is indicated in reflection on the formal structures of language and of Dasein as such. The picture, as we have seen, also has further implications for our understanding of the nature of presence, the basis of predication, and the structure of sense. In this last section, I shall briefly further develop two of these possible implications: the first concerns the (Fregean) conception of senses as modes of presentation, and the second concerns the semantical behavior of languages (such as English) which contain both their own truth-predicate and the general possibility of forming names for their own sentences by means of quotation or some similar device.

Frege often describes the sense of an expression, whether it be a name, a concept-term, or a sentence, as a "mode of presentation" (*Art des Gegebenseins*) of a referent. His most basic reason for doing so is the same as his reason for introducing the distinction between sense and referent to begin with: the need to account for the informativeness of judgments of identity. On the conception, it is necessary in order to account for this informativeness that the same referent (e.g. a triangle or the planet Venus) can be presented or given in any of various different ways, and that it *is* the same object may not be evident from these presentations alone. The sense of a name is thus to be understood as a way in which its

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[49] Gadamer; cf. Figal.

referent is presented or given, and analogously the sense of a sentence is understood as a way of presenting its truth-value.

As commentators have noted, this conception of senses as modes of presentation is in some tension with another picture Frege sometimes employs, particularly with respect to sentential senses: namely that of senses as non-physical objects of a special kind, capable of being grasped in thought, and possibly existing in a "third realm" beyond those of the spatiotemporal and the individual-subjective. One particular place in which the tension shows up is in connection with Frege's own account of indirect discourse or *oratio obliqua.* On Frege's account, a sentence in oblique discourse (such as "the planetary orbits are circles" as it figures in "Copernicus asserts that the planetary orbits are circles") has an "oblique" referent which is not its ordinary one, i.e. a truth-value, but rather its (ordinary) sense. In terms of Frege's overarching picture of the distinction between concepts and objects, this means that senses, in oblique contexts, are treated as particular kinds of objects. But it is not clear how to individuate or distinguish senses if we treat them as objects in this way. In particular, senses cannot be distinguished simply by the words used to express them; for it might be correct to describe Copernicus (for instance) as having the same belief even though he never spoke English. On the other hand, we also cannot identify the senses of two terms, even if their referents are *necessarily* identical (e.g. we cannot identify the sense of "equilateral triangle" with that of "equiangular triangle"), since the judgment of identity may still, in this case, be informative.

In *Meaning and Necessity*, Carnap argues that Frege's treatment of sense, reference, and indirect discourse points toward a more general antinomy which arises for any theory that treats the various types of expressions composing a sentence as each having a distinct sense and reference. In particular, if we allow the general substitution of extensionally equivalent or even just necessarily co-referential terms into sentential contexts, including sentences containing oblique contexts, the result will be contradictions in the truth-values assigned to some of these sentences.[50] Frege's device of ascribing as the reference of a sentence in oratio obliqua its (ordinary) sense can be seen as a way of avoiding the antinomy, but it leads, as Carnap notes, to a kind of infinite proliferation of entities. In particular, if a particular sentence is used obliquely, its sense is thereby named; but the name must be conceived as different from the sentence in its usual use (which, instead, names a truth-value). This name then has a further sense, which itself must have a further name, and so forth. The treatment of senses as possible objects of reference, which Frege introduces to attempt to deal with the special problems of indirect discourse, thus necessarily introduces an infinite series of names and special objects for each sentence that can appear embedded in such discourse.

As an alternative, Carnap develops a "method of extension and intension" on which intensions are defined by the semantic rules laid down in advance for "the use of corresponding expressions in language systems to be constructed" (p. 8) and substitution of co-referring terms is not generally permitted into intensional contexts (pp. 142-144). Carnap observes that any picture committed to treating linguistic expressions generally as names (or as always having referents, in Frege's terminology) will lead to the antinomy of the name relation and invite, by invoking senses (or intensions) themselves

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[50] Russell's example

which must be nameable, something like the infinite proliferation of names and entities that Frege's picture involves. What Carnap does not point out is that his own method of extension and intension, while prohibiting the substitution of coreferring terms in intensional contexts internal to a language, nevertheless leads to a formally similar problem on the level of the determination of a language itself. For Carnap, the rules which determine the analytic truths (or L-truths) of a language and its logical equivalences (or L-equivalences) are to be stipulated in advance in such a way as to explicate the pre-existing notion of necessity or analyticity (p. 8).

To begin with, it is not clear that actually solves the problem which Frege's invocation of the sense/reference distinction was originally meant to answer, since Carnap *does* permit the substitution of L-equivalent expressions in *all* (intensional as well as extensional) contexts. If, for instance, the axioms of geometry are considered to be among the semantic rules definitive of the linguistic system, then Carnap's system will allow "X believes the triangular figure is equilateral" to be substituted with "X believes the triangular figure is equiangular," and the informativeness of the identity judgment "an equilateral triangle is equiangular" is not explained.[51] More generally, if the semantic rules determining L-truth and L-equivalence are themselves conceived as explicating pre-existing determinations of analyticity and logical equivalence in a natural language, the question arises: on what basis can these pre-existing determinations themselves be justified? The stipulation of semantic rules *explicative* of analyticity in a natural language as spoken would thus seem to presuppose a further explicit stipulation of the rules already *constitutive* of the natural language in question. But it is impossible to suppose that this stipulation of rules could take place, unless the rules in question were already in place. The argument is made explicitly by Quine in "Truth by convention," and formulated somewhat differently in the classic "Two Dogmas of Empiricism". It appears to affect any picture on which the intensional structure of a language is considered capable of being wholly and uniquely described from outside that language itself, whether the object of description is understood as a corpus of explicitly stated rules, conventions of usage, or even just regularities implicit in practice. The aporia that results is, in the context of the present discussion, a direct consequence of treating the intensional structure of a language as capable of objective description from without, and so may be understood as a consequence of "treating senses as objects" (in a suitably extended sense of "sense" and "object"). With respect to the origin and constitution of natural (historical) languages, it appears to demonstrate the untenability of any conception of their intensional structure as conventionally or stipulatively instituted, and point to a deeper problematic of their historicity.

At any rate, there are good reasons to think that Frege's own motivations in introducing the sense/reference distinction to begin with should have led him to try to avoid these interrelated problems, even if he was not completely successful in doing so. According to Dummett, the common complaint that Frege does not tell us much about what constitutes senses or how to individuate them is only partly justified; for Frege has, after all, specified the sense of an expression as "the manner in which we determine its reference," and has furthermore said much about the different kinds of referents of different types of expressions.[52] Nevertheless, Dummett admits that Frege's usual way of indicating the

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[51] Ref. the article that says this
[52] FPL, p. 227.

senses of words and symbols is not to describe these senses directly, but rather just to state the reference. The reason for this procedure, according to Dummett, is that, since the sense of an expression is just the mode of presentation of a referent, we cannot expect to be able, in general, directly to specify senses, for instance by a pronouncement of the form "The sense is…". Thus, at least on the "healthier" of the two strands of Frege's notion of sense (Dummett means, here, the strand according to which senses are modes of presentation rather than ideal objects) "the sense of a proper name is the way we arrive at the object, but not conceived as a means to a separable end;" sense is thus "better understood as the manner in which we pick out the object than as the route we take to it."[53] Instead of describing senses directly, which we thus cannot do in general, according to Dummett, when we wish to convey or stipulate a sense we may adopt the procedure that Frege does adopt, which is to "choose that means of stating what the referent is which displays the sense." Dummett here appeals, in particular, to the early Wittgenstein's distinction between saying and showing, suggesting that in thus *saying* what the referent of a word is (in a particular way) we may succeed in *showing* its sense.

As Dummett acknowledges, however, this leaves open the question of what is actually known in knowing the sense of an expression of a certain type. [54] The distinction between sense and reference was introduced, after all, to track salient distinctions in knowledge, and in particular to account for the possibility of gaining knowledge of the truth of a statement of identity, so it seems reasonable to ask this further question.[55] One possibility that Dummett considers is that "to know the sense of a proper name is to have a criterion for deciding, for any given object, whether or not it is the bearer (referent) of that name" and similarly that to know the sense of a predicate or relational expression is to have a criterion for deciding "for any given object[s]" whether the predicate or relational expression applies to them.[56] On this sort of view, to grasp a word's sense is thus to possess a kind of ability to determine the truth-conditions of sentences involving it, and this ability is further to be understood, in the case of names, as the ability to recognize the requisite objects (or recognize whatever counts as establishing that the name applies to a particular object).

The trouble with this, as Dummett in fact notes, is that it is not in fact legitimate, in the context of a full picture of sense, simply to characterize the knowledge of sense as a matter of the ability to recognize "a given object." For:

> In understanding a proper name or predicate, I am supposed to be able to recognize something as establishing that a given object is the referent of the name or that the predicate applies to it: but *what* is it that I recognize to be established? That such-and-such a name stands for the object, or that such-and-such a predicate applies to the object – indeed: but *which* object? The given object, of course: but here we have a right to ask, 'How was it given?' (pp. 231-232)

In fact, as Dummett points out, the conception of knowledge of sense as simply consisting an ability to recognize objects cannot succeed, since an object cannot be recognized at all unless it is first presented

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[53] IFP, 132.
[54] FPL, p. 229.
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[56] FPL, p. 229.

in some specific way or other, and this already involves (in terms of the conceptions of senses as modes of presentation) that they are presented by means of some sense or other. "We are," Dummett concludes in a parallel discussion, "never given an object, complete in itself; we can think about it, speak of it or apprehend it only as presented to us in some particular way…" (IFP, p. 132) Thus the conception of knowledge of senses as consisting in the ability to recognize objects as the bearers of names, or as falling under predicates, cannot succeed, except perhaps in the context of a much broader conception of sense, one inclusive of the observation that the grasping a sense (for instance) of a proper name must include the ability to grasp objects as of a type or category, including grasping general "criteria of identity" for objects of that type.[57] For instance, even the use of a proper name in connection with a demonstrative gesture in expressing a judgment of recognition ("This is Fido") already involves the availability of sortal criteria for objects of the type (e.g. "dog") that are not wholly given in the recognitional judgment itself.

It is here that we may appeal to Heidegger's specific disclosive conception of truth as providing an appropriate conception of sense as mode of presentation that has undergone the requisite broadening with respect to Frege's own conception. As we have seen, Heidegger's conception of truth as disclosure is ontologically grounded in the primary structure of the hermeneutic-existential "as", or the disclosure of something *as* something. This structure, according to Heidegger, characterizes what it is for anything to be presented (whether in explicit assertion, perceptual consciousness, engaged practice or just everyday inexplicit, circumspective concern) in any way at all, and the articulation indicated by the "as" is here, as Heidegger says, structurally basic and unavoidable. Sense is itself, for Heidegger, grounded in the "projective" phenomenon of interpretation characterized by the "as" structure, and so it is, on this conception, nothing other than "mode of presentation" in a generalized sense. As we have seen (above), the underlying existential/hermeneutic "as" structure is inherently intensional and plausibly *preconditions* (without being reducible to) narrower intensional and "intentional" phenomena such as propositional and intentional attitudes by pointing toward the general hermeneutic conditions for *any* intentional "accessibility." On Heidegger's picture, it is thus possible to agree with Dummett's point, that we can recognize, speak about, or apprehend objects "only as presented in some particular way" (i.e. including that they are presented as being of some particular type) and, as well, to give an expanded and phenomenologically motivated account of how this presentation occurs. This account, understood as a suitable generalization of Frege's narrower conception of sense as mode of presentation in language, connects the conception back to the phenomenological and ontological ground of possible givenness of objects that must plausibly *underlie* any account (such as Frege and Dummett attempt to give) of how linguistic signs can function to express senses that are themselves conceived as modes of presentation of objects.

There are other precedents for generalizing Frege's notion of modes of presentation in this way. In 196-, Dagfinn Follesdaal argued that Husserl's notion of noema or noematic sense can be seen as a generalization of Frege's notion of sense as mode of presentation. On the suggested generalization, the noematic sense is that ideal component or aspect of an intentional act by means of which it achieves an intentional connection to a particular object or objectivity; the generalization results from relaxing

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[57] FPL, p. 233.

Frege's restriction of the notion to the case of language and allowing it to characterize the structure of intentional acts of consciousness generally (thus Husserl can speak of the particular noemata of acts of perception, memory, imagination, etc.) Noematic senses, on Follesdaal's reading, thus generalize the notion of modes of presentation or of givenness beyond the linguistic cases that Frege considers to encompass all of the non-linguistic modes of givenness to individual consciousness that Husserl himself describes phenomenologically. Of course, the conception of givenness that Heidegger develops in his discussions of sense and truth itself develops from Husserl's picture and is in some ways a generalization of it; in particular, it results (as we have seen above) from considering that givenness "to consciousness" is in fact rooted in the deeper and more original phenomenon of Dasein's being-in-the-world, and by further generalizing the modes of possible givenness of objects beyond the sphere of subjective consciousness. If Follesdaal's suggested generalization of Frege's original notion is itself justified, then all that is needed in order to further broaden the notion to coincide with Heidegger's conception is to include those forms of givenness (for instance to circumspective concern or practical comportment) that do not depend on givenness within consciousness at all. This allows the expanded conception to capture, in particular, those forms of givenness implicated in the structure of Dasein's factical life that, while avowedly in many cases emergent only along with the articulation implied by the existence of a shared language, nevertheless are *equally* dependent on the particular ways in which the relevant entities are thereby presented in their being.

Most significantly, however, the supplementation of the broad picture of truth with the Heideggerian conception of truth as disclosure allows for an ontological clarification of the status of sense (conceived as mode of presentation in a broad sense) that indicates the actual ontological reasons for the "antinomy of the name-relation" and the related aporias that arise for pictures that treat senses as objects to which reference can be made. As we have seen, on the Heideggerian picture, sense, in accordance with the underlying hermeneutic-existential "as", is always related to presentation in a suitably broadened sense, and presentation is as such constitutively linked to being in that the underlying "as" structure always reveals beings in their being or otherwise. It is thus that sense, while it typically and primarily characterizes beings, is also always structurally linked to their being, and also to their unconcealment within the ontic-ontological structure of Dasein. A general reason for concluding that modes of presentation cannot be treated as objects, then, can be found in the observation that sense is always characterized by a twofold reference, not only to beings but to their being; and owing to the ontological difference, being itself is not a being. Modes of presentation, in Heidegger's sense, cannot therefore be characterized simply as entities, and cannot be accounted for (as we have already seen in connection with Davidson) in terms of the merely ontic relationship between two or more beings. More specifically, to treat any mode of presentation *as* a seperable and distinct object of reference would be, in Heidegger's framework, to suppose that the phenomenon of sense and presentation in general could be described as a structure or event *purely* on the ontic level; and this, as we have seen, runs counter to the whole thrust of Heidegger's inquiry.

With this in mind, it is possible to consider the implications of Heidegger's broadened picture for the narrower issue specifically treated by Frege, that of the senses of linguistic expressions as modes of presentation (of referents). From the broadened Heideggerian perspective, as we have seen, linguistic

senses can still be treated, as Frege does treat them, as given by whatever allows *truth-conditions* for the sentences of a language as a whole to be determined. But this determination must, in addition to the linguistic-structural determination of the truth-values of sentences from "primitive" relations of satisfaction in accordance with a Tarskian truth theory, *also* include whatever determines the presentation of beings (such as they *could* plausibly figure in relations of satisfaction or other reference-like relations to begin with). Dummett actually grasps this point, at least in a negative way, as is evident in his recognition of the need to address the ways in which objects are given as part of a general theory of sense. But although he also recognizes that modes of presentation cannot be treated as separable objects of reference, on pain of aporia and infinite regress, he is led by the apparent demand to explain what knowledge of a linguistic sense consists in to attempt to countenance such knowledge as possession of an ability to recognize objects, or more broadly to use linguistic terms meaningfully in specific, epistemically characterizable ways.

The attempt to describe knowledge of senses in terms of recognitional abilities does not succeed, since as Dummett also recognizes, the description of knowledge of sense in terms of abilities to recognize objects itself presupposes the availability of the senses it is supposed to explain. But while recognizing this failure in the case of the narrow recognitional theory, Dummett nevertheless persists in supposing that it *must* be possible to characterize the knowledge involved in knowing a linguistic sense non-circularly in terms of *some* notion of epistemic ability, ultimately at the basis of our ability to identify something *as* being the case when it is. This is what yields Dummett's attempts to describe knowledge of sense in terms of such formulas as the "grasping of a rule," the possession of a specifiable ability, adoption of a method, the possession of specifiable criteria, or the knowledge of a means of "picking out" something from among others. But as we have seen, if it must (on pain of aporia) be impossible to treat senses in general as separable objects of reference, then it appears likely that these attempts to characterize sense non-circularly in terms of some prior methodological means must fail as well. Moreover, to introduce them as figuring centrally in explanations of what it is to grasp a sense, as Dummett does, is effectively to locate epistemic notions at the heart of the systematic theory of sense and truth, a strategy which is (as Dummett himself recognizes) in substantial tension with Frege's own realist approach, and which we have good reason to think (see above) cannot succeed in capturing the specific sense of truth, in any case.[58]

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[58] Dummett recognizes the general issue: "If I am wrong…and there is some non-circular account of the notion of knowing what it is for something to be the case, not construed as verabalizable knowledge (on pain of circularity in the course of explaining what it is to understand words), nor appealing to the recognition of its being the case, then the general form of the model of sense we have been considering can be preserved while the whole model is recast in terms of this notion. What we are interested in in the present context is, after all, this general form, the structure of a model of sense, and not the question how far epistemological notions can legitimately be employed within such a model. But, despite the fact that Frege was undoubtedly highly realist in his whole philosophical outlook, that for him sense was related to truth rather than to the recognition of truth, and despite his constant inveighing against the intrusion of psychological notions into logic (more properly, into the theory of meaning), it is far from apparent that he would have rejected an account of the form we have been considering, on the grounds of the present objection [viz., that it the model in terms of recognition "invokes epistemological considerations where they are relevant."]" (FPL, pp. 239-240). Dummett goes on to argue that the notion of sense for Frege is, after all, connected to "cognitive notions" involved in the advance from a thought to a truth-value, and that this

On the recommended Heideggerian alternative, there is no requirement, in general, for the knowledge involved in grasping the sense of an expression to be portrayed as consisting in the possession of any ability, adherence to any practice, or any relation of the individual subject to any other (ontic) event, object or process. This negative point is just the obverse of the positive recognition that sense as a *phenomenon* can only be described in terms that are ontological as well as ontic, and that this ontic-ontological double structure (itself inherent to the structure of Dasein) is essential to the specific phenomenon of truth itself. Significantly, this allows for a generalized discussion of linguistic sense that situates it as a specific phenomenon within the broader context of the ontological concept of presence and presentation as such, and thereby allows a broadened discussion, as well, of the *temporal* determinants of the possibility of presence in the broad as well as the narrower (i.e. linguistic) sense, a discussion in which the temporality of *language* is, necessarily, equally at issue. From this perspective, the picture of an already-constituted language, determined and fixed as a total structure, coming to bear on the world simply by confronting a world already constituted as a totality of determinate objects bearing determinate properties, is a complete fiction. Rather, it must be acknowledged that objects and their determinate properties and relations emerge, in a temporally *complicated* sense, only with the development of a language and the specific possibilities of expression and presentation that its structure, at any given point of its development, make possible. That fictional picture is, however, the one that ultimately motivates conceptions, such as Carnap's, on which a language can be conventionally instituted or stipulated as a whole simply by fixing its semantic rules; it is also the picture which may be thought to motivate Tarski's original idea of truth-predicates for artificial languages as definable in terms of "primitive" relations of satisfaction, though not (or at any rate, not in the same way) Davidson's modified picture of the interpretation of natural languages, which is inherently holistic and reconstructs satisfaction from truth rather than vice-versa. Recognizing that such fictional pictures of the "language-world" relation must cede to one that takes seriously the thought that linguistic sense itself is co-constituted along with the articulation and constitution of the world on which it bears, including the determinate presentation of its objects and phenomena, we can, at any rate, begin to see a phenomenological basis for challenging the Fregean assumption that senses must themselves be timeless or eternal existences whose own temporality is quite independent of the temporality of the specific phenomenon they are actually invoked to explain, that of the presentation of objects. This is to open, in other words, the question of the underlying temporality of sense as (in the Heideggerian jargon) the question of the *being* of language, including the question of its temporal constitution, continued existence, and possibilities of gradual or radical transformation or change in co-articulation with those of the world it discloses.

I turn, now, to another issue about linguistic truth upon which the suggested Heideggerian extension of the concept of truth has specific bearing. This is the question of the structure of a language which contains, as natural languages generally do, its own truth-predicate (e.g. the English predicate "true", as characterizing sentences in English). In "The Semantic Concept of Truth," Tarski famously argued that

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suggests that it is wrong to hold that "Frege wanted to extrude everything epistemological from logic or from theory of meaning…". While it is true that the idea of "cognitive value" to which Frege appeals in introducing the concept of sense is, at least partly, an epistemic notion, though, this does not suffice to establish that Frege would be willing to accept any general epistemic constraint, of the sort Dummett imagines, on the nature of sense.

any language which includes its own truth-predicate along with devices for forming arbitrary names for its own sentences (such as the device of naming sentences by quoting them, or some other suitable device), would, in connection with the structure of T-sentences, necessarily involve a contradiction. For it is possible in any such language to construct a "liar" sentence of the form

L: L is not true

and, assuming the relevant truth-predicate is in the language under discussion, the T-schema for L produces the contradiction

"L is not true" is true iff L is not true

i.e.

L is true iff L is not true.

Tarski accordingly suggested that no language that contains its own truth-predicate could be formally characterized in accordance with the T-schema; it was thus necessary to discuss and define the truth-predicate for each language under consideration in a *different* language which contains all the sentences of the original language (or translations of them) as a proper part. Given this, it is impossible to formulate the liar sentence, and the contradiction is avoided. The procedure has some plausibility in the case of formal languages, for which there is a stronger metalanguage (such as English) readily available. But even in this case, one can reasonably wonder how the notion of truth in the metalanguage itself is defined or definable; here, the general application of Tarski's solution would involve the postulation of an indefinite open hierarchy of metalanguages, each stronger than the last, in which truth for each language is definable only by the next higher one. And if we are interested primarily in natural languages rather than formal ones, the device of defining truth in a metalanguage is of no use to begin with. For these languages plausibly contain their own truth-predicates, and there is not, in general, a "stronger" metalanguage available which can express everything the initial language can express and more. Indeed, it is plausible, as Tarski himself recognized, that every natural language has (as such) "universal" expressive power, and is therefore not to be modeled without contradiction by the T-schema. Tarski himself concludes that it is therefore hopeless to attempt to use the T-schema to characterize the structure of the truth-predicates of natural languages, and accordingly that these languages are, in a basic sense, unformalizable.

More recently, though, some philosophers have considered how the structure of truth can be formally treated in accordance with the T-schema even for those languages which, like English, contain their own truth-predicates (as well as the resources to make descriptive reference to their own sentences). In his influential "Outline of a Theory of Truth," Kripke notes that Tarski's hierarchical approach cannot handle situations that occur routinely in natural languages where the truth of sentences is discussed, such as the situation in which Dean says, "Most of Nixon's statements are false" and Nixon says, "Most of Dean's statements are false." As Kripke notes, there need not be any actual contradiction here, since both Dean's statement and Nixon's statement can be true without producing a contradiction; but Tarski's hierarchical device implies both that the truth-predicate which Dean uses in describing Nixon's

remarks must be at a higher linguistic level than the one Nixon uses and that (conversely) Nixon's must be at a higher level than Dean's. Kripke suggests, accordingly, that Tarski's account in terms of a hierarchy of languages and different truth-predicates should be replaced by one on which sentences, rather than being assigned to fixed levels of a linguistic hierarchy, are allowed to "find their own levels" within a language conceived as unitary. In particular, given an initial partial interpretation which assigns truth-values to some of the langauge's sentences, sentences involving ascribing the truth-predicate to other sentences can be assigned truth-values at a higher level than the sentences discussed. The hierarchical construction can be iterated arbitrarily and even through transfinite ordinal levels. Kripke shows that, within the iteration, there will be certain *fixed points* at which some sentences attain a stable value (such that, if true at that level, they will be true at all subsequent levels of the hierarchy, or if false there, they will always subsequently be false), and these can then be treated as determinately true or false. Nevertheless, there will still be some sentences (such as the liar sentence itself) that never attain a stable truth-value on any level; these are treated as "ungrounded" and as exhibiting truth-value gaps, i.e. being neither true nor false.

Drawing on Kripke's "fixed-point" construction but modifying its intuitive basis, Gupta and Buelnap have proposed a "revision theory" of truth which attempts to explicate the concept of truth as a *circularly* defined one. In particular, whereas Kripke understands the levels of the hierarchical construction as iterated interpretations of a language at ever-higher inductive levels, Gupta and Buelnap understand the Tarski biconditionals as pointing toward an underlying concept of truth that is circular in the sense that the *definiendum* (truth) is in some cases contained in the *definiens*.[59] Such a definition, as Gupta and Buelnap note, does not permit the determination of the extension of the definiendum non-circularly, but it does give a rule according to which we can determine the final extension of the definendum given an initial hypothesis about its extension.[60] The re-interpretations of the truth-predicate that occur on different levels of the hierarchical construction, including fixed points, are thus interpreted as *revisions* of a truth-predicate that is defined, in itself, circularly. This kind of circularity is, Gupta and Buelnap hold, at the root of both the irremediably paradoxical behavior of some sentences (such as the Liar sentence) and the fact that others eventually attain stability at some fixed points.

Against both pictures (and others), Graham Priest (2006) has argued that taking seriously the Tarskian T-schema in application to the truth-predicates of natural languages such as English requires recognizing that the concept of truth that they formulate is inherently contradictory in the sense that such a language will contain true contradictions.[61] Attempts to avoid a contradictory semantics while preserving the Tarskian schema, such as Tarski's own as well as those of Kripke, Gupta, and Buelnap, are therefore to be rejected. Priest's main argument against theories such as Kripke's, which invoke truth-value gaps and deny the general applicability of the law of the excluded middle, is that no such solution can, in fact, avoid contradiction. For instance, for a sentence, *a,* that turns out to be ungrounded in Kripke's sense and is thus treated as lacking a truth-value, "*a* is not true" is nevertheless itself true (since sentences that lack a truth value are not true). Thus we can consider the "extended" liar paradox

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[59] Revision theory, pp. 113-118.
[60] Pp. 118-119.
[61] In contradiction, p. 12.

S: S is not (stably) true.

If S is true, it is not (by the T-schema) and if it is false *or* valueless (for instance if it is "ungrounded" in Kripke's sense), then it is true. Accordingly, even the hierarchical construction in terms of stable truths at fixed points fails to achieve an unparadoxical classification of sentences across the language as a whole.

Priest gives a further argument against Gupta and Buelnap's revision theory, this time bearing on the structure of the underlying basis of the "conventions" that provide for the definition of truth, on their account. As Priest notes, since the revision theory identifies the truth-value of sentences with their truth-values on stabilized interpretations, it can regard the T-scheme as holding only for stably true or false sentences, rejecting its applicability to paradoxical sentences (such as the liar). But Priest questions what this is supposed to show: in particular, how does the elaborate formal construction involved in the distinction between stable and unstable sentences actually relate to the semantics of English as spoken? The construction involves, after all, a hierarchy of interpretations that must be continued not only through finite but also through transfinite ordinal levels. If this hierarchy of interpretations is supposed to explicate the meaning of the truth predicate of an actually spoken language such as English, it is thus apparently necessary to attribute to the speakers of the language at least an implicit grasp of the (highly complex) notions of a transfinite ordinal, of transfinite induction, etc.; but that ordinary speakers of English generally grasp these notions in using the ordinary notion of truth seems highly implausible. Similarly, Priest questions how the successive stages of revision are actually to be interpreted: it seems inappropriate to interpret them as actually temporally or chronologically ordered (so that the extension of the truth-predicate would be revised periodically, perhaps every week or every month), but it is unclear how else to interpret the claim that truth is successively "revised," as Gupta and Buelnap claim. Finally, even if we follow Gupta and Buelnap in taking sentences to have the semantical properties they do when the revisions finally stabilize, there will still be the possibility of generating paradoxes of the "extended liar" type anyway.

All of these constructions and interpretations of the significance of the paradoxes are relevant in the current context because they attempt formally to explicate what I have here called the "transcendental" concept of truth, which is plausibly the concept underlying truth-predicates of languages such as English that contain their own truth-predicate and that possess "universal" expressive power in Tarski's sense. As we have seen, any attempt seriously to consider the structure of this transcendental concept of truth requires rejecting Tarski's hierarchical structure of languages with distinct truth-predicates, since none of these captures the target notion under consideration. The transcendental concept of truth, as I have discussed it here, is itself intended to capture explicitly the *phenomenon* of truth, which is not restricted to any particular language or even to contexts in which sentences are formed and uttered at all. But since it is also highly plausible, as I have argued, that Tarski's T-schema essentially captures the formal-linguistic aspect of this phenomenon as it figures in the structure of natural languages, the necessary existence and implications of the semantic paradoxes within these languages must also be considered relevant here, and might reasonably be considered to characterize in a significant sense the semantic structure of *any* language capable of discussing the truth-values of its own sentences. Thus each of the formal interpretations that make sense of the implications of the paradoxes for the overall semantic

structure of a language is, at least, potentially suggestive of the formally indicated features of the broad phenomenon of (transcendental) truth.

Certain aspects of these constructions can also be linked in more specific ways to features of the transcendental phenomenon of truth in the sense that I have described. For example, the circularity in the definition of linguistic truth to which Gupta and Buelnap advert can be motivated, in the broadened context of a disclosive understanding of transcendental truth, by recalling the well-known circularity in the hermeneutic basis of the unconcealment of beings to which Heidegger points in *Being and Time*. According to Heidegger, because of the necessary involvement of the fore-structures (see above) in any interpretive understanding of the world, all possible interpretative unconcealment is itself situated within a circle, grounded in the structure of Dasein itself, in which Being-in-the-world must first be understood as a whole, albeit in a vague and inexplicit way, in order that it can subsequently be made explicit.[62] In this sense, "Any interpretation which is to contribute understanding, must already have understood what is to be interpreted." (p. 152). The circular structure is, according to Heidegger, characteristic of the kind of understanding that is requisite to grasping the present-at-hand as well as other modalities of beings (p. 153) and is "formal-indicatively disclosed" by Dasein's understanding projection itself. (p. 315). The circularity of the interpretive foundations of truth is thus a necessary feature of the phenomenon, according to Heidegger, and it is thus reasonable to think that any explicit conceptual grasp of it would include this circularity. In particular, since assertion is, for Heidegger, a type of uncovering, itself grounded in the broader disclosive structure of Dasein, it is reasonable to suppose that when we restrict our attention to assertoric truth (as all the philosophers who follow in the tradition of Tarski do), we will find the same circular structure. Here, the fact that the circular structure of the truth-predicate for a natural language can be shown to be a consequence of the uniform applicability of the T-schema is itself an important independent confirmation of a result that could also have been predicted on phenomenological-existential grounds.

In particular, from the perspective of the Heideggerian picture, the circular structure that Gupta and Buelnap discover in the concept of truth may be thought to reflect the fact that, due to the kind of objectification that language makes possible and its own inherent reflexivity, itself grounded in the reflexivity that is structurally characteristic of Dasein, sentences of a language are themselves continually uncovered *as* true or false and thereby become entities that can be discussed in terms of their own semantic status. In the course of inquiry, the extension of the truth-predicate will then pass through various stages of revision in which the status of various sentences or sentence-types as true or false is itself taken into consideration and used as a guide to the revision. This might even reasonably be thought to include moments of "infinitary" reflection involving the consideration of infinite sets of

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[62] "As the disclosedness of the 'there', understanding always pertains to the whole of Being-in-the-world. In every understanding of the world, existence is understood with it, and *vice versa*…. [The] circle of understanding is not an orbit in which any random kind of knowledge may move; it is the expression of the existential *fore-structure* of Dasein itself… In the circle is hidden a positive possibility of the most primordial kind of knowing. To be sure, we genuinely take hold of this possibility only when, in our interpretation, we have understood that our first, last, and constant task is never to allow our fore-having, fore-sight and fore-conception to be presented to us by fancies and popular conceptions, but rather to make the scientific theme secure by working out these fore-structures in terms of the things themselves." (pp. 152-53).

sentences of a particular type or characterizing a certain subject matter; these are the moments modeled, in Gupta and Buelnap's construction, by the "limit" stages of the procession to, and through, transfinite ordinals. In chapter – of this work, we will see how a certain idea of passage to the infinite, which can be modeled by appeal to Cantor's transfinite hierarchy, can itself be motivated by a phenomenological consideration of the reflexivity of Dasein in a way that is nevertheless not inconsistent with Dasein's essential structural finitude. For now, it is sufficient to note the possibility of this phenomenological motivation and to point out how it could be reflected in the narrower dynamics of the behavior of the truth-predicate of a language over time.

What, then, of Priest's second argument against the revision theory, the argument concerning the relation of the theory to the actual knowledge and practice of speakers? As we have seen in connection with Dummett, the phenomenon of transcendental truth itself does not need to be seen (and should not be seen) as necessarily grounded in the capacities, abilities, or practices of individual knowers in order to be explicated phenomenologically. It is, rather, to be seen as grounded in a structure which, though it is *formally indicated* in the structure of Dasein's facticity, also does not have to be (and generally is not) explicitly present in the conscious awareness of any individual subject. Moreover, the formal indication is itself understood as involving important aspects of formalization and interpretive articulation, so that it may turn out on interpretation to have essential structural moments that are not at first apparent from the facts about linguistic usage or conscious mastery alone. Though the existence of elaborate formal structures such as the transfinite construction of Gupta and Buelnap's picture would admittedly have to be positively demonstrated in relation to the underlying phenomenon of truth, it is thus not inconsistent with this conception that it exist and characterize, more narrowly, the meaning and behavior of the truth-predicate as it is actually employed in linguistic practice. Priest's second objection to the revision theory is thus to be rejected in this context.[63]

Nevertheless, Priest's first objection – that the revision theory and Kripke's theory do not in fact eliminate paradox, but only relocate it – remains legitimate, and in fact *also* can be seen as pointing to significant features of the underlying phenomenon of transcendental truth. As Priest argues in detail, it is plausible that *any* theory that eliminates the semantic paradoxes and the closely related set-theoretical ones from a particular language will do so only by *limiting* the expressive resources of the language in question. It is this limitation, for example, that saves the consistency of each language within the Tarskian hierarchy by stipulating that none of the languages in question can capture their *own* notion of truth. The choice between consistency and expressive completeness is, then, a fundamental one, and it appears to be unavoidable that any theory that attempts to characterize a language as a whole must choose for one or the other.[64] Thus if we consider the language in question to have *full* expressive resources, as characterized by the unlimited applicability of the T-schema, we must also accept that there will always be paradoxes and contradictions that characterize the very structure of truth.

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[63] Also, the temporality objection.
[64] Connection to limit-contradictions; relation (that both Priest and Gupta/Buelnap point out) to set theory.

Should we see truth, as illuminated by the Heideggerian picture, as structurally circular *or* as contradictory, then? The answer is, "both". The inherent reflexivity of any language that discusses truth, itself a structural outcome of the hermeneutic circularity of Dasein, means that the semantic structure of any existing language can *either* be viewed as containing a circular truth predicate that is, at any moment, incomplete, and as undergoing ongoing revision as the semantic consequences of existing theories are themselves considered and reflected upon. The process is, under this aspect, never complete (even at fixed points), and will always leave some sentences in the category of paradox or instability. But it is equally possible, with a shift of perspective, to characterize the truth-predicate of a language as already embodying the general phenomenon of truth *as a whole*, and thereby to see the actual phenomenological basis for the necessary structural existence of contradiction and paradox. The two perspectives – that of consistency with incompleteness and that of inconsistency with completeness – cannot be occupied simultaneously; but if the structural features of truth are indeed phenomenologically characterized as I have suggested here, it must essentially be seen as describable only in terms of this irreducible duality.[65] The inherent circularity *and* contradictoriness that thereby emerge as essential structural features of the concept of truth would be a problem, in an obvious sense, for any theory that wishes to *define* truth consistently and non-circularly. But where the goal is not the fixing of definitions but rather phenomenological and formal indication of an underlying structure that is and must be presupposed, it is not unreasonable to see the structure as bearing these features essentially.

In closing, it is worth noting that although the two issues I have discussed in this final section -- namely, the issue of the status of linguistic senses as "modes of presentation" and the issue of the structure of truth-predicates in natural languages – are not the same, there is nevertheless a suggestive formal homology between them. In both cases, what is phenomenologically at issue is the way in which sentences reflect, in the narrowed context of linguistic assertion, the broader phenomenon of truth characterized in terms of presentation and presence. In both cases, as well, this reflection produces irreducible structures of circularity and contradiction within language itself. The inevitable presence of these structures plausibly demonstrates, in both cases, the impossibility of characterizing the functioning of meaningful language wholly in syntactic terms, or of any clean divide between the syntax of language from the semantics of truth. Rather, in light of the broadened consideration of the phenomenological conditions of assertoric truth, the paradoxical and aporeatic results (such as Tarski's) that have appeared to demand this separation within the ambit of the assumption that truth is simply characteristic of assertion actually show it to be untenable once the broader phenomenological phenomenon of presentation is taken in view as a necessary component of the specific concept of truth. The aporias and paradoxes can then emerge as formal indications, within the structure of language more narrowly conceived, of the phenomenalization of phenomena, the presentation of presence itself.

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[65] In part II, I will further develop this dual picture of truth as consistent incompleteness or inconsistent completeness on basic phenomenological/ontological grounds, with close reference to the guiding idea of consistency that appears in the force of the "law of noncontradiction," and also with reference to the constitution of fundamental temporality.

Heidegger's *Sophist* and the Logic of Presence

(Chapter 4 of Draft MS: *The Logic of Being: Heidegger, Truth, and Time*)

In the *Theaetetus* and the *Sophist*, Plato is centrally concerned to respond to an argument given by Parmenides according to which the discussion of non-beings or the utterance of falsehoods is impossible. Parmenides argues that it is not possible to speak, think, or know of what is not (me on), or of what is not true, since to do so would be to speak, think, or know of nothing, and to do so is not to speak, think, or know at all.[1] The argument motivates the distinction Parmenides draws between possible ways of inquiry or understanding.   In fragment 2[2], the two ways that are thus distinguished are the one of being (or "that is") which "attends upon truth", and the other, of non-being ("that is not"), which is called "indiscernible" and is further said to be unknowable and incapable of being indicated.[3] The two paths are mutually exclusive, and the goddess stresses the injunction to avoid the second one. This leads to her suggestion, in Fragment 6, of a way typically followed by mortals and identified with confusion and error, and against which the goddess also enjoins her audience; on this way of confusion, "to be and not to be" are believed to be "both the same and not the same."[4] Both injunctions, the injunction to avoid the confused way of mortals as well as the wholly indiscernible way of non-being, formulate sharply the basic demand for a decision between being and non-being, or between truth and falsehood, suggesting that only incoherence can result from a failure to make the decision. Parmenides' argument can thus be read as anticipating or actually inaugurating the logical law of non-contradiction, which first gains explicit formulation by Aristotle, and according to which it is impossible (in some sense) to affirm both A and not-A. At the same time, in formulating the key distinction as that between truth and being on one hand, and falsehood or illusion on the other, Parmenides further suggests that clarity on the difference is requisite for attaining any coherent understanding of the nature of being or of what is as opposed to what falsely appears or merely seems to be, including the characteristics of unity and timelessness which Parmenides' poem goes on to attribute to being in itself.

The solution given by Plato's Eleatic Visitor, in the *Sophist*, to the problem posed by Parmenides' argument against the possibility of speaking the false turns on the specific structure of an assertoric or predicative sentence (or logos). According to this solution, the possibility for a predicative sentence to be false depends on the fact that the act of asserting does not have the simple relational structure of

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[1] I follow the formulation of T.H. Irwin in "Plato: The Intellectual Background."
[2] KR, 291; Heid. calls it "fragment 4"
[3] Kirk and Raven translate: "The one, that [it] is and that it is impossible for [it] not to be, is the path of Persuasion (for she attends upon Truth); the other, that [it] is not and that it is needful that [it] not be, that I declare to you is an altogether indiscernible track…" They supply the parenthetical "[it]", in each case, as a grammatical subject for Parmenides' verb *estin*; this is based on their supposition that Parmenides is applying the verb to "any subject of enquiry whatsoever…" (p. 245); they thus take Parmenides to be holding, with respect to any such subject, that it is necessary either to assume that it exists or does not. However, as we shall see, this interpretation prejudices ontological issues about the meaning of *estin* in Parmenides that are better left open.
[4] Three ways or two?

actions described by simple transitive verbs (such as "to touch" or "to hold"); rather, sentences have the minimal structure of saying something *about* something, and it is thus possible to say something that "is not" about something that is. As we have seen (chapter 1 above), Plato's solution thus depends on his identification of what he sees as the irreducibly synthetic structure of predication as making possible a logical *koinonia*, or combination, of name and verb. The possibility of this logical *koinonia* in the sentence, which in a certain way mixes being and non-being in the case of falsehood, is itself a result of the possible mixing or *koinonia* of the great types; non-being in general can appear in that difference mixes with being to produce something that is not-being in a certain way. On the picture suggested by the Visitor, negative claims or sentences say *that* something is *not* with respect to a particular individual, and to utter a false logos is to say "what is not" *about* something that is. This is itself possible only in that it is possible to say *of* something (say Theaetetus) something that is not "about him" or something that is different from everything that is "about him." At the basis of the possibility of falsehood is thus the twofold logical structure of predication, on one hand, and the possible mixing of the great types, on the other; and Plato's Visitor sees the twofold structure as the ultimate possibility of the actual phenomenal appearance of non-being in the person of the Sophist. The correspondence between the two levels is itself apparently understood by Plato, in a somewhat problematic way, in terms of a mimetic relationship of similarity or copying between forms and their instantiations, which allows for the distinction between good or accurate copies (*icons*) and the "false copies" or *phantasmata* that instances of illusion amount to, on the Visitor's suggestion.

As we have seen in chapter 1, in the massive 1924-25 lecture course on the *Sophist*, Heidegger interprets this response to Parmenides as allowing Plato to discover the specific structure of intentionality as well as an original mode of the phenomenal appearance of nothingness that actually underlies, according to Heidegger, the logical possibility of negation. Heidegger argues that Plato, in discovering the specific possibility of a phenomenalization of nothingness at the basis of the logical operation of negation, has made a decisive advance over Parmenides himself in unfolding the underlying meaning or sense of being. However, since both philosophers interpret being itself primarily ontically, or in terms of beings, neither one can see the original structure of ontological relationship between being and the nothing which, Heidegger suggests elsewhere, is itself at the root of any possible explicit relationship of Dasein to beings as a whole. In particular, because both Plato and Parmenides presuppose the structure of the assertoric logos as the basic determinant of the being of beings, and therein adopt an interpretation of the logos as itself an extant being, they fail to see the more basic grounding of the possibilities of falsehood and illusion in the *ontological* structure of truth as disclosure.

In developing the interpretation in 1924-25, Heidegger follows Plato in understanding the specifically *iterative* structure of the logos as giving rise to the dangerous possibility of a logos being "cut off" from its original context and coming to misrepresent or mislead with respect to the "matters themselves" originally indicated by it. This conception exposes Heidegger's position in 1924-25, as I shall argue, to criticism on the basis of a position on which the structural iterability or possibility of repetition characteristic of language is grounded in an originary and irreducible phenomenon of difference and differentiation. This kind of picture is developed explicitly, in different but analogous ways, by Derrida and Deleuze; affirming it in the context of Plato's argument in the *Sophist* means affirming, as Deleuze

says, the "rights" of the simulacra over the faithful copy and, as Derrida points out, renders the distinction between philosophy and sophistry that Plato pursues in terms of this primarily mimetic distinction itself, in a certain sense, undecidable. But although Heidegger does not yet see it in 1924-25, there is in fact a motivating basis for the conception of originary difference that Deleuze and Derrida expound in Heidegger's own development of the ontological problematic; in particular, this basis is to be found in the radicalization of the implications of the ontological difference that Heidegger undertakes in the middle 1930s and that underlies the famous *Kehre* or "turn" in his thought. Through this radicalization, as we shall see, Heidegger replaces the metaphysical "guiding question" of the Being of beings with the historical "grounding question" of the truth of Being, and prepares for a transition from the metaphysical thought of beings as a whole to a thoughtful questioning of Being itself, independently of the reference to beings that is determinative for metaphysics in each of its stages. This allows Heidegger to see, as he had not in 1924-25, the possibility of an essentially historical conception of the metaphysical tradition as determined by historically determined but variable interpretations of the being of beings, and to contemplate the possible closure of the metaphysical epoch of "being as presence" as a whole in relation to the extra-metaphysical happening of Being itself, or *Ereignis*. (critique of omiosis in Plato) In particular, if the history of metaphysics is itself thinkable as a series of successive conceptual and practical fixations of the ontic totality of beings, then the metaformal dynamics of totality and limit in relation to those of negation and nothingness themselves point the way, as I shall argue, to an ontological clarification of the structure of negation, falsehood, and illusion, beyond the metaphysical determination of being as presence.

To begin to see how a radicalization of the ontological difference itself can begin to point the way to an extra-metaphysical determination of truth and illusion, it is helpful first to note a significant and structurally determinative ambiguity in Parmenides' exposition. This ambiguity is present both in his basic argument against the possibility of non-being and in the description of the two (or three) ways that is motivated by it. It is the ambiguity between *enjoinder* and *description as impossible*; in particular, the way of non-being is described by the goddess as *both* "indiscernible" *and* not to be taken, on pain of the negative consequences of pursuing it; the third way (if it is not simply a redescription of the first) which confuses being and non-being is itself described as confused, and leading to disorientation and errancy. The root of this overdetermined structure, what is said to be impossible (namely the thought or description of non-being) is simultaneously, nevertheless, prohibited or enjoined against, is to be found in the same problematic structure of reference that actually underlies the possibility of Parmenides' basic argument *as well as* (from a certain perspective) undermines its conclusion. It is that, in refuting the possibility of referring to any X, it is actually necessary first to make reference to X; Parmenides actually does, in this case, refer repeatedly to non-being in general as *me eon*. (Plato notes this).

Parmenides' procedure in pursuing the argument is motivated (though not rendered ultimately coherent) by his appeal to what may be called a *criteriological picture* of the difference between being and non-being. On this picture, the range of existing beings constitutes a delimited whole, with respect to which non-beings are located outside. The picture can be seen, from an ontological perspective, as a basic consequence of Parmenides' understanding of being as identical to the ontic totality of existing beings; but given this understanding, it is also necessary, in order to argue for the actual impossibility of

reference to non-being, to conceive of nonexistent beings as possible objects of description or indication beyond the boundary and thus as constituting, in some sense, possible objects of reference after all. It is also not possible to avoid the paradox inherent in this structure of delimitation by holding that the imperative to avoid non-being is simply the imperative, formulated from within, not to transgress the boundary envisaged as surrounding beings and inclosing them as a whole; for the possibility of describing any actual thought or assertion as one that transgresses the boundary by thinking or asserting what is not must itself presuppose a specific determination of what is (apparently) referred to as not being.

The criteriological picture is modified, but not essentially altered, if the line is seen as one between truths and falsehoods, or obtaining and non-obtaining states of affairs, rather than as one between beings and non-beings. In particular, if formulated in this way, the line becomes the one between true and false sentences (or, alternatively, between what is and what is not "the case") and Parmenides' argument becomes one against the possibility of asserting (or actually, if we take it in its full force, even determinately conceiving of) falsehoods or "non-obtaining" states of affairs.[5] The arguments that Parmenides gives, as well as the distinction between the two ways, can be understood either way; for Parmenides' own formulation of the distinction is ambiguous between "what is" in the sense of being and "what is" in the sense of truth (as the Greek of his time itself is ambiguous). It is in the second form that Plato mainly reacts to it, taking Parmenides to have argued specifically against the possibility of uttering falsehoods, and thus as posing a *prima facie* problem for the identification and definition of the sophist as a purveyor of falsehoods. Even when the argument is understood in the second way, however, the paradoxical structure of overdetermination remains. For the possibility of prohibiting or enjoining the assertion of falsehoods presupposes the availability of these falsehoods *as* possible objects of assertion, and although this does not demand that they be true, it presupposes that they exist, subsist, or are "structurally possible" in some way.

The picture, in this second form, underlies the theory of the logical form of language and the world in Wittgenstein's *Tractatus*. Here, "The world is all that is the case;" furthermore, the totality of facts, or subsisting [*Bestehen*] states of affairs, determines what is the case as distinct from what is not. (1.12). Thoughts and meaningful sentences are understood as determinately true or false in that they structurally picture actually subsisting states of affairs or only possible ones. This raises the question of the mode of existence of non-subsisting, merely possible states of affairs; and here Wittgenstein develops an atomist picture of the basis of both types of states of affairs as depending upon the inherent structural possibilities of logical form characteristic of both language and the world. In particular, states of affairs are understood as articulate combinations of objects which must, in order for the sense of sentences to be determinate in every case, exist necessarily and at all times. The possibility of drawing the univocal and determinate line between true and false sentences which delimits the world is thus preconditioned by the broader structure provided by the necessarily existent objects, and the totality of true *and* false meaningful sentences, so understood, determines the boundary of sense or of what *can* be said. As I have argued elsewhere, the typical overdetermination between enjoinder and

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[5]LW: TLP.

impossibility that already characterizes Parmenides' argument is replicated in the structure of the *Tractatus'* last remark, which enjoins the reader to silence "whereof" we *cannot* speak. Its basis is the structural limit-paradox as a result of which, as Wittgenstein recognizes, the apparently substantive remarks of the Tractatus, as articulating the possibility of sense by apparently describing the *whole* of logical form, must themselves ultimately be "kicked away" as nonsense.

Putting things this way allows us to see that Plato does not overcome the paradoxical structure of the criteriological picture, but just modifies it. In particular, Plato's way of drawing the distinction between the true and the false *logos* allows for the false logos to occur only on the basis of a "mixing" of difference with being that is mirrored or instantiated at the level of sensible beings by the relationship of an actual individual to a form that is *not* "instantiated" in his case. The presumed mimetic relationship between the relations of forms and the relations of individuals to forms (figured in the problematic "relationship" of *methexis*), thus immediately raises questions, in the new "logical" context of the *Sophist*, about the peculiar force of logical relations and their ability to structure both language, on one hand, and actual states of affairs, on the other. In particular, Plato's dependence on the specific structure of the logos to solve the problem of falsehood requires an overarching formal or grammatical order which must pre-exist and condition the possibility of meaningful utterance and the possibility of its bearing (truly or falsely) on the world. With the specific conception of non-being as capable of appearing in that difference "mixes" with other great types, the Visitor substantializes the basis of the difference between being and non-being and begins to consolidate the criteriological or topological picture according to which linguistic predicates pick out determinate ranges of beings. The picture paves the way for the Aristotelian ordering of beings into species and genera, on which everything has a determinate place within the given categorical ordering and "being" becomes the highest and most general (and accordingly most indeterminate) genus or type. It remains the case, in Aristotle's picture, that the deepest and most binding determination of the possibilities of logical and ontological relations, that of the necessity to avoid contradiction (formulated as the "law of non-contradiction") continues to operate in overdetermined fashion as the enjoinder against what is simultaneously said to be impossible.

As I shall argue here, Heidegger's conjoint radicalization of the ontological difference and of the question of being in the "turn" of the 1930s yields a position from which we can understand ontologically the basis of the overdetermination, and the underlying limit-contradiction, characteristic of every criteriological picture of this sort. For Heidegger's radicalized historical understanding of the ontological difference in the 1930s gives shape to the proposal that all metaphysical pictures of language, truth, negation and non-being result from the attempt to conceive "beings as such and *as a whole*" which is, on Heidegger's reading, characteristic of metaphysics as such. Here, as I shall argue, the attempt to take into consideration "beings as a whole" is not simply to be blocked or refused at the outset; rather, the inherent formal structures of overdetermination and paradox that emerge structurally *from* this attempt point toward the underlying "relationship" between beings and being that is at the basis of the coherence of any such attempt but is also necessarily forgotten within them. To comprehend, in relation to the ontological difference that itself finds expression in them, the paradoxical limit-structures that emerge from the metaphysical attempt to grasp beings as a whole in

criteriological fashion is thus to begin to trace the closure of the metaphysical epoch of "being as presence" itself. In particular, if philosophers since Parmenides have necessarily thought the line between being and non-being as an ontic one, separating beings from beings, and hence have been led to presuppose a constitutive reference to totality that they cannot themselves positively ground, Heidegger's essential thought here is that both the totality and its necessary undermining can only be thought, ultimately, on the ground of difference.

It is from this perspective of originary difference that, as I shall argue here, we must understand the structure and "force" of negation, nothingness, and (ultimately) the law of non-contradiction itself. In particular, tracing the paradoxical structures of limit-contradiction that emerge as the necessary expression of the ontological difference *within* the metaphysical conception of the ontic totality allows us to see how the "normative" force of the law, as well as the logical structure of negation itself, are structurally conditioned by that which is necessarily presupposed in any phenomenalization of beings as a whole but also necessarily escapes it. On this picture, in other words, originary difference is at the root of *all* phenomenalization, both illusory and veridical, and there is no distinction to be drawn between "true" and "false" seemings with respect to their representational or mimetic correspondence or non-correspondence with an original. Nevertheless, as I shall argue, understanding the ontological basis of the force of negation allows us nevertheless to maintain a distinction, on the level of presentation, between truth and falsity. The result is that it is possible to consider the formal-ontological basis of the interrelated logical phenomena of negation, falsehood, and illusion from the position of a pure differentiation independent of representation and the successive regimes of presence that characterize metaphysics as a whole. This is to trace the paradoxical in-closure of the metaphysics of presence, or the history of being, as difference and differentiation, from that "happening" of being, "outside" metaphysics, that Heidegger calls *Ereignis*.

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Heidegger's lecture course in Marburg from the Winter Semester 1924-25, announced under the title "Interpretation of Platonic Dialogues (Sophist, Philebus)", comes in the midst of his first profound, transformative and definitive encounter with Greek philosophy.[6] During this encounter, Heidegger repeatedly expresses his basic loyalty to the phenomenological project of Husserl, but has also begun to seek to radicalize and deepen its methods and results through the hermeneutic consideration of medieval and ancient texts and sources, which Husserl himself had largely eschewed.[7] At this time, the central focus of Heidegger's repeated efforts to penetrate the meaning of Greek philosophy and recover its most original guiding concepts was Aristotle; over the period from 1921to 1928, Heidegger devoted no fewer than 10 lectures, courses and seminars to the interpretation of Aristotle's corpus, finding in it the key to such decisive issues as the nature of truth, change and motion, the meaning of perception and action, and the structure of time itself. After 1923, Heidegger's interpretations of Greek philosophy

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[6] (Kisiel 1993), p. 472.
[7] (Kisiel 1993), p. 229.

uniformly unfold along the guideline of the fundamental insight (which he appears to have reached that year), that Greek philosophy universally interprets the meaning of Being as presence, and hence privileges the (temporal) present over other dimensions of time, and understands it on the model of things "present at hand."[8] After Heidegger accomplished it, this insight affected in a fundamental way his understanding of what is involved in phenomenological investigation itself, as well as its application to recover the deepest sources of the metaphysical tradition in the Greeks. For as he explains in the "preliminary considerations" for the 1924-25 course, the sense of phenomenology comprises *phainomenon*, or "what shows itself," as well as *legein*, what Heidegger here translates as "to speak about" [*ansprechen*].[9] Though many sciences indeed talk about what shows itself in various ways, the specificity of phenomenology is determined, Heidegger says, by the specific "way in which it posits what shows itself and in which it pursues this."[10] Here, this primary respect is the "question of the Being of these beings." (p. 8). The resource to the Greeks in the hermeneutic interpretation will thus attempt to prepare an "orientation" toward their understanding of basic concepts and toward the Greeks' interpretation of the most important objects of philosophical inquiry; this includes achieving "an orientation concerning how such peculiar objects as Being and non-being, truth and semblance, become visible at all..." (p. 7)

According to Heidegger, Plato's insight into the structure of the *logos*, as formulated especially in the *Sophist*, represents "a remarkable innovation" (p. 204) over earlier Greek inquiries into the nature of Being. In particular, in explicating the nature of the sophist in relation to that of the philosopher, the dialogue aims "to create, as it were, the milieu within which beings can show themselves in their Being." (p. 204). Although Parmenides, like Plato, sees the philosopher as ultimately defined by his capability of noetic seeing, for Parmenides "this *noein* remains wholly undetermined. He does not say whether it is the *noein* of a determinate realm of Being or of beings in general;" accordingly, "he speaks of Being only in general and in an undetermined way." With Plato, by contrast, "the ground upon which rests the question of the meaning of Being now becomes concrete." (p. 205) An exemplary sign of this greater concretion, Heidegger says, is Plato's acknowledgment of, and questioning of, the being of non-beings in the *Sophist*; this questioning forges ahead with the inquiry into the beings themselves in their "most immediate and original way of being encountered," which is just one leading aspect of "the question of the meaning of beings" or the "question of Being" itself. (p. 205) Nevertheless, despite his success in raising this question on the basis of his interpretation of the *logos*, Plato's inquiry, like Parmenides', remains determined by the assumption that "something can be settled about beings with regard to their Being only insofar as the beings are present [*sofern das Seinde da ist*]..." (p. 205) and, more generally, by the overarching interpretation of Being as presence. This interpretation, Heidegger holds, itself

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[8] (Kisiel 1993), p. 230, summarizing Otto Pöggeler, suggests that this crucial insight was reached in "the years 1922/23"; Heidegger himself, though much later, seems to have given the date as "1923". ((Kisiel 1993), p. 534; cf. Denkweg, 1983 Postscript, pp. 351f./285).

[9] Heidegger, *Platon: Sophistes* (GA 19) [1925] 1992 (henceforth: *PS*), p. 8. Throughout the paper, I have generally quoted from the translation by Richard Rojcewicz and André Schuwer (Heidegger, *Plato's Sophist* [1925] 1997), except where (as indicated) I have modified the translation slightly. Page numbers are as in the original German text.

[10] Transl. slightly modified.

brings about the Greek development of the theme of *logos* and logic culminating in Aristotle. For the Greeks draw "the basic character of Being … from the context of *logos* itself" in that beings are understood, in a privileged sense, as *on legomenon*, beings that can become themes for *logos*. In this sense, the "irruption of *logos*" in Greek philosophy is thoroughly motivated "by the fact that on, the Being of beings itself, is primarily interpreted as presence [*Anwesenheit*], and *logos* is the primary way in which one presentifies [*vergegenwärtige*] something, namely that which is under discussion." (p. 225)

In analyzing the dialogue, Heidegger first analyzes the person of the Visitor and the initial *diaeresis* of the sophist; the point of this opening discussion, he suggests, is simply to show how the phenomenon of the *legein* is decisive for the nature of the sophist, and that it is accordingly the structure of the *logos* on which we must focus if we are to track him down (p. 306). At the same time, since the initial *diaeresis* subordinates the whole discussion of the sophist to the question of the type of *techne* that defines his practice, this question of the structure of *logos* as pursued through the sophist will also be a question of the extent to which *logos* itself can be subordinated to a *techne*, and in particular to what Plato understood as the "technique" of speaking well, or rhetoric. (p. 307).

In the second part of the *Phaedrus* (259e1f), Socrates considers the relationship of successful speaking and writing to truth; a successful orator, in order to succeed in public communication, will "have to have in mind the truth about the subject he is going to discuss." (259e). This normative guideline of truth governs the successful production of speech about any topic; however, as Socrates admits by way of a reference to Zeno's paradoxes and contradictions, the *techne* of rhetoric itself does not prevent the rhetorician from "speaking on opposite sides" and convincing audiences of contradictions. (261d-e). This is why, for Plato as Heidegger reads him, the proper *logos* cannot be reduced to a *techne* of rhetoric, but must maintain an essential relation to the matters spoken of, including the unifying view of these matters that Plato calls the *idea* (p. 331), and must accordingly be grounded ultimately in the practice of dialectic. At the same time, however, the concluding portion of the Phaedrus bears witness to what Heidegger calls Plato's "skepticism with regard to *logos*," (p. 339), a skepticism that is articulated through Socrates' retelling of the myth of the Egyptian god Theuth and his invention of writing.

According to the myth, the *techne* of writing, though initially intended as an aid to memory and wisdom, will in fact "introduce forgetfulness into the soul of those who learn it"; for they will soon put all of their trust in writing, "which is external and depends on signs that belong to others, instead of trying to remember from the inside, completely on their own…" (275a). Writing is, accordingly, both potion and poison, both aid and detriment to the accessibility of the matters themselves to expression in a revealing *logos*. This is because, as Socrates goes on to explain, written words have a "strange feature" that they share with paintings and other static representations. Although such words seem at first to be "speaking as if they had some understanding," they cannot be questioned as a living speaker can, for "if you question anything that has been said because you want to learn more, [they continue] to signify just that very same thing forever." (275d). Moreover, "When it has once been written down, every discourse roams about everywhere, reaching indiscriminately those with understanding no less than those who have no business with it, and it doesn't know to whom it should speak and to whom it should

not." (275e). In these respects, the *logos* as written is inherently problematic and decidedly inferior to a better *logos*, one that is "written down, with knowledge, in the soul of the listener." (276a). This is the "living, breathing *logos* of the man who knows, of which the written one can fairly be called an image [*eidolon*]." (276a).

Thus, according to Socrates' concluding discussion in the *Phaedrus*, the written *logos* exists in a "dangerous" exteriority and fixity with respect to the original, living *logos*, an exteriority that Plato already understands as a matter of its distance from the interiority of "living" memory and its closer access to the matters themselves. Heidegger's gloss on this passage concurs with Socrates' diagnosis, and indeed sees it as demonstrative of Plato's whole attitude toward the possibilities of truth and untruth inherent to the *logos* as such. For Plato as Heidegger reads him, Plato's "suspicion" toward the *logos* as it appears in writing, in particular, is justified in that:

> The *logos* as something communicated, something written, is capable of promoting an unconcern with retaining the matters spoken of, i.e., with retaining them in their proper substantive content. And then comes the more precise reason: ….[those who learn to write] will retain what they learn *dia pistin graphes*, "by relying on what is written," *exethen*, "from the outside," i.e., on the basis of the written word, "by means of foreign signs" which have, in their own character, nothing at all to do with the matter they refer to. The written form of the word "chair" does not have the least kinship with the thing itself; it is something completely foreign to the thing itself … The *pistis graphes*, reliance on what is said, in the broadest sense of what is talked about publicly, considers itself absolved from having to look into what is talked about." (p. 342; transl. slightly modified).

According to Heidegger, it is thus an inherent ontological possibility of *logos* in general, and specifically of the kind of "publicity" inherent to the written *logos*, that a kind of "free-floating" [*freischwebenden*] *logos* can arise which makes it "possible for one's view of things to be distorted." (p. 339). In particular, "insofar as it is free-floating, *logos* has precisely the property of disseminating presumed knowledge in a repetition that has no relation to the things spoken of." (p. 340). This occurs, according to Plato as Heidegger reads him, when the *logos* no longer "takes its life from a relation to the matters themselves," (p. 345), when it fails to maintain a proper relation (a correct *symmetria*) to the things themselves. (p. 348). This occurs when the *psuche* (or, as Heidegger glosses, "inner comportment") of the speaker no longer "lies in the correct condition [*rechten Verfassung*] with regard to the world and itself." (p. 348). In this respect, the very possibility of falsehood, error and deception is itself, Heidegger maintains, a structural feature of the *logos* that results directly from its inherent capacity to be "repeated" and "publicized" in the form of the external and derivative 'image' or *eidolon* of writing. In being repeated and publicized in this fashion, the *logos* stands in eminent danger of losing its relation to the original matters themselves and the "inner" comportment of the *psuche* toward their disclosure. Thus the possibility of error and deception has its deepest root, once again, in the possibilities of comportment inherent to the life of the being defined, for the Greeks, in terms of the *logos* itself in relation to whatever is, the *zoon logon echon*, which can either achieve a proper disclosure of the matters that arises from "setting out to see them … on one's own" (p. 343) or, again, can cover up and

obscure these matters by fixing and repeating them in the indifferent modalities of publicity, writing and idle talk.[11]

With this account of the origination of falsehood and deception in place, Heidegger now returns to the interpretation of the *Sophist* and its attempt to demonstrate the being of non-being, or the fundamental possibility of saying what is not. The purpose of the next section of the dialogue (from 226b to 236d), according to Heidegger, is to demonstrate the "existence of non-beings," or the *me on*, by demonstrating the factual existence of the sophist. (p. 403) Since the sophist is, in turn, defined by his capacity to produce the *me on*, this factual demonstration will suffice to show that the "me on" in some way exists. It is accomplished, according to Heidegger, in two ways. First, insofar as the sophist purports to speak about everything, the object of his discourse is shown to be "impossible," since as the Visitor points out, no one can know about everything. The *techne* of the sophist is therefore in a certain sense "impossible in terms of that to which it relates" (p. 388) and the "sophistical *techne*" is therefore, "according to its Being," itself impossible. Nevertheless, Heidegger says, such a *techne* "is in fact given along with the existence of the sophist," so we have here something that in a certain sense is, although it is also impossible; the sophistical techne thus already presents, in a certain sense, the "Being of a non-being." The second place at which the being of non-being is demonstrated through the factual existence of the sophist, according to Heidegger, is at 235c-236d, in the course of the Visitor's attempt to distinguish, within the copy-maker's art in general, the making of "good" copies or *eikons* from the making of bad ones or *phantasms*. According to Heidegger, this distinction also serves to verify in the person of the sophist itself the existence of the me on as a positive phenomenon: in particular, although the *eikon* is already "not the same as what it presents," the *phantasma* "possesses still less of that which it is designed to present and render, not even its proportions in the sense of the same size, length, breadth, and depth." (p. 402). As a consequence, the *phantasma* is "even more not that which it poses as" than the icon; in it, "non-being is all the more general" and there is "still more of *me on*." Thus, with the demonstration of the *techne phantastike*, "something exists which is still more not what it presents" and accordingly, Heidegger concludes, "the factual existence of non-beings [*das faktische Vorhandensein des Nichtseienden*] can by no means be disputed any longer." (p. 403) At this point, with the demonstration of the sophist as a kind of "walking incarnation [*Faktizität*] of the *me on*," "the actual existence of non-being" has actually been established, and can now serve as a guideline for the remainder of the discussion. (p. 404)

Nevertheless, there still remains the perplexity captured in Parmenides' thesis of the unsayability of non-being, and if the actual existence of the *me on* has in some sense already been demonstrated in the person of the sophist, it nevertheless remains to make this being "intelligible" by demonstrating, against Parmenides, the very possibility of speaking of what is not. This is the problem of the possibility of the psuedos *logos*, a *logos* which does not "uncover the being as it is" but rather distorts it. (p. 410). But

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[11] Heidegger here mentions the close etymological connection between *eidos* ('form' or, as Heidegger glosses it, "the outward look of something, i.e., that ontological determination which gives something as what it is") and *eidolon* (or "image, imitation, or the like"). According to Heidegger, the contrast is that while both terms thus refer to the "outward look" of something [*das Aussehen von etwas*], *eidolon* refers to the "*merely* looks that way"; it is something that "only appears to be thus and so." (p. 345; transl. slightly modified).

such a *logos* will only be possible if "non-beings can be" in some sense, and Parmenides' statement as to the impossibility of the existence of what is not is defeated, or shown to be limited. Indeed, with respect to Parmenides, Plato now faces a fundamental choice. Either he may maintain "complicity with the well-established dogma of the school of Parmenides that non-beings are not" or he "can acknowledge the factual existence of the sophist and accordingly of *me on*, of the *psuedos*, and take the factual existence of deception, distortion, and misrepresentation as it is and so transform the theory of Being." (p. 411) It is in the renewed discussion of images at 240a-c that Heidegger sees the first beginnings of the "ontological" solution to this problem. The image, or *eidolon*, of course exists in a certain way – as the image that it is. Nevertheless, in a certain way it is not; in particular, it "poses" as what is not and therefore manifests non-being in a certain way. This recognition of the peculiar character of the image means, Theaetetus suggests at 240c, that in it non-being is in a certain way "woven together" with being – here, Heidegger says, "non-beings can enter into a *symploke*" with beings. This is the first suggestion of what the Visitor will ultimately offer as his solution to the "logical" problem of non-being, the suggestion of a combination or koinonia of types, such that the type being can, through its combination with the type difference, also enter into a certain unity with non-being. According to Heidegger (p. 431), the key to this specific *koinonia*, and hence to the whole problem of the entry of non-being into what is, is the peculiar structure of the *logos*, the addressing of something *as* something; only through this structure and with its discernment does it become possible to see that something which is not, i.e. a non-being, can nevertheless be addressed *as* something that is.

In *Difference and Repetition*, Gilles Deleuze suggests that the question of the sorting of good from bad copies in Plato can be seen as governing the central problems of the theory of forms. According to Deleuze, there is at the center of Plato's *corpus* "an obscure debate … carried out in the depth of things, between that which submits to the action of the Idea and that which escapes this action."[12] This is not the familiar "debate" between Ideas and their copies, but rather between what Deleuze calls "good copies" (or *eikons*) and simulacra (or "images without resemblance").[13] By contrast with the more familiar one, this is a:

> …more profound and secret dualism hidden in sensible and material bodies themselves. It is a subterranean dualism between that which receives the action of the Idea and that which eludes this action. It is not the distinction between the Model [or Idea] and the copy, but rather between copies and simulacra. Pure becoming, the unlimited, is the matter of the simulacrum insofar as it eludes the action of the Idea and insofar as it contests *both* model and *copy* at once.[14]

In *Difference and Repetition* and the *Logic of Sense*, Deleuze draws from this problem a remarkable systematic deconstructive reading of Plato, one that in its ambition to "overturn Platonism"

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[12] (Deleuze [1969] 1990), p. 15.
[13] (Deleuze [1969] 1990), p. 257.
[14] (Deleuze [1969] 1990), p. 2.

nevertheless finds in the Platonic text the basis for an entirely positive and affirmative retrieval of the "rights of the simulacrum" over the image or icon. Whether or not we see the official "theory of forms" as more or less completely determined, and undermined, by this problem, though, what is important in the present context is its connection to the attempt to define the sophist as the maker of false images, or what the Visitor calls phantasms, as opposed to true images, or icons. However this distinction might be made in the literal case of paintings and sculptures, where we might indeed conceivably appeal to features such as proportion and symmetry to describe one image as "more closely resembling" its original than another image of the same thing, the application of the distinction to *words* and *statements* (clearly, the actual medium of the sophist's art) is more complicated. For where the artist's "images" are made in words, we cannot appeal *at all* to mimetic relations, such as relations of resemblance in various respects, to make the difference between accurate and inaccurate copies. There simply *are* no such relations of resemblance or mimesis between a *legein* – a word or sentence – and its "original," the object or state of affairs described.

Plato's Eleatic visitor is clearly aware of the problem, as is evident when Theaetetus, after the initial discussion of Parmenides, again suggests that we might understand the sophist as a practitioner of making "copies" (*eidola*) in the sense of "copies in water and mirrors, and also copies that are drawn and stamped and everything else like that…" (239d). The answer, the Visitor responds, will certainly fail to satisfy the sophist. For:

> "He'll laugh at what you say when you answer him that way, with talk about things in mirrors or sculptures, and when you speak to him as if he could see. He'll pretend he doesn't know about mirrors or water or even sight, and he'll put his question to you only in terms of words." (239e-240a).

The necessity to speak in words about the sophist's peculiar art of *logos* here shows that defining his "copy-making" art in terms of mimetic copies such as sculptures and images in mirrors will not do.In particular, the Visitor explains, the Sophist will ask "what runs through all those things which you call many, but which you thought you should call by one name, copy, to cover them all, as if they were all one thing." (240a). Here, as elsewhere in the Platonic corpus, the demand to display the "one thing" that runs through many instances – what Plato will elsewhere often specify as the idea – proceeds by way of what is manifestly and essentially a *linguistic* inquiry; the question is, quite simply, what all the instances have in common that can be called by a single *name*, in this case, the name "copy." If we are indeed to take the sophist to be a maker of copies in some sense, it is clear that to respond to this question with an explanation in terms of *mimetic* images only will not do – for these are not the sort of "copies" that the sophist makes, and it is not at all clear how to draw the analogy, if such there be, from images in painting, sculpture and the like to "images" in words. Moreover, the possibility of presenting an image *of* non-being, of what quite simply is not, remains obscure in either case. For it is clear that there can be no mimetic relationship between an image, which is something that is, and what simply is not.

Remarkably, the question of *logos* in the *Phaedrus*, and in particular the status of writing according to the concluding myth of Theuth, is precisely the central focus of Jacques Derrida's classic deconstructive reading of Plato in the long article "Plato's Pharmacy," first published in 1968.[15] Derrida discerns in Plato's discussion of the dangers of writing a distinctive yet ambiguous logic of the *supplement* that will have, according to Derrida, in a certain sense determined Western metaphysics in its entirety. According to this ambiguous logic, writing is the supplement of speech in that it both makes up for what is specifically lacking in speech and, at the same time, is wholly external to it and ultimately unnecessary for it. In the *Phaedrus*, writing operates as a *pharmakon* to the true *logos* of speech and the accurate memory of its objects; it is both cure and poison, both technical extension and enhancement of the powers of memory and the fatal threat of their downfall through disuse and atrophy. Reading the passage in the *Phaedrus* (276a-b) wherein Socrates purports to distinguish between written language and another kind of discourse, a kind of "brother" to written speech but one of much greater legitimacy, the "living and animate" discourse of the "one who knows" which is, in a certain sense, "written in [his] soul", Derrida identifies the profound role of this guiding and organizing distinction in the history of Western philosophy:

> While presenting writing as a false brother – traitor, infidel, and simulacrum – Socrates is for the first time led to envision the brother of this brother, the legitimate one, as another sort of writing: not merely as a knowing, living, animate discourse, but as an inscription of truth in the soul …
>
> According to a pattern that will dominate all of Western philosophy, good writing (natural, living, knowledgeable, intelligible, internal, speaking) is opposed to bad writing (a moribund, ignorant, external mute artifice for the senses). And the good one can be designated only through the metaphor of the bad one … Bad writing is for good a model of linguistic designation and a simulacrum of essence. And if the network of opposing predicates that link one type of writing to the other contains in its meshes all the conceptual oppositions of "Platonism" – here considered the dominant structure of the history of metaphysics – then it can be said that philosophy is played out in the play between two kinds of writing. Whereas all it wanted to do was to distinguish between writing and speech. It is later confirmed that the conclusion of the *Phaedrus* is less a condemnation of writing in the name of present speech than a preference for one sort of writing over another, for the fertile trace over the sterile trace, for a seed that engenders because it is planted inside over a seed scattered wastefully outside: at the risk of *dissemination*."[16]

The treatment of the written *logos* as *pharmakon* in the Phaedrus confirms the ambiguous, supplementary status of writing for Plato ultimately by making it the supplement of a "more original" and "living" writing, the private "writing in the soul" in which knowledge ultimately consists. The contrast that determines the sense of the written *logos* in Plato – and even determines, Derrida will

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[15] (Derrida [1968] 1981).
[16] (Derrida [1968] 1981), (pp. 148-49).

suggest, "Platonism" as a whole – is thus the contrast between an interior, secured, and living presence of the soul to itself, and the "exterior," insecure, public and "dead" representation of the sign. If this opposition itself presupposes and carries out a distinctive logic of the relationship of original presentation to copy and representation, this logic is inseparable, as Derrida recognizes, from the meaning of the "metaphysics of presence" itself in Plato (p. 114). Once again, it is a problem, for Plato, of distinguishing between two kinds of copy, two kinds of repetition of original presence: in this case the "good" repetition of the living memory vs. the "bad" repetition of the *simulacrum* – or fanstasm -- that writing represents. Thus, in endorsing the myth of Theuth, Socrates adopts the central opposition thereby implied, the opposition: "…between knowledge as memory and nonknowledge as rememoration, between two forms and two moments of repetition: a repetition of truth (*aletheia*) which presents and exposes the *eidos*; and a repetition of death and oblivion (*lethe*) which veils and skews because it does not present the *eidos* but re-presents a presentation, repeats a repetition. (p.135) The logic of this system remains irreducibly tied to *mimesis*, even as it insists upon the absolute inferiority of the copy to the original.[17] This produces the ambiguous logic of the supplement, which opposes the "bad copy" of the simulacrum, the "disseminated" and externally replicated image, whose most extreme instance is the written sign, to the "good copy" of the ikon, the spoken *logos*, and the living presence of self to self in the originary disclosure of the original.

In "affirming the rights of the simulacrum" and in pointing to an alternative conception of repetition no longer governed by *mimesis*, both Deleuze and Derrida draw out the implications of a thought of *difference* as an originary or even pre-originary basis for all possible manifestation and phenomenalization. This thought is developed by Derrida, in the essay of the same name, as the thought of *différance*, which must be understood, according to Derrida, as both synchronic difference (or "spacing") and temporal deferral.[18] *Différance* is moreover, according to Derrida, to be understood in terms of the total structural system of "language…or any system of referral in general;" in this respect it is the "weave of differences" in which any such system is "constituted" without itself "being" or existing as an entity, phenomenon, or cause.[19] [also closely connected to iterability as repetition]

The thought of *différance*, Derrida argues, provides a basis on which it is possible to interrogate the "value of presence" which, as Heidegger has shown, is coextensive with the metaphysical or

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[17] For Plato, "…just as painting and writing have faithfulness to the model as their model, the resemblance between painting and writing is precisely resemblance itself: both operations must aim above all at resembling. The are both apprehended as mimetic techniques, art being first determined as mimesis." (p. 137). Nevertheless, according to Derrida, "Despite this resemblance of resemblance, writing's case is a good deal more serious. Like any imitative art, painting and poetry are of course far away from truth (Republic X, 603b). But these two both have mitigating circumstances. Poetry imitates, but it imitates voice by means of voice. Painting, like sculpture, is silent, but so in a sense is its model… The silence of the pictorial or sculptural space is, as it were, normal. But this is no longer the case in the scriptural order, since writing gives itself as the image of speech. Writing thus more seriously denatures what it claims to imitate…It displaces its model, provides no image of it, violently wrests out of its element the animate interiority of speech. In so doing, writing estranges itself immensely from the truth of the thing itself, from the truth of speech, from the truth that is open to speech." (p. 137)
[18] Pp. 10-11.
[19] P. 12.

ontotheological determination of Being, and thereby allows for the critical interrogation or even comprehension of the total "epoch" of metaphysics in which Being is determined ontotheologically as presence.[20] Thus understood, *différance* is closely related, according to Derrida, to the ontological difference between Being and beings; in one "aspect of itself," indeed, it is "certainly but the historical or epochal *unfolding* of Being or of the ontological difference."[21] As such, it is at the structural *basis* of the possibility of the differentiation between presencing and presence that Heidegger understands both as the ontological difference and as the basis of all possible presentation, any possible appearance of phenomena.[22] In this way, *différance* points to the origin of all possible presentation, all possible determination of beings from Being, and all possible disclosure in presence. Nevertheless, according to Derrida, it is simultaneously possible to think, on the basis of *différance*, that the "determination of the ontico-ontological difference" as well as the "*meaning* or *truth* of Being" remain "intrametaphysical effects" of *différance*.

Concluding the essay with a close reading of Heidegger's discussion of the "Anaximander Fragment" from 19--, Derrida ventures to suggest that *différance*, thought in this way as underlying the ontological difference without being reducible to it, also opens the possibility of a "silent tracing" in which it is possible to think that "the history of Being, whose thought engages the Greco-Western *logos* such as it is produced via the ontological difference, is but an epoch of the *diapherein*."[23] Thought as the "play" of a "trace" which is both inscription and erasure, *différance*, "in a certain and very strange way, (is) 'older' than the ontological difference or than the truth of Being"[24] This play of the trace is not its presence, according to Derrida, but rather "the simulacrum of a presence that dislocates itself, displaces itself, refers itself…"; through the constitutive erasure which constitutes it as a trace (and in particular through what Heidegger understands as the "early trace" of the ontological difference in the Pre-Socratics, since vanished in the development of a metaphysical tradition which, more and more, forgets the difference), the text of metaphysics will have nevertheless retained a "mark" of this original difference, even as it has lost it or set it aside. This structure of inscription and erasure points to a "paradox" which "produces the following effect: the present becomes the sign of the sign, the trace of the trace."[25] This effect of redoubling, whereby the present itself becomes a "function in a structure of generalized reference," now allows that the text of metaphysics be "*comprehended*" and accordingly becomes legible and "to be read." In this reading, the metaphysics of presence is no longer "surrounded by" its limit, as if inscribed uniformly within some larger space within which it would have clear and uniform bounds. Rather, it is "traversed by its limit, marked in its interior by the multiple furrow of its margin."[26]

Along partially similar lines, in the first chapter of *Difference and Repetition*, Deleuze considers a thinking of "difference in itself" whereby it would not be subordinated to a prior idea or principle of

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[20] P. 16.
[21] P. 22.
[22] P. 23.
[23] P. 22.
[24] P. 22.
[25] P. 24.
[26] P. 24.

identity but would rather manifest a "univocity of Being" on which "Being is said in a single and same sense of everything of which it is said, but that of which it is said differs: it is said of difference itself." (p. 36). This "univocal" sense of Being is closely linked to a structure of repetition in which repetition is primarily the "repetition of the singular"; thought this way, repetition is a "difference without a concept" that is nevertheless "internal to the Idea" in that it "unfolds a pure movement, creative of a dynamic space and time which corresponds to the Idea." (p. 24). By contrast with the repetition of the same or identical, this repetition of difference or of the singular is, according to Deleuze, "grounded in inequality, incommensurability and dissymmetry"; it thus precedes and also founds, according to Deleuze, the principle of identity as well as the subsequent possibility of the "partition of concepts" and the "measuring of subjects." (p. 33). Understood in terms of its "own concept" and as correlative to an original repetition of repetition in which the repeated can no longer be distinguished from an original, the repetition of difference in this sense, according to Deleuze, also underlies the logical structures of negation and contradiction.[27] In this respect, according to Deleuze, negation is difference; but it is "difference seen from its underside," rather than "the right way up," whereby it is also, more basically, affirmation. In this sense, "negation results from affirmation; this means that negation arises in the wake of affirmation or beside it, *but only as the shadow of the more profound genetic element* – of that power or 'will' which engenders the affirmation and the difference in the affirmation." (p. 55)[28] Contradiction itself, according to Deleuze, has its ultimate ground in this basically affirmative repetition of difference, in which simulacra repeat themselves endlessly without origin and point to an ultimate undecidability at the root of logical differentiation.[29]

Both Deleuze and Derrida thus propose a thought of originary difference, closely linked to repetition, at the basis of the structure of mimetic representation, and of the specific logical conceptions of negation, falsehood, and illusion that this structure permits. From this perspective, it is possible to see how the picture of difference and of non-being presented by the Eleatic Visitor in the *Sophist* as a positive solution to the problem of the actual existence of the Sophist involves such an essentially mimetic conception of truth, falsehood, difference and negation, which submits the nature of negation and illusion to a (modified) version of what I have called the "criteriological" picture above. As we have seen, the Visitor's picture of non-being and falsehood makes a central appeal to difference, insofar as it is the mixing of the great type or form of difference with being that ultimately accounts for the possible appearance of determinate non-being. Though the appeal to difference is central, though, it is not originary (or pre-originary) in the sense in which it is for Derrida and Deleuze; in particular, difference is here understood as a substantial type or form, and it is not through its original action of differentiation but rather through its "mixing" with being that it articulates the distinction of it from non-being. Here, in other words, the criteriological line of difference that surrounds beings and separates them from non-beings on Parmenides' picture is not replaced but simply distributed throughout the range of beings, types, or characteristics, as difference itself is said to be distributed across the things that are. Plato's picture (or the one presented by the Visitor) is thus not so much a replacement of Parmenides' as a

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[27] P. 55
[28] Deleuze's italics.
[29] Logical and nomic 'distributions' – nomic as distribution in a space without limits

modification of it still conditioned by the general conception of beings as a whole as a consistently bounded totality, the conception that is correlative with the constitutive "metaphysical" reference to beings as a whole.

In particular, recall that, on the solution offered by the Visitor to the "falsehood paradox" of Parmenides, to say of something that it is *not* is always to say that it is not *something*, i.e. that it is not some way or other or that it is *different* from what is that way. Non-being, in general, is thus able to appear only insofar as difference mixes with being to produce *what is not* (i.e. what is different from what is) in some way. As the Visitor clearly notes, this means on the one hand that there is no place, on the conception, for a phenomenal appearance or positive conception of "non-being" *in itself*; and also that the mixing or distribution of difference "over against" that which is produces whatever actuality non-being can have.[30] Here, in other words, difference is not originary but rather partitive or diaeretic with respect to a logical order of types and forms in relation to particulars. The distributed mixing of difference articulates the line, within the set of articulated logoi, between true and false logoi.[31] The topological intuition underlying the picture of the role of difference in the phenomenalization of non-being (some way) is that of a spatial or topological exteriority. On this picture, something (e.g. Theaetetus) is not-something (e.g. flying) insofar as he lies outside the domain of correct application of the term or universal "flying", or insofar as all his actual characteristics are *different from* that of flying. To say that something has a property is thus to say that it fits within its range of application; to say that it does not is to say that it is different from what has that property.

The picture suggested by the Eleatic Visitor already recognizably anticipates an Aristotelian picture of predication on which properties or predicates in general can be organized into categorical and hierarchical relations of inclusion or exclusion, as species and genera; here, negation is simply the determinate exclusion of something from its falling under or exemplifying some property or concept. On this conception, beings as a whole are thinkable in terms of a uniform structure of categories or "things said," structured according to possibilities of being "said of" and "present in". At the same time being itself is treated as the highest and most general structure of things. Though being is nevertheless not said to be a genus, since nothing can be set over against it, the relation to being is treated in terms of the enigmatic "pros hen" relationship . The possibility of the *logos* to be true or false is then to be understood simply in terms of its "saying of" something what is the case, or is not, where this is itself understood as a matter of the properties of substances.

As Deleuze suggests, it is thus possible to see Plato's methodology of division in the *Sophist* as delicately balanced between, on the one hand, a thought of original differentiation whose goal is ultimately the differentiation of the authentic from the false, and on the other, the Aristotelian topological picture which mobilizes difference only as the differentiation of species and genera within already determinate mediating concepts. Insofar as the Eleatic visitor actually produces a logical "solution" to the problem of

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[30] 238c; 258d-e; 259a.
[31] This is not to say Plato himself had a general conception of facts; but he did have the conception of the articulate logos, as we've seen, above.

the identity of the Sophist, however, he imposes the latter picture, one that finally subordinates difference to identity and differentiates terms only within the assumed commonality and structural unity of the great types. [32] In particular, although the discussion in the Sophist does not yet fully develop this ultimately topo-logical and distributive picture of truth, falsehood, and negation, which will find full expression only in Aristotle, its underlying conception of a logical *koinon* linking the structure of sentences and language with that of the superior grammar or structure of types already significantly the picture of identity that will, subordinating difference, establish the regime of *mimesis* in which negation is thought as exclusion and truth and falsehood can be opposed as original is opposed to secondary copy. In particular, in explaining linguistic non-being and falsehood in terms of the distribution of difference across (already constituted) beings, the picture presupposes, as we have seen in chapter 1, an overarching *structural* correspondence between the "grammar" of types and the possibilities of determinate expression in language. The problem of this correspondence is the problem of how the "superior" structure of types relates, on the one hand, to the properties and relations of actual particulars, and on the other to the possibilities of linguistic predication. The Visitor's solution to this problem does not succeed in solving the problem of the actual structure of negative and positive predication, however, since it continues to rely on the obscure correspondence between the superior grammar of types and the real possibilities of *logoi* and objects in producing the systematic logical structure of possible (meaningful) predication. [33] In particular, it remains obscure on this conception

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[32] Cf. Deleuze (in the same paragraph of *Difference and Repetition* wherein he defines the task of "modern philosophy" as that of overturning Platonism): (also pp. 32-33 on Aristotle):

"Aristotle indeed saw what is irreplaceable in Platonism, even though he made it precisely the basis of a criticism of Plato: the dialectic of difference has its own method – division – but this operates without mediation, without middle term or reason; it acts in the immediate and is inspired by the Ideas rather than by the requirements of a concept in general. It is true that division is a capricious, incoherent procedure which jumps from one singularity to another, by contrast with the supposed identity of a concept. Is this not its strength from the point of view of the Idea? Far from being one dialectical procedure among others which must be completed or relayed by others, is not division the one which replaces all the other procedures from the moment it appears, and gathers up all the dialectical power in favour of a genuine philosophy of difference? Is it not simultaneously the measure of both Platonism and the possibility of overturning Platonism?

Our mistake lies in trying to understand Platonic division on the basis of Aristotelian requirements. According to Aristotle, it is a question of dividing a genus into opposing species: but then this procedure not only lacks 'reason' by itself, it lacks a reason in terms of which we could decide whether something falls in one species rather than another. For example, we divide art into arts of production and arts of acquisition: but then why is fishing among the arts of acquisition? What is missing here is mediation – that is, the identity of a concept capable of serving as middle term. However, this objection clearly fails if Platonic division in no way proposes to determine the species of a genus – or if, rather, it proposes to do so, but superficially and even ironically, the better to hide under this mask its true secret. Division is not the inverse of a 'generalisation'; it is not a determination of species. It is in no way a method of determining species, but one of selection. It is not a question of dividing a determinate genus into definite species, but of dividing a confused species into pure lines of descent, or of selecting a pure line from material which is not." (pp. 59-60) – also, Platonic "point of departure" as a "mixture", an "indefinite representing multiplicity which "must be eliminated in order to bring to light the Idea"; question "not of identifying but of authenticating; myth, logos and circulation; dialectic discovers its "true method" in division, which lets the line between dialectic and myth lapse (p. 61). Problems and questions.

[33] Cf. Davidson: "Plato speaks of the forms as blending, connecting, or mixing with one another. In the case of Rest and Motion, they fail to blend. The difficulty is to reconcile these declarations with the claim that every sentence must have a verb. Clearly the words 'Motion' and 'Rest' name or refer to forms, so if the sentence 'Motion is not Rest' has a verb, it must be 'is' or 'is not' (or 'blends with' or 'does not blend with'). Plato takes Sameness and

how the kind of mixing of difference that is said to produce the differentiation of forms from one another is related to the differentiation of *particulars* that accounts for the possibility of negatively predicating of them.

If the logic of the differentiation between the original and the simulacrum, which the Visitor applies in his analysis of the possibility of falsehood, is itself based on this subordination of a more originary difference, then the Visitor's account of falsehood is open to reconsideration, along with the whole mimetic picture on which sensible particulars are to be conceived as images or copies of supersensible forms, on the basis of an affirmation of this more originary difference. On Deleuze and Derrida's conception, as we have seen, this more originary difference is not exterior to the possibility of repetition which is structurally inherent in language, but is rather (in one sense) co-original with it, so that the structural possibility of repetition and iteration that is characteristic of every linguistically articulable content is not conceived as secondary with respect to the original disclosure of contents, but rather as structurally present with any disclosure as such. This recognition is requisite, for Deleuze and Derrida, in order structurally to describe the conditions for a distinction between truth and falsehood, and hence between true presentation and illusion, that owes nothing to *mimesis* or to the mimetic distinction between the good and the bad copy. Here, rather, the primary difference that underlies the distinction between truth and illusion is not simply "original" but actually *pre*-original or *arche*-original, in that it structurally precedes (as Deleuze and Derrida both emphasize) any possible distinction between original and copy, and thus also is prior to the "originarity" of Being itself.[34] On this conception, this originarity is itself only the effect of a structural repetition without origin, the "sign of a sign" or the "trace of a trace".

The undecidability that this suggests in the distinction between "original" presentation and "false" exterior repetition (or between the icon and the simulacrum) is itself at the positive basis of the undecidability that Derrida and Deleuze see in the distinction between the philosopher and the sophist, a distinction whose maintenance already has, for Plato, the significance of the prohibition of contradiction and paradox. On this conception, Plato's picture is, like Parmenides', simply a version of the topological picture which puts non-being outside being as a kind of external surrounding; though the Visitor's conception of difference mobilizes the distinction between beings and non-beings and distributes it among beings as the logical difference between what falls within the range of a particular predicate and what falls outside it, this does not modify in any fundamental way the basic topological picture, which is grounded in the identity of the concept. Both are to be opposed by a conception of originary difference on which, as Deleuze says, "There are not two 'paths', as Parmenides suggests, but a single 'voice' of Being" which is said *of* difference. This is not, in other words, a secondary distinction *between* already identified beings, of those which are and those which are not, or a division among already constituted beings of those which fall *under* a concept and those that fall outside it. Rather it is a singular voice of Being said univocally of all, but ultimately said *of* difference rather than identity, and

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Difference to be forms, but then fails to recognize that if these forms are what is meant by the 'is' and 'is not' in sentences that speak of the forms blending or failing to blend, then a sentence like 'Motion is not Rest' names three forms ('Motion Difference Rest'?), and there is no verb." (p. 82)

[34] Derrida: differance and the trace are "older than Being".

so an affirmation of difference at the ultimate prior ground of all possible *identification* of beings as such.

With the affirmation of this arche-original difference at the root of any possible phenomenalization, Plato's own argument for a positive phenomenalization of non-being *based in* the mixing of the substantial type of difference with being is itself radicalized and the ground for the distinction between being and non-being put on a more fundamental basis. The issue that drives toward this ground is just, as we have seen, that of the phenomenalization of non-being itself, and hence the very root of the possibility of error, illusion, and falsehood. What is at issue is whether this phenomenalization of non-being is to be understood as a figuring, representation or indication of what is not within the determined range of what is, or whether it can only be seen as the outcome of a more fundamental differentiation, at the root of any possible constitution of identity, that affects and underlies beings and non-beings equally.

Along with this, it becomes possible to consider whether Heidegger's position, in 1924-25, insofar as he endorses Plato's supplementary logic of the distinction between the originary logos and the "cut off," "free-floating", "covered-up" one, is itself open to criticism from the perspective of the affirmation of this pre-original difference at the more basic root of the *logos* and, more broadly, of all phenomenalization as such. It is not, as we have seen, that Heidegger simply replicates Plato's position *vis a vis* Parmenides; rather, while attributing to Plato a deepening of the ontological problematic and crediting him with a fundamental achievement in moving beyond Parmenides' position to recognize a genuine possible appearance of non-being in the person of the sophist, he also situates both philosophers clearly within the regime of the "Greek" interpretation of being as presence, which means that both understand the distinction between being and non-being ultimately in terms of the presence of beings in general and as a whole. Furthermore, there is actually, as we have seen in Derrida's analysis of *différance,* a motivating basis for the affirmation of original difference that Plato and Aristotle suppress and dissimulate in the logical doctrine of negation and the topological picture of conceptual determinacy can in fact be found in considering the implications of the *ontological difference* between being and beings, which is at least implicit in Heidegger's analysis of Plato and will be named explicitly by Heidegger a few years later. As we shall see in the next section, in fact, this development of the ontological difference can even be seen, in the context of Heidegger's own radicalization of the implications of the difference in the period of the "turn" of the 1930s, to produce the transformation in Heidegger's own thought from the *Being and Time* conception of fundamental ontology to the later, "history of being" project.

Nevertheless, it remains that, in 1924-25 at least, Heidegger still sees the specific structure of the *logos*, insofar as it is the result of a more fundamental structure of disclosure that can either give "the matters themselves" or fail to do so, insofar as it falls into exterior repetition and becomes "cut off" from this original disclosure. This is connected, as we have also seen, with Heidegger's interpretation of what he presents as Plato's actual solution to Parmenides' problem of falsehood, and thus to the problem of distinguishing the philosopher from the sophist, in terms of what Heidegger sees in 1924-25 as the positively demonstrated possibility of a phenomenalization or presentation of non-being itself. In

particular, as we have seen, Heidegger here takes Plato to have established, through the Visitor's argument, the actual *presentation* (and hence existence) of the *me on*, "what is not" or "non-being" itself, and that this demonstration is closely connected, for Heidegger, with the suggestion, which he finds in Plato's text, that "the me on", as participating in the general character of *logos* as *legein ti*, itself articulates in a fundamental way the basis of the possibility of disclosure.[35]

At 257b, the Visitor summarizes the discussion so far by suggesting that the "me on" means, not something contrary to being (or what is) but rather "only something different from it." As Heidegger suggests, this points to the way in which the "me on" is structurally an aspect of the *pros ti* relation of any *logos* to its subject matter. Thus: "Putting it sharply, the Being of the "not" (the "non-"), the me, is nothing else than the *dunamis* of the *pros ti*, the presence of the Being-in-relation-to." (p. 558). He goes on to emphasize, on behalf of "phenomenological research" itself, the implication that negation itself has a disclosive sense with respect to the structure of the *pros ti*:

> Phenomenological research itself accords negation an eminent position: negation as something carried out after a prior acquisition and disclosure of some substantive content. This is what is peculiarly systematic in phenomenology, that, provided it is practiced authentically, phenomenology always involves an antecedent *seeing* of the matters themselves. What is systematic is not some sort of contrived nexus of concepts, taking its orientation from some construct or system. On the contrary, the systematic is grounded in the previous disclosure of the matters themselves, on the basis of which negation then attains the positive accomplishment of making possible the conceptuality of what is seen.
>
> Furthermore, it is only on the basis of this productive negation, which Plato has at least surmised here, even if he has not pursued it in its proper substantive consequences, that we can clarify a difficult problem of logic, a problem residing in the copula of the proposition or judgment: the meaning of the "is" or "is not" in the propositions "A is B," "A is not B." (pp. 560-61)

Thus, according to Heidegger, "negation as something carried out after a prior acquisition and disclosure of some substantive content" must be accorded, on the basis of its participation in the general *pros ti* structure of the *logos*, phenomenological priority over "bare negation" or mere denial. In fact, according to Heidegger, even the "empty exclusion" which appears to characterize the sense of negation for Parmenides must itself be understood as disclosive, and in particular as having its basis in its relationship to "the nothing":

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[35] "Over and against a blind addressing of something in merely identifying it by name, there is a disclosive seeing of it in its co-presence with others. And in opposition to the mere blind exclusion that corresponds to this identification by name, there is, if our interpretation of apophasis is correct, a denial which discloses, which lets something be seen precisely in the matters denied. Hence Plato understands the "not" and negation as disclosive. The denying in legein, the saying "no," is a letting be seen and is not, as in the case of the mere exclusion corresponding to the pure calling by name, a letting disappear, a bringing of what is said to nothing." (p. 560)

Phenomenologically, this can be clarified very briefly. Every "not," in every saying of "not," whether explicitly expressed or implicit, has, as a speaking about something, the character of exhibition. Even the empty "not," the mere exclusion of something over and against something arbitrary, shows, but it dimly shows that on which the negation is founded, thus what, in saying "not", is delimited against the nothing. (p. 570)

Thus it is important phenomenologically not to concur with Parmenides' sense of negation as "prior to the nothing" but rather to reverse it, and rather see even the empty and general "not" that figures in such phrases as "non-being" and "what is not in any way" as phenomenologically founded in a prior disclosure, indeed of "the nothing" itself. This is the sense in which Heidegger takes Plato to have "acquired, on the basis of the new insight into the *on* of *me on*, a new basis for the interpretation of *logos*" and thus accomplished a fundamental "advance in the determination and clarification of beings" corresponding to this new and "radical" conception of the *logos*. Heidegger takes this discovery to mean that "the opposite of *on*, *me on* itself, is to be addressed as an *on*," and to show that we have actually made "*me on* itself visible as an *eidos*" and even "shown how *me on* itself looks." (cf. *Sophist* 258d).

Heidegger's" interpretation of the Visitor's argument thus takes it to establish, over against Parmenides' own undifferentiated sense of bare and exclusionary negation, a kind of "productive negation" which depends on and allows the disclosure of the "me on" itself, the actuality or "presence" of "non-being." The idea of a form of disclosure of "the nothing" that is in fact prior to, and at the foundation of, the logical function of negation figures prominently in Heidegger's 1929 Freiburg inaugural address, "What is Metaphysics?"[36] The centerpiece of the address, in particular, is Heidegger's claim for the possibility of a disclosure of "the nothing" in the fundamental mood, or attunement, of *Angst*, and its relation as so disclosed with the possibility of a first conception of being, here still understood as the being of beings, but also as giving a kind of explicit access to being as an inquiry "beyond or over beings." The lecture begins by posing a question about the "nothing" that lies beyond the scope of scientific inquiry into beings, or beyond our pursuit of beings in science and the determinate orientation to research and to the existence of the world as a whole that characterizes this pursuit. This nothing, Heidegger argues, can in fact be made manifest in the attunement of Angst, in which "all things and we ourselves sink into indifference." In this attunement, "beings as a whole slip away" (p. 89 PM) and it is thereby possible for the nothing to become manifest as a "slipping away of the whole" (p. 90). Such a manifestation itself allows, according to Heidegger, "the original openness of beings" to [arise]; here it is possible to grasp in particular that "they are beings – and not nothing" (p. 90). This "nothing" is, Heidegger emphasizes, no superfluous addition, but points to an original ground for the manifestation of beings as such.

Heidegger goes on to argue that this possible manifestness of the nothing precedes and founds the "bare negation" that figures in logic as an act of the intellect, rather than the other way around:

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[36] (Heidegger [1929] 1993)

What testifies to the constant and widespread though distorted revelation of the nothing in our existence more compellingly than negation? But negation does not conjure the "not" out of itself as a means for making distinctions and oppositions in whatever is given, inserting itself, as it were, in between what is given. How could negation produce the not from itself when it can make denials only when something deniable is already granted to it? But how could the deniable and what is to be denied be viewed as something susceptible to the not unless all thinking as such has caught sight of the not already? But the not can become manifest only when its origin, the nihilation of the nothing in general, and therewith the nothing itself, is disengaged from concealment. The not does not originate through negation; rather, negation is grounded in the not that springs from the nihilation of the nothing. (pp. 104-105).

Thus, while "the nothing" is definable as "the complete negation of the totality of beings" (p. 98), it is the experience of this "nothing" in the positive phenomenon of its "nihilating" that first makes possible an experience, or disclosure, of "beings as a whole."

This experience is not, however, a matter of conceiving of, or conceptualizing the totality of beings, which Heidegger suggests "impossible in principle." Rather:

As surely as we can never comprehend absolutely the whole of beings in themselves we certainly do find ourselves stationed in the midst of beings that are revealed somehow as a whole. . (p. 99)

Heidegger draws on these conclusions – that negation as a logical operation is preceded by, and grounded in, a disclosive experience of "the nothing," and that this disclosive experience is itself grounded in mood and attunement rather than intellect – to dispute what he here calls the "traditional" logical treatment of negation and indeed the "rule of 'logic'" itself. It is indeed, Heidegger suggests, necessary to challenge this traditional "rule" in order to understand the real phenomenological and ontological basis for the possibility of negation, which is itself structurally linked to the possibility of the unconcealment of beings as such. For: "[A]ccording to the reigning and never-challenged doctrine of "logic," negation is a specific act of the intellect." (p. 97) The more original disclosure of the nothing in the experience of Angst itself shows, Heidegger suggests, that we must reject the priority expressed in this traditional "logical" doctrine of negation and challenge its underlying assumptions. Even the law of non-contradiction itself, "the commonly cited ground rule of all thinking," must be challenged, in that it threatens to "lay low" the question of the meaning and disclosure of the nothing. But this disclosure of the nothing "makes possible the openedness of beings as such." (p. 104).

In "What is Metaphysics," in the context of what is still a positive reference to the possibility of metaphysics as a systematic "inquiry beyond or over beings that aims to recover them as such and as a whole for our grasp," (p. 93 Pathmarks), the positive possibility of a phenomenalization of the nothing is thus seen as the basis for an initial understanding of the being of beings as such. This possibility is, moreover, structurally connected with the positive ground for the disclosure of beings as such and as a whole in that it characterizes the very structure of Dasein according to which it constitutively transcends

itself, being "held out into the nothing" to achieve a relationship to beings as a whole. As such, the possible phenomenalization of the Nothing is also seen as the ultimate ground for the function of negation and other logical structures, including (we may surmise) what Heidegger discusses in the Sophist lectures as the *pros ti* relationship to beings as a whole and as such. In this respect, the position that Heidegger adopts in "What is Metaphysics?" is a development and extension of the conception of the basis of negation that he finds in Plato in the *Sophist* lectures; in particular, where the "productive negation" that he finds in Plato's conception as opposed to Parmenides' depends on the "systematic" elaboration of a structure of relationality founded on a "prior seeing of the matters themselves" which is itself characteristic, as Heidegger says in the lectures, of the very structure of the *pros ti* relation of intentionality, here this *pros ti* relationship is itself generalized into the "relationship to beings as a whole and as such" which the specific manifestness of the nothing makes possible. This prior manifestness of the Nothing, set over against the totality of beings, then itself becomes the ultimate basis for any possible characterization of beings as a whole, as well as of the determinate conceptual grasp of their properties or relations that negation, as well as other logical structures, makes possible, and is seen to be structurally rooted in the transcendence of Dasein. The structure of any articulate logos as well as the specific force of logical rules, including the law of non-contradiction, are thus seen as outcomes of a more fundamental topological or meta-topological relation between beings as a whole and the Nothing beyond, here thought also as an enigmatic first indication of being, over against "beings as a whole and as such" themselves.

In this way, Heidegger's conception of the actual presentation of the Nothing in "What is Metaphysics?" sharpens and deepens the conception he finds in Plato by exposing in detail the structural connection, only, at best, implicit in Plato's own discussion, between the phenomenon of the nothing as such and the underlying structure of the relationship of the *pros ti* or of intentionality. This relationship is itself, as we have seen, grounded for Heidegger in the possibility of implicit or explicit reference to the totality of beings "as such and as a whole." Plato's partitive conception of the distinction between being and non-being with respect to individual properties or traits (at the basis of the logical picture of Aristotle) is thus replaced with Heidegger's picture of the nothing as set off against the totality of beings and as *thereby* providing an original foundation and broader horizon for the "logical" function of negation and the force and applicability of the law of noncontradiction. This deepening of Plato's picture results from Heidegger's insistence on the implications of the ontological difference between beings and being, in terms of which, as set off against the totality of Beings, the Nothing provides a kind of first sign or indication of their being.

Nevertheless, despite the way in which it deepens Plato's own picture and officially replaces what is there a merely ontic difference between ranges of beings with the ontological difference between the totality of beings and their being, Heidegger's conception in 1929 retains a basically topological picture of this totality and this relation. The picture is marked in its picture of beings as a whole, in relation to their positive consideration within scientific research and the positive "stance" to them thereby taken, as bounded by as a whole by a clear and univocal limit which can become apparent to conceptual reflection, and by the metaphors of "shrinking back before," "turnaround," and ultimately of the "transcendence" of Dasein in relation to the totality of beings which Heidegger here employs. As we

shall see in more detail, insofar as this picture still presupposes the possibility of a univocal *delimitation* (whether implicit or explicit) of beings as a whole that is not itself contradictory, from an assumed position of a Dasein capable of anticipating the delimitation in Angst and of explicitly recovering it metaphysically, this is still to think the "original" difference as secondary, as the drawing of a line of enclosure between two regions that must *first* be thought as positive existences in themselves. From a perspective which, by contrast, affirms pre-original difference and finds in it the specific conditions for the differentiation between being and non-being which itself structurally yields the possibility of any totalizing reference to beings as a whole, the complexities of this line of enclosure will be further shown in the paradoxes constitutively involved in this totalizing reference. In particular, the intuition of a clear and univocal line will yield to that of a line which, if total in its enclosure of beings, must be traversed and structured by paradox; and hence to a thinking of the ontological difference itself as itself divided, between (on the one hand) an incompleteness of every positively constituted field of beings with relation to their Being; and on the other, an inconsistency of univocal Being itself in its self-differentiation, an original difference that produces as a determinate effect every possibility of negation, falsity, error and truth.[37]

III

Heidegger's position in 1929 thus involves, on the one hand, treating negation as founded ontologically in the phenomenon of a "nothing" that is set off against the totality of beings, and on the other, treating its *logical* structure, including the scope of the application and force of the law of non-contradiction, as founded in this more basic phenomenological or ontological structure, wherein "logic itself dissolves in … a more original questioning." On this conception, as we have seen, the experience or phenomenon of "the nothing" is essentially prior to that of negation and indeed to its specifically *logical* structure. Heidegger's claim for the primacy of ontology over logic has often been resisted, both in general and on specific points, within the analytic tradition that has taken Fregean logic as a basic guideline for the clarification of issues in semantics, epistemology, and metaphysics. To gain clarity about the situation, it is helpful to consider a conception of negation and its force that has been foundational for this tradition, the one suggested by Frege in the 1918-19 article "Negation."

In an obvious sense, Frege's conception of negation is not the one that Heidegger attributes to the "reigning and never-challenged doctrine of 'logic.'" For on that conception as Heidegger describes it, "negation is a specific act of the intellect." In the 1918-19 article, however, as usual throughout his writings, Frege distinguishes sharply between acts, for instance of judging or asserting, and the *contents* that are (for instance) judged or asserted. The latter are not, in Frege's terminology, acts or activities of the intellect or any other actor; rather they are, in Frege's terminology, thoughts, and can essentially be grasped *as* one and the same thought by different thinkers at different times. On Frege's account, it must be possible to entertain or grasp thoughts prior to judging them true or false; indeed, the whole

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[37] I am indebted here (and specifically for the suggestion of a division of the ontological difference between incompleteness and inconsistency) to John Bova. Cf. also Bova (2010).

process of inquiry largely consists in the advance from the grasp of a thought to this judgment. In particular, a propositional *question* (such as "Is the sun bigger than the moon?") contains a "demand that we should either acknowledge the truth of a thought, or reject it as false." (p. 346). It must thus be possible to recognize the thought as such, prior to the determination, and it must be possible to grasp a thought even if it is false. Frege accordingly argues that it is incorrect to hold that the "being" of a thought consists in its truth; for false thoughts must also be available to be grasped in order for propositional inquiry to be possible. "The very nature of a question demands a separation between the acts of grasping a sense and of judging." (p. 348)

As Frege acknowledges, one might recognize the distinction and still think of negation as a kind of act, negatively correlative to judging. But the recognition of thoughts as contents which can in principle be judged either true *or* false itself shows that this conception of negation is wrong, or at least limited. For the negation of a thought is true if and only if the thought is false, and vice-versa; but it must be possible to have both a thought and its negation available to one before either is judged to be true *or* false. Similarly, what is added to a sentence by the word "not" or by other linguistic markers of negation cannot be understood as an activity (for example an activity of denial, negatively correlative to (positive) assertion or judgment), for then its inclusion in a sentence would have to express a special kind of force, correlative to assertion but negative. But it must be possible to express a negative sentence (for instance as the antecedent of a conditional) which includes the word "not" without, thereby, affirming or denying anything.[38] Thus "not" (and other verbal indicators of negation) cannot indicate a particular kind of force, either of assertion or denial. These considerations lead Frege to the view that the negation expressed in language by "not" and similar expressions is not a kind of judgment, assertion, denial, or indeed any kind of act. Rather, what is expressed by the "not" is a "possible component of a thought," and is not to be identified with anything exterior to this content.

As we have seen (chapter 1, above), for Frege the special and unique connection of sentences evaluable as true or false with thoughts ensures that thoughts exhibit a particular kind of unity, not to be identified with the compositional or synthetic unity of several constituents separately bearing individually representational contents. This unity provides the basis for his further argument, in "Negation," that negating a thought is not to be understood as an activity of separating or dissolving. The negation of a thought is still a thought, and still bears the specific kind of unity characteristic of thoughts; negation itself is accordingly not to be understood as a separation or division of what is supposed to be united or composed in a "positive" thought. This contrasts with the conception articulated by Plato's Eleatic Visitor in the *Sophist*, and further developed by Aristotle, on which, as we have seen, a positive sentence, as composing a name for a subject and a verb which is conceived as the name of a property or "action", is thought of as such a compositional unity, and a negative sentence is thought of as a differentiation or separation of what is named in the subject term from what is named in the predicate. In fact, both traditional claims – that a "positive" sentence is a compositional unity of

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[38] The consideration is parallel to the consideration that it must be possible to use a positive sentence without (positively) asserting it; the point is just that it follows from this that, just as "It is true that …" does not express assertoric force, "it is false that…" or "…not…" cannot express a different kind of force.

separately referential parts and that its negation results from the separation of what is thereby composed – are to be rejected, according to Frege, on the basis of the special unity of the thought as a possible bearer of truth or falsity. In fact, as Frege notes, it is by no means clear that there is a motivated distinction between "affirmative" and "negative" judgments or thoughts, since one and the same predicative term (for instance "immortal") may be seen indifferently as "positive" or "negative" without altering the content of any sentence in which it is used. Since there is no fundamental logical motivation for a view on which "positive" sentences are uniformly to be distinguished from "negative" ones, both are to be treated equally as expressing unified thoughts, equally capable (in general) of being true or false. As a result, according to Frege, both true and false thoughts must equally be treated as actually having "being" in the same sense.

With this, Frege rejects Plato's picture, as well as Aristotle's, which (as we have seen) both understand negation as a kind of diaeresis or separation of what is named in the subject from what is named in the predicate. The basis for the rejection is Frege's recognition of the specific non-compositional unity of the sentence and its constitutive link this enjoys with the possibility of being asserted, which must hold indifferently of all propositional contents (whether conceived as "negative" or "positive") and which cannot itself be marked explicitly in any linguistic predicate. How, then, is what is expressed by "not" "contained in the thought" for Frege? The analogy that Frege draws explicitly here, is, as usual, that between the structure of a thought and the sentence that expresses it: thus "The world of thoughts has a model in the world of sentences, expressions, words, signs" and "To the structure of the thought there corresponds the compounding of words into a sentence…" (p. 351). However, with respect to the question of what is specifically expressed by the word "not" in English, the analogy is, at best, strained; for on Frege's own admission, one and the same thought may be expressed by two sentences, one which involves "not" and one which does not (e.g. "Jesus was not mortal"; "Jesus was immortal"). In particular, the unity of both "positively" and "negatively" expressed thoughts which verifies that negation is not to be opposed to assertion, judgment, or composition as a correlative but negative act, also involves that it is not generally possible to recognize a distinctive range of thoughts as *individually* including any constituent corresponding to the "not" or to negation. All that can be said is that for each thought there is an "opposite," i.e. a thought which is related to it in such a way that if the first thought is true, the second is false, and vice-versa.

This conception of negation underlies the (later) designation of negation as a "truth-function," though the sense of "function" here must not be that of any kind of act, process, or occurrence. Rather, because of the separation of negation and the other "truth-functions" from any such act or activity and because of the unitary possibility of *any* propositional contents figuring in the logical relationships they allow, they are not conceived as having *any* representational meaning, but are rather structurally characteristic of the system of possible contents and their rational relations as a whole. Accordingly, on this picture, negation and the other truth-functions are characteristic of the constitutive structural and logical relations of the domain of (judgeable) contents as a whole, without themselves naming, designating or referring to any content, act, or object; they characterize, in the structural relations they introduce, the structure of what can be asserted *using* the referential and quantificational devices of (Fregean) logic, without themselves referring or quantifying. Frege's picture is in this respect already

well on the way to Wittgenstein's atomistic "picture" theory, whose fundamental insight is (as LW says), that the truth-functional "connectives" do not represent. Rather, they characterize structurally the inherent logical relationships among possible contents, here conceived as those that can be expressed by means of names, variables and predicative terms along with the truth-functions in a quantificational language.

This leaves entirely open, however, the questions of the *actual constitution* and *underlying temporality* of the realm of *possible* contents itself. As we have seen (chapters 1 and 3), Frege's metaphorization of the realm of senses as a timeless "third realm" beyond those of the physical and the individual-subjective does not significantly clarify the question of its temporal basis or ontological genesis; rather, it simply ignores these questions or substitutes for an answer what must be seen, from a perspective of ontological questioning, or of a real consideration of the being of language, as a mythology. This is not to deny the point of the metaphor on the level of what it intends to capture: namely, the specifically *logical* character of the relations relevant to truth that exist among the contents expressed by sentences in a language, and the distinction of this character from any empirical or ontic relationships. It is part of drawing the distinction that what is expressed by a sign of negation, as well as by the other truth-functional signs, must rigorously be distinguished from any type of act, process, or indeed any ontic event; nevertheless, maintaining the distinction by itself does not fully illuminate what is meant by "logical" structure itself. In particular, as we have seen in chapter 3, in specific connection with the "transcendental" character of truth, the application of the Fregean structure *presupposes* the availability of a range of contents or of the realm of sense and does not significantly illuminate the basis of this availability itself. The applicability of the Fregean devices of quantification and truth-functional structure, in particular, presupposes both a determinate and previously specified range of beings over which the quantifiers can range and that they are given as bearing determinate properties and standing in determinate relations. Both of these presuppositions invite (or even demand) a further question of the givenness of sense, and as we have seen, an ontological/hermeneutic development of this question is requisite to the further clarification of the generic meaning of "truth," on any reasonable conception of what is meant by it as it is used in natural languages.

The specific questions that are left open here can be clarified, from an ontological point of view, as concerning two issues which commentators have in fact noted as limitations or problems for Frege's approach. The first is the issue of the relationship between *content* and *force*. As we have seen (cf. chapter 1 above), Frege often suggests that the assertoric (or other) force of utterances must be separated from their content; it is the content, rather than the force, that is logically tractable and that defines what can be grasped independently of what, specifically, is to be done with it (whether, e.g., it is to be judged, doubted, questioned, etc.) Nevertheless Frege never develops a general theory of assertoric or any other kind of force as it finds expression in language, and there are moreover positive reasons to suppose that no such theory can be given. For as Frege notes in "Negation", while there is generally no specific marker of assertoric force in natural languages, the force of assertion is nevertheless in some way "bound up" with the predicate, so that (as he says elsewhere) the predication of truth is (in some sense) implicit in any predication whatsoever, whether or not it plays a role in

assertion specifically.[39] As we saw in chapter 1, it is necessary to recognize that the force of assertion is thus, in an obscure way, indicated in the structure of predication itself, without being able to be expressed there by any direct linguistic formulation or sign. The recognition points to the way in which a general theory of contents, such as Frege's, necessarily communicates with a general account of force, even if the distinction between acts and contents is rigorously drawn. As Frege indicates, as well, in "Negation," the connection between contents and assertoric force, however it may be drawn, is also closely connected with the nature of negation and with any possible understanding of it as an "operator" on or "function" of contents. Even if Frege's insistence on limiting the scope of a properly logical theory to relations of (truth-evaluable) contents prevents him from considering the broader problems of the relationship of content itself to force, setting Frege's project within a broader setting of ontological questioning can point to the way in which the very idea of content, in the structure of predication which also inherently involves the possibility of negation, both presupposes and problematizes an ontologically prior clarification of what is involved in both affirmation *and* negation as operators of force. Here, in particular, ontological questioning stands to clarify the temporal and ontological bases for what appears in Frege's picture as the always-already *a priori* availability of judgeable contents or modes of presentation of the true and the false, including their constitutive logical structure, on the basis of its own more ontologically penetrating development of the specific phenomenon of truth.

The second issue with respect to which the limits of Frege's own approach here appear is the issue of the *specification of domains*. As has often been noted, although the application of the Fregean quantifiers does not by itself demand any specification of the particular domain over which the variables involved are considered to range, it is standard to construe universal generalizations of the form "All A's are B's" as quantified conditionals (of the form, for all x, if x is an A, it is a B). This suggests, however, that it is impossible or meaningless to state claims with full generality which are considered to range over all objects or possible variable places, for instance "Everything is physical." However, the possibility of claims of this sort in ordinary language cannot be gainsaid; nor is it plausibly possible (or desirable) to avoid all negative existential claims (e.g. "There are no unicorns"), which themselves have the form of universally quantified negative claims ("for all x, x is not a unicorn"). Nor can the difficulty be solved by requiring (as is sometimes done) that a particular "domain of quantification" or "universe of discourse" be specified in advance before any meaningful application of the quantifiers can be made. For in an obvious sense, the specification of such a domain itself presupposes the prior availability of a broader domain from within which it can be specified. Even if it is considered to be impossible or meaningless to apply quantification without first specifying a domain of quantification – a consideration that appears to sit poorly, in any case, with much ordinary usage – the iteration of the question of the possibility of this specification will obviously tend, at the limit, to elicit the necessity of a prior possibility or presupposition of coherent reference to the totality of what is, or of beings as a whole. Here, indeed, what appears to be necessarily presupposed is not just a general or vague reference to "whatever is," but indeed a determinate conception of this totality in terms of its overall logical and categorial

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[39] Thus, e.g., if I ask whether the sun is bigger than the moon, I simultaneously ask *whether it is true that* the sun is bigger than the moon, etc.

structure, insofar as it must be the presupposed basis for any *further* delimitation of specific domains of beings or entities.

It is with these questions in mind that we can now return to Heidegger's claim about the priority of "the nothing" as the specific ontological basis for negation and other aspects of logical structure, while bearing Frege's logical picture of negation, also, firmly in mind. On the Fregean conception, as we have seen, the possibility of negation characterizes the domain of logically judgeable contents or of thoughts in a basic, structural sense. Here, in particular, negation is a kind of reversibility of such contents, such that the negation of a content is understood to reverse its truth value. The universality of this possibility throughout the whole domain of judgable contents is an aspect of the basic connection of such contents to the possibility of being true *or* false and results immediately from the general intelligibility of propositional questions which may have a "yes" or "no" answer. Negation is thus a characteristic structurally grounded possibility with respect to the *totality* of judgeable contents, and as such plausibly constitutively *linked* to the constitution of this totality itself. However, as we have seen, Frege leaves the actual basis for the constitution of the totality of judgeable contents almost completely obscure; in particular, though he often points to the compositional analogy between thoughts and linguistic sentences, he does not rely on (nor could he have, given his commitments to the objectivity and timelessness of contents of thought) any reference to (empirical) language in describing the ontology and temporality of the realm of sense. Frege's picture thus, all by itself, invites the question of the broader basis for the logical structure of negation and the other "truth-functions," as well as, along with, as an integral part of this question, the question of the *applicability* and *force* of negation (as an "operation") across the whole domain of judgeable contents and references to beings. Thought not only as a question of activity or performance but also regulation or prohibition, this is nothing other than the question of the basis and "normative" force of the law of noncontradiction (among other presumably "logically binding" principles).

Frege's picture of the logical nature and force of negation thus organically involves an implicit and requisite reference to the totality of contents and of beings, a reference which itself is given no further positive explanation in Frege's account. Here, because what is in question is the specific basis for the applicability of the central logical "possibility" or "operation" of negation *tout court* and hence that of the constitution of a domain of possibly true or false judgeable contents "governed" by logical principles and characterized by their structure, the question must not be one simply of further *logical* conditions but also of the broader *ontological* preconditions whose elaboration must be further grounded in an ontological clarification of the phenomenological structure of truth. This clarification, however, is just what, as we have seen, Heidegger's account gestures to; in particular, in situating the question of truth in the constitutive context of the ontological difference between being and beings, Heidegger points to the way the specific phenomenon of truth as disclosure irreducibly manifests this difference. The account in "What is Metaphysics?" further develops this conception of truth as involving the possibility of recovering a conceptually explicit understanding of being, one which is phenomenologically related to the totality of beings in being set over against it, as is what he refers to here as "the Nothing". If this conception of the ontological difference can indeed be considered basically illuminating with respect to the structure of the specific phenomenon of truth, it is also plausible that it stands to illuminate the

logical structure of the totality of truth-evaluable contents which is the domain of Frege's conception of the scope of quantificational logic. In particular, the structural interconnections that appear in the logical interrelations of the particular contents thereby involved themselves point to, if considered as characterizing the whole domain of possible content, the broad possibility of a constitutive reference to totality, and thus by themselves pose the question of the position from which such a reference might be possible, either implicitly or explicitly. Heidegger's picture addresses this question by pointing to the ontic-*ontological* structure of Dasein as the structure of truth as (ontic-ontological) disclosure, and as capable of gaining the position for an explicit retrieval of the implicit grasp of beings as a whole that is always already presupposed in factical life, through the fundamental possibility of an attunement to what is set over against this totality, the Nothing that first emerges phenomenologically in the "totalizing" attitude of Angst.

This is also the basis on which it is possible to respond to a commonly formulated response to Heidegger's position, on which it cannot be maintained that "the Nothing" is the basis for negation, since Heidegger's apparently nominative reference to "the Nothing" is itself nonsensical or logically impossible. On the position suggested by this response, it is rather supposed to be obvious that negation is, rather, the foundation for "nothing," in that "nothing" always has the meaning of "not any thing", and demands completion, within a sentence, by binding the quantifier apparently involved and specifying its domain of application. For example, on this view, "nothing" has significance in contexts such as "There is nothing in the box" or "I found nothing to speak of", but requires such additional context in order to make sense, and even there cannot have the significance of a noun or noun phrase.[40]

We have already seen that it is implausible from the perspective of normal usage that existential and universal quantification can only be employed in restricted or previously delimited domains of quantification; what speaks against this is not only ordinary claims about the totality of things and negative existential judgments, but also the way that any such specification of domain presupposes, at least implicitly, a larger domain from within which *it* could intelligibly be carried out. So even if the meaning of "nothing" must indeed be logically connected with that of "not any thing," it appears possible and trenchant to consider that at least in some cases this "not any thing" can be considered to have essentially unlimited scope, or at any rate to range over, and hence involve the intelligibility of, the totality of things or beings. From this perspective, the kind of "totalizing" experience involved in Angst as Heidegger describes it indeed might naturally be put as the experience that (for instance) "there is nothing", i.e. there are really (in the most basic sense of "being" or "existence") no beings. It is then certainly possible to nominalize what appears or becomes phenomenologically manifest in this kind of experience or phenomenon; and it is certainly not unreasonable to suppose that just this is what Heidegger himself has taken himself to have done with his nominative references to "the Nothing." As Heidegger himself notes, the nominalization should not be taken as construing the Nothing "as an object", since to do so would be to convert it "into something and not nothing". But this is no reason to maintain that it is generally impossible, or that sentences involving the nominalized form may not be phenomenologically illuminating and ontologically indicative.

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[40] Carnap (obviously), also Tugendhat, "Das Sein und das Nichts". Also, Sartre?

The situation is more closely analogous to Frege's own usage in distinguishing between concept and object as logical types; drawing the distinction itself necessarily involves that concepts are referred to, at least in general, which violates the strict delimitation which Frege places on the logical functioning of concept- and object-words, according to which concept-words can only predicate and can never refer to objects. As Frege himself recognize, such a usage is in fact necessary owing to the structure of language and indispensable in indicating logical distinctions (he described these as "elucidations" and they can be connected to Wittgenstein's showing/saying). Here, ordinary language thus already, in a certain way, points beyond the domain of its constitutive strictures to provide the possibility of phenomenologically or ontologically indicating the basis of their logical force and application. It is true that Heidegger in 1929 is not completely clear about this basis, since he does not have in view a conception of logic that as sharply distinguishes act from content as does Frege's, and also that his descriptions of the phenomenon of the "nothing" as grounded in the *experience* of Angst may invite anthropological or personal-subjective suggestions which are, even on Heidegger's own telling, quite alien to the structural/ontological problematic of Dasein and truth itself. Nevertheless, what is specifically thought and indicated here is, as we have seen, already as Heidegger says, a more original ontological basis for the specific force of logical laws and principles, including the law of noncontradiction, to the totality of beings as such and as a whole, a basis which can be grasped by an explicitly indicative description that recovers explicitly the relation to totality that is implicitly presupposed in the very ontico-ontological structure of Dasein as it is constituted by the phenomenon of truth.

III

As we have seen, Heidegger's picture of being and the nothing in the 1920s yields a position from which it is possible to consider the *ontological* basis of the *logical* structure of negation; this position depends, in particular, on the specific conception of the *totality of beings* against which "the nothing", in Heidegger's sense in 1929, is opposed. Because, as I have argued, the structure of negation as a logical function is plausibly intimately connected to this possible or actual reference to the totality of beings or of contents, the conception provides the specific ontological terms in which it is possible to consider the broader questions of temporality and constitution that are left to one side by Frege's own account of the realm of sense. Heidegger's picture in 1929 illuminates these questions, in particular, by pointing to the ontological *difference* between being and beings as the specific ontological basis for the structure of truth, in terms of which the structure of logical contents must itself be understood. With this indication, Heidegger points to the way in which any account of negation, as well as logically articulated falsehood and truth, must be related to the possibility or actuality of a conception of the totality of beings; this conception is necessarily presupposed, in particular, in any positive conception of the "normative" force of logical norms or principles, including the law of noncontradiction.

This is not to say, however, that Heidegger's picture in the 1920s has yet attained full clarity in tracing the implications of this difference, or (in particular) describing the *temporal* structures that it ultimately

underlies. Indeed, as we have seen in part I, above, to the extent that Heidegger's picture in the 1920s commits him to a conception of the kind of repetition or iterability that is structurally involved in the *logos* as secondary or derivative with respect to matters "originally" given in themselves, this picture does not yet formulate the consequences of a rigorous thinking of *pre*-originary difference (such as can be found, by contrast, in Derrida and Deleuze). Indeed, it tends to replicate a topological conception of negation as an *ontic* separation of beings rather than ontological (or ontic-ontological) type of differentiation grounded in the difference between being and beings. This topological conception is explicit in Plato's account, in the *Sophist*, of negation as produced by the mixing of difference with the other great types, and is there closely connected with the mimetic or representationalist picture of predication on which individual elements of sentences, including predicative terms, represent separately existing entities. But Heidegger's picture in "What is Metaphysics?" also retains the topological picture of negation, at least in residual form. For although it clearly identifies the phenomenological basis of negation and its force with the differentiation between *beings as a whole*, on one hand, and *being,* on the other, Heidegger's picture here still presupposes the possibility of a (complete and univocal) *delimitation* of beings as a whole. Here, the Nothing thus stands over against beings as a kind of presupposed externality; but the possibility of the delimitation, and hence the temporal conditions for the possibility of having beings as a whole in view at all, are not further interrogated.

In the 1930s, though, Heidegger develops a radicalized understanding of the implications of the ontological difference in the context of the deepening of the ontological problematic which is now carried out, from *Being and Time'*s question of the being of beings to what he calls in the *Beitraege zur Philosophie: vom Ereignis* the "grounding question" of the *truth* of being itself. This radicalization underlies the transition or turn in Heidegger's own thinking from the "preparatory analytic" and "fundamental ontology" of *Being and Time* to the later "history of being" project. As we shall see, it also yields a specific temporal basis for the radicalized critique of *omiosis* or *identity* which Heidegger now undertakes against Plato and the entire metaphysical tradition. This radicalized sense of pre-originary difference, developing from the "ontological difference" but also overcoming it in a certain way, provides the deep-seated ontological critique of the principles of identity and of sufficient reason which he undertakes in a series of treatments beginning in the 1930s. As I shall argue here, although there is no correspondingly sustained investigation in Heidegger's corpus of the specific basis of the principle of non-contradiction, this radicalization of the ontological difference can indeed, in parallel fashion, also produce a historically motivated basis for the ontological critique of the principle of non-contradiction, and along with this, significantly clarify the logical structure and ontological foundations of negation, falsehood, and illusion.

Early in the *Beitraege*, Heidegger announces, in connection with a thinking from and toward the essential happening of being, or Ereignis, the new question of the "truth of beyng" [Wahreit des Seyns] in contrast to the "previous question of philosophy," which has asked only about beings:

> The question of being [Die Seinsfrage] is the question of the truth of beyng. When grasped and worked out historically, it becomes the grounding question [Grundfrage], as opposed to the previous question of philosophy, the question about beings (the guiding question [Leitfrage]).

By contrast with the earlier "guiding" questioning about beings, the "grounding" question is here specified as the question of the "truth" of beyng itself. This question of the "truth of beyng" is further understood as the question of an "openness for essential occurrence [Wesung] as such" (p. 60/76) and as the question of the ultimate ground for the appearance of *any* being (p. 8/7). Thus thought as the ground of all possible appearance, this "essential swaying" of beyng [wesung] is designated as *Ereignis* (p. 8) and a preliminary and transitional "thoughtful speaking" of, and from, it is attempted. This attempt at thinking and speaking is, according to Heidegger, to be understood as a "directive" and "indication" on the way to a possible "leap" from the previous question of beings to the new question of the truth of beyng in itself, without reference to beings. Nevertheless, the task toward which it is directed remains, as in *Being and Time*, related to the specific question of the grounding of domains of beings, up to and including beings as a whole; here, for example, this task is specified as that of the "retrieval of beings out of the truth of beyng." In particular, this "task" is carried out by means of a distinctive questioning about "sense" [Sinn] as "the grounding of the projected domain"

> The question of 'sense,' i.e., according to the elucidations in *Being and Time*, the question of the grounding of the projected domain, or, in short, the question of the *truth of beyng*, is and remains *my* question and is my *unique* question, for at issue in it is indeed what is *most unique*....

> The question of the 'sense of beyng' is the question of all questions. As we unfold this question, we determine the essence of what is here called "sense" that within which the question as meditation [*Besinnung*] persists, that which it opens up as a question: the openness for self-concealing, i.e. truth. (p. 11; transl. slightly modified)

The new "grounding" question of the truth of Beyng thus results from a historical and ontological deepening of the problematic of sense and truth already pursued in *Being and Time*. As we have seen, for Heidegger in Being and Time, sense is fundamentally Dasein's temporal projection of possibilities onto what are thereby constituted as intelligible entities; the possibility of this projection is itself closely related to that of disclosive truth in that both take place on the ground of Dasein's fundamental hermeneutical structure of interpretation, that of the "hermeneutic-existential" as. Here, Heidegger deepens the linked question of the basis of sense and truth into the question of the basis of projection itself, or of the kind of opening and concealing that is characteristic of Dasein as such. Da-sein is itself, accordingly, no longer seen as a positive given phenomenon to be described or illuminated; rather, it is to be achieved or accomplished by way of a transformative *grounding* of Dasein itself in the truth of beyng. This is, in particular, to be achieved by way of a thoughtful meditation on this truth, which also has the significance of an "appropriation" of Dasein by, and into, Ereignis as beyng's event.

In developing the "grounding" question in contrast to the previous "guiding" question, Heidegger points toward a "leap" which prepares for an "other beginning", outside the ambit of the traditional interpretation of being which determines how it is understood, according to Heidegger, from Plato to Nietzsche. Within this traditional determination, according to Heidegger, the question of being takes

the form of a questioning of beings as beings (*on e on*) whose most general form is the question "what are beings" (*ti to on*) and whose answer is given by a determinate conception of the being of beings, for instance (in the most characteristic example) by Aristotle in determining the overarching categories of *ousia* or substance. In the scope of this traditional questioning, being, according to Heidegger, is always understood as "beingness", or as the most *general character* of beings as such. Here (for Aristotle and the whole subsequent tradition up to Nietzsche), in particular, "being (as beingness) is always and only meant as the *koinon*, the common and thus what is common to every being." (p. 60/75) Thus, despite Aristotle's denial that being itself has the character of a genus,

The traditional understanding of being as beingness, in other words, characteristically operates by looking to the specific characteristics of beings and locating them within a more general structure which sees their ultimate essence or most generally definitive characteristic as the basis for their unity within a *koinon* or "common" that ultimately encompasses all that is. The specific determination of this structure takes various historical forms, but in each case the overarching structure of logical and ontological characteristics is determined on the guideline of specific characteristics of beings in accordance with the "guiding" question about beings:

> The answer to the guiding question is the being of beings, the determination of beingness (i.e. the providing of the "categories" for *ousia*). Various realms of beings become important in various ways for later, post-Greek history. The number and the type of the categories as well as their "system" change, but the approach remains essentially the same, whether based immediately in *logos* ["discourse"] as assertion or following determinate transformations in consciousness and in the absolute spirit. From the Greeks to Nietzsche, the *guiding question* determines the same mode of asking about "being." The clearest and greatest example attesting to this unity of the tradition is Hegel's *Logic*. ...

By contrast, in the transition to the grounding question of the historical truth of beyng, what is sought is not the general character of beings but the deeper underlying conditions for the possibility of *any* appearance of beings whatsoever. Accordingly, for the grounding question as opposed to the guiding question, "the starting point" is no longer "this or that being;" nor, indeed, is it "beings as such and as a whole" (p. 60); it is rather the possibility of a "leap" into truth as the "clearing and concealing" of *beyng* itself.[41] This question accordingly extends to the question of the underlying ground of the possibility of *any* of the various historical *determinations* of what is seen, through shifting historical categorizations, *as* their total or general character, and of the more basic ground for *all* of these determinations in beyng itself. This implies that the kind of basic positionality recurrently involved in the traditional interpretation of the basic character of beings, which makes possible determinate conceptions of beings as a whole, is here subjected to a deeper historical questioning of the ground of *its* possibility which takes in the "entire history of the guiding question" (p. 61) on the ground of its more basic historical determination by beyng itself:

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[41] Here, "beyng can no longer be thought on the basis of beings but must be inventively thought from itself." (p. 8)

The guiding question, unfolded in its structure, always allows the recognition of a *basic position* toward beings as such, i.e., a position of the questioner (human being) on a ground which cannot be fathomed or known at all from out of the guiding question but which is brought into the open through the *grounding* question. (p 61).

In this way, the question of positionality that is implicit in the history of the guiding question and its determinate conceptions of the generality of beings, and implicitly answered in advance with each such conception, can only be unfolded explicitly with the leap to the deeper grounding question that asks after the underlying truth of beyng. The result of this unfolding is the historical *questioning* of the way being is determined as beingness in the context of each of these determinations of beingness as generality or *koinon*, and the correlative delimitation of the history of these determinations as a whole against the anticipation of the transition to the "other" beginning from *Ereignis*.

For this reason, the transition from the "guiding" to the "grounding" question itself implies a radicalization and partial overcoming of what was earlier thought as the "ontological difference" between being and beings. In particular, according to Heidegger, it is here necessary to understand the question of the being of beings as pointing toward the deeper, grounding question of the "truth of beyng" rather than as it has been understood within metaphysics, wherein it is answered in terms of beingness, universality and the *koinon*:

> In accord with the Platonic interpretation of beings qua beings as *eidos – idea* and of the *idea* as *koinon*, the being of beings becomes altogether the *koinon*. To be the "most general" becomes *the* essential determination of being itself. The question of the *ti estin* ["what it is"] is always the question of the *koinon*, and thereby is given for the entire thinking of beings as such the framework of the highest genus (highest universality) and *specification*. The main realms of *beings* are precisely sheer *specialia* of the universality of beings, i.e. of the universality of being. And in this way the character of the guiding question is reflected in the distinction between *metaphysica generalis* and *metaphysica specialis.* In the guiding question, a possible coupling of *metaphysica generalis* and *metaphysica specialis* is no longer an issue at all, since they are indeed coupled in the way just named, a way that is very external to beings and afortiori external to beyng. Utterly groundless pseudo-questions arise here as long as the unrecognized basis of the guiding question and the distinction between the two disciplines are from the start taken to be self-evident.

> The confusion increases altogether if a solution to the question is sought with the help of the "ontological" difference developed in fundamental ontology. For this "*difference*" is indeed not a way of approach to the guiding question: it aims instead at a leap into the basic question. And it does so not in order to play vaguely with henceforth fixed terms (beings and being) but, rather, in order to go back to the question of the truth of the essential occurrence of beyng and thus to grasp in a different way the relation between beyng and beings, especially since also the interpretation of *beings* as such is transformed (sheltering of the truth of the event) and it

becomes impossible to unwarily smuggle "beings" in as "represented objects," "things objectively present in themselves," or the like.

For Heidegger in the *Beitraege*, the questioning attempted in Being and Time is itself at best "transitional," and can only prepare the way for a "grasping" of the "truth of beyng out of the latter's *own* essence", namely, as Ereignis (p. 197). On the way to the posing of the more basic question of this truth, a thinking of the ontological difference is, according to Heidegger, both necessary *and* "disastrous"; in particular, because it itself arises from the inquiry into "beings as such" in their "beingness," it does not immediately permit the leap into the grounding question of the "truth of beyng itself." Indeed, Heidegger suggests, insofar as the ontological difference suggests an inquiry into the "unity" of its terms (being and beings), the question is quixotic and can never lead to the deeper position "from which it could be seen that the distinction no longer is primordial". p. (197) Foregoing this conception of unity, it is necessary instead, Heidegger suggests, to "leap over" the distinction and indeed over the "transcendence" that was earlier thought as the surpassing of beings by being in order to achieve the "creative grounding of the truth of beyng" which is the "leap into the event [*Ereignis*] of Da-sein".

As we have seen (in chapter 1, above), in Plato's *Sophist* the debate between the materialists and friends of the forms over the mutual relationship between being and becoming, which forms the crux of the "gigantomachia" over being, is apparently resolved by the Eleatic visitor with his suggestion of the series of logical and structural *koinonia* that link the great types in the soul, in the articulate structure of the spoken *logos*, and in the overarching logical grammar that is seen as presiding over both. The specific problem of non-being, which is both logical and temporal, is resolved, in particular, by the suggestion of a phenomenalization of non-being in the person of the Sophist which is itself made possible by the *koinon* or mixing of the great types, and in particular by the mixing of difference with being to produce non-being as differentiation from what is. On this conception, which itself prepares the way for Aristotle's conception of logical categorization as the structure of differentia of genus and species, the appearance of non-being, illusion, and falsehood is thus itself understood as a mimetic or quasi-memetic phenomenal *presencing* of non-being whose specific condition of possibility is the superior structure of the logical/ontological/psychological *koinon*. This mimetic or quasi-mimetic conception then invites the question of the ground for the distinction between the good and the bad copy, the icon and the phatasma, which Plato's visitor answers by pointing to the structural correspondence or non-correspondence of *logoi* and states of affairs with the overarching structure of types and forms in their determinate possibilities of mixing or combination. The characteristic "ti estin" question of identity is thus answered in terms of the articulate structure of the logos and its correspondence to the superior grammar of types or forms. As we have seen, the solution depends ultimately on the necessary a priori existence of the types or forms with their determinate possibilities of mixing and combination, and it does not explain or account for this structure. Additionally, it fails ultimately to clarify, particularly in the case of non-being, the ultimate basis of the possibility of the requisite structural correspondence itself.

In the *Beitraege*'s development of a critical recounting of the history of the pursuit of the "guiding" question which is characteristic of the metaphysical tradition up to Plato, Heidegger suggests that the determination of beings in terms of *identity* plays an early and essential historical role in the development of the relationship of thinking and being from the Pre-Socratics to the modern configuration of "experience" and "machination" or technology. This determination is simultaneous with a "collapse" of truth as *aletheia* into truth as "correctness" [Richtigkeit] which itself pre-determines the modern and contemporary interpretation of thinking as representation and truth as correspondence. This early development is marked, according to Heidegger, by the interpretation of *noein* as "nous of the idein of an idea" and "koinon and logos as apophansis ["assertion"] of the kategoriai ["categories"]" (p. 155). In this development, "thinking, as a faculty, falls prey to a 'psychological' –i.e. ontic – interpretation" and the "relation already *prepared* by Plato between *psyche* and *aletheia (on)* as *zugon* [yoke]" becomes, as it does explicitly in Descartes, "the ever-sharper subject-object relation" (p. 155). In this development, in particular, "Thinking becomes the I-think" and the unity of thinking and being becomes the unity of the unifying *function* of synthetic thought in the "transcendental unity of apperception" (Kant) or in the absolute self-identity of the self-positing "I" (Fichte).

> At first, all efforts then implicitly strive to make this relation itself (thinking as the thinking of the I-think-something) purely and simply the ground of the beingness of beings and indeed through assumption of the inceptual determination of beings as what is *en*.

> In this manner, identity becomes the essential determination of beings as such. Identity derives from the *aletheia* of *phusis*, from presence as unconcealed gatheredness into unconcealedness. (p. 156)

But each of these later developments are only possible as outgrowths of the "Platonism" that "dominates" the history of metaphysics, or of the determination of beingness as constancy and presence (pp. 153-54) and thereby determines the development of the metaphysics of presence from the relationship of thinking (as presenting and representing) and being as beingness.

A particularly decisive moment in this development, according to Heidegger, is Plato's determination of the *idea* on the basis of a mimetic or representational relationship between it and sensible particulars. Here, the *idea* is originally thought as the *look* of something in which it both comes to presence and which supplies its constancy in presencing. This look is then understood as a "unifying One," as being itself (on) is thought as unifying, and "as a consequence" the idea is now interpreted as *koinon* and being itself as the "most general" (p. 164). The *idea* is now thought, with respect to individual beings, as having a *koinon* character, that of gathering them into unity, and accordingly as what best "satisfies the essence of beingness" and is therefore qualified, over against the many sensible entities, as the "ontos on" or "what is most eminently." (p. 164) Along with this, truth in the sense of *aletheia* "collapses" and is transformed into *omoiosis* or correctness, from whence it will subsequently develop into *adequatio* and certainty. (p. 169). In the Platonic determination of the relationship between the idea and the particular on the basis of *koinon* and *omiosis*, there arises therefore "a mode of representation which in

various forms radically rules over the subsequent history of the guiding question and thereby also over Western philosophy as a whole." (p. 169) In this determination of the idea as the koinon, according to Heidegger, is to be found the condition by which the *khorismos* between thinking and being becomes "a sort of being"; here is to be found the origin of "'transcendence' in its various forms" as well as the specific sense of the representation of the *a priori*. Subsequently, transcendence is understood in an "ontic" sense as the surpassing of one being over all others (as in Christianity), in an "ontological" sense whereby it refers to the surpassing that "resides in the *koinon* as such," namely in a system of categories "beyond" and "prior to" beings, or, finally, in the sense of the fundamental ontology of *Being and Time*, where it is understood as Da-sein's structural surpassing as such, and thereby related to the prior understanding of Being which is there treated as definitive of Dasein's projective being-in-the-world. Through the conception there developed of understanding as "thrown projection", Heidegger says, transcendence as it is treated in *Being and Time* already indicates a standing of Dasein "in the truth of beyng". However, even that conception is here to be overcome, along with every sense of transcendence, in favor of a deeper consideration of the ultimate basis for projection itself in Da-sein's "enduring" of the "open realm of concealment." (p. 170)

The history of the interpretation of being as presence which Heidegger describes as the history of the determination of being as beingness (and hence in terms of beings) is, by contrast, one of increasing obscurity, forgotteness, and withdrawal with respect to beyng itself. In this progressive withdrawal, alethethia is understood as correctness and finally as universal representability, and thinking more and more takes on the character of uniform representation and availability for a regime of "lived experience" that stands over against machination or the technological manipulation of beings as paired and mutual expressions of the contemporary understanding of the basic character of being. In close connection with the contemporary dominance of a reign of "calculative thinking", "machination" is here specified as the interpretation of all beings as "representable and represented" (p. 86) and as such "on the one hand, accessible in opinion and calculation, and, on the other hand, providable in production and implementation." It correlates with, on the side of the experiencing subject, the comprehensiveness of a regime of "lived experience" understood as a "basic form of representation" which "promotes and entrenches" a humanist or "anthropological" way of thinking (p. 104) rooted in the conception of the human being as *animal rationale* and intimately connected to the dominance of the categories of "culture" and "worldview" as prevailing ways of thinking and representing beings (p. 102).

In this way of thinking, all that counts as "being" is "what is or can be the object of a lived experience" in being able to be brought before one in representation. (p. 102). To this conception of being as what is representable corresponds the apparently *unlimited* representability of beings in machination; here, there is no limit to what can be given for representation, since there is "*nothing* that is, or could be, given" to representation "*as a limit*." Instead, "everything is humanly possible, as long as everything is calculated in every respect and in advance and the conditions are provided." (p. 107) This unlimited calculability means that "the incalculable is merely that which has not yet been mastered in calculation but which in principle will also be incorporated some day;" here, there is, accordingly "in no way …anything *outside calculation*" (p. 95) and because of the certainty about beings which this in-principle

calculability of everything provides, "the question of the essence of truth" is itself "no longer needed". (p. 95) Here, accordingly, "there is no problem that is not solvable, and the solution is merely a matter of number applied to time, space and force." (p. 98)

This universal calculability is, according to Heidegger, just one aspect of an "abandonment by being" [Seinsverlassenheit] which is the "ground" and "more original" essential determination of what is grasped (though dimly) by Nietzsche as the world-historical process of nihilism. (p. 95) What Nietzsche grasps under the heading of "nihilism" is now rejected and warded off, with increasing desperation, by the unlimited elevation of what were at first only means to goals into goals in themselves; for instance, the elevation of a *people*, their "cultural assets", and all "cultural politics" here become elevated to absolute ends. This elevation, however, is itself "the most insidious form of nihilism and therefore its highest form." (pp. 109-110). Here, nihilisms of different forms battle with each other, as, for instance, Heidegger says, in the battle between the nihilism of Christianity and the "crude nihilism" of Bolshevism. But the whole process forecloses what is in fact "*the* decisive domain regarding beyng or non-beyng." (p. 110) But the "abandonment by being" which the growth of nihilism, in all of its forms, at last expresses is itself the determining basis of a "unique era in the history of the truth of beyng" (p. 95). In this era, "of long duration," "truth hesitates to put its essence into clarity" and beings are accordingly "disappropriated of beyng." The process culminates with Nietzsche's metaphysics of the will to power; in this metaphysics, "truth deteriorates into a necessary illusion" and an "unavoidable stabilization introduced into beings themselves." (p. 157). Nevertheless, although in this culmination and end, the Western metaphysics of presence is "furthest from the question of the *truth* of beyng" it is, Heidegger says, also "closest" to this truth in that with this end, "it has prepared the transition to this question." (p. 157). In this configuration, machination itself "withdraws" and tends to hide itself behind determinations such as "actuality," objectivity and constancy. Both this withdrawal and the actual dominance of machination that it obscures are, however, aspects of the ongoing withdrawal of beyng itself; in fact, the dominance of machination *is* the "essential occurrence of beyng". (p. 101)

According to Heidegger, the dominance of machination and of lived experience thus belong together in a deeply interlinked but also initially obscure configuration which is, if grasped in its actual togetherness, a clue or indication to the culmination of the history of the interpretation of beyng as beingness and thus to the "hidden" *history* of *Beyng* itself. In particular, "the coming together of machination and lived experience contains a peculiar event within the hidden history of beyng." (p. 105) This event both summarizes and completes the history of the interpretation of being as beingness. For if the history of this interpretation is the history of the relationship of thinking, understood as representational grasping, and being, understood as beingness, then "Machination and lived experience constitute as a formula the more original version of the one expressing the guiding question of Western thought: beingness (being) and thinking (as representational grasping). " If machination and lived-experience are thought together, this therefore indicates, according to Heidegger, not only their mutual belonging but also "an equally essential *non-simultaneity* within the "time" of the history of beyng". In particular, machination is the "early" but initially distorted "essence of the beingness of beings." But as it comes more and more to the fore in differing interpretations, it also "draws back" behind what at first seems its "extreme opposite," namely personal lived experience. If, however, the deep link between the two is grasped in

thoughtful meditation, "then at the same time the basic thrust of the history of the first beginning (the history of Western metaphysics) is already grasped out of a knowledge of the other beginning." (p. 101). In this way, "Machination as the essential occurrence of beingness provides a first intimation of the truth of beyng itself". (p. 100)

In the radicalization of the ontological difference that Heidegger carries out in the *Beitraege*, the difference between being (as beingness) and beings that appears in each of the epochal configurations of metaphysics is thus itself thought on the deeper ground of the truth of beyng and *Ereignis*. This radicalization is the key to Heidegger's description of a history of metaphysics that is opened and closed with two configurations of thinking and being that both figure, in different ways, the universality of representation: the initial configuration that Plato thinks as the psychological and semantical *koinon* ensured by the superior structural *koinonia* of the *eidei*, and the final one of machination and lived-experience which finally yields the domination of nihilism and the "completion" of the thrust of the "first" history of being as the history of beingness. The "non-simultaneity" of these configurations opens the temporal difference in which the whole history of metaphysics will have come to pass, in which the epoch of the determination of being as presence will have opened, progressed through the series of particular epochal determinations of the beingness of beings, and finally exhausted itself in completion and closure. In this history, both the beginning and the ending configuration have a specifically *logical* determination, marked in the beginning in Plato's thought of the logical *koinon* and at the end in the universal calculability of beings, itself achieved by means of a "mathematization" and application of universal countability that has its ground in the presumed universal applicability of calculation to all problems and in the specific technologies that accomplish it. The basis for this universal calculability is itself the "logical" conception of thought as oriented toward being in its ability logically to comprehend and discern in representation the superior *koinon* structure of the *eidei*.

By radicalizing the thought of the "ontological" difference between being and beings, which characterizes every determinate configuration of the intelligibility of beings, Heidegger thus prepares a position from which it becomes possible to pose the deeper and broader question of the truth of beyng in itself, and thereby to interrogate, from a position that itself stands outside the "guiding" question of beings, how the "metaphysical" interpretation of being as presence is itself temporally constituted as a whole. In carrying out this radicalization, Heidegger accordingly points toward a thought of the closure of the epoch of metaphysics that is itself determined as the trace of a withdrawal, that of beyng itself in its "holding back" from its own truth. This holding back is evident, according to Heidegger, in the specific structure of the epochal determination of each configuration of intelligibility, where beings appear in the light of some particular being that is elevated to the position of "highest" standard, whereby it becomes the measure of beingness or being "in general," as well as, in a different and more total way, with respect to the whole epoch of the interpretation of being as presence itself. Here, by contrast with the position of "What is Metaphysics," negativity is not thought simply as destruction and nihilation but as abandonment and nihilism; it is no longer the outcome of a specifically phenomenalized "nothing" standing over against the totality of beings, but rather of the epochal event of beyng itself, which grants each of the specific configurations of the history of being as presence and also withdraws from them in *their* totality. It is this thought that leads Heidegger to wonder, early in the Beitraege,

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whether, "if the event becomes a withholding and a refusal" it is "only the withdrawal of beyng and the surrendering of beings into non-beings," or whether, on the other hand, "the refusal (the negativity of beyng) [can] become in the extreme the most remote appropriation…? (p. 9) Grasped in the view of a history of being determined by the grounding question of beyng rather than beings or their beingness, therefore, negativity is first and foremost withdrawal; only secondarily, and only relative to a particular logically regulated configuration of beings, is it determination. This evinces a *primary* negativity of Beyng which cannot be understood in terms of cancelling, destruction or negation, but must rather be understood in terms of its differentiation from itself, its separation from itself of the thought of beingness and the generality of being as *koinon*. This self-differentiation is both, equiprimoridally, appropriation *and* expropriation; it is the trace of a fundamental difference that is not the difference between two terms but which must be grasped, in the historical trace in which it manifests as withdrawal, be seen as *Ereignis* itself.

IV

As we saw above (section II), negation, considered as a *logical* function of senses, presupposes and depends upon the implicit or explicit reference to a *totality* of contents, the whole articulated "realm" of thoughts or of propositional senses, as Frege conceives it. In the structure of this totality, thought as containing the totality of modes of presentation of objects and entities, as well as concepts, and thereby linking their systematic structure to the possibility of truth, is to be found also the basis for the totality of possible references or of objects. The totality of beings is, as we have seen, thought in a related but different way by Heidegger in 1929 as set over against the "nothing" and being itself, and in the historical and temporal radicalization of the ontological difference carried out in the *Beitraege*, the various epochal configurations of the being of beings *each* have the structure of making possible a *particular* phenomenalization of the totality of beings (while the historical totality *of* such configurations is itself thought as bounded at the beginning and end as the totality of metaphysics, over against the truth of beyng, which grants presence). In each of these cases, the logical specification of negation and its distinctive logical structure *internal* to the constituted totality – including the scope and force of the application of the law of non-contradiction itself as ground for the coherence of contents – is, as I have argued, closely related to the constitutive structure of the totality itself. In fact, as we have seen, whereas Frege's own theory does not provide anything like a positive theory of the temporal and ontological *constitution* of the realm of (linguistic) sense, Heidegger's conception of the ontological and ultimately being-historical basis for the constitution of sense can plausibly provide the relevant and needed supplementation. This involves setting specifically *logical* negation in a broader framework, one in which it is related ultimately to a pre-original difference that itself radicalizes the ontological difference between being and beings. Nevertheless, the internal dynamics of specifically logical negation and logical contradiction with respect to the totality of reference here become significant, both as characterizing the problems to be solved and as, themselves, indicators of the broader ontological and temporal situation.

As is well known, Frege's attempt to ground arithmetic on logic and naïve set theory in the *Grundgesetze der Arithmetik* depended on the application of an "unrestricted" principle of comprehension – the so-called basic law V – which implies (in more contemporary set-theoretical language) that to each linguistically well-defined predicate there corresponds a set of just those elements falling under it. The assumption, along with the whole project in its initial formulation, famously came to grief when Russell pointed out the antinomy of the set of all sets that are not self-membered; such a set is a member of itself if it is not, and is not if it is. Thus, the apparently well-defined property of being "non-self-membered" cannot correspond to a set, on pain of irreducible contradiction, and it appears that the basic principles of set formation must be limited or modified if the contradiction is to be avoided. In particular, this appeared to Frege to show that the logic at the basis of mathematics must itself have extra-logical foundations, and though he accordingly considered his own logicist project to have failed, he worked for much of the remainder of his life on various attempts to rectify the situation. Russell's own solution was to impose a regimented structure of hierarchical levels or "types" on the set-theoretical universe; on this solution, it is excluded at the outset that any set include itself, since sets of lower types can only be included in sets of higher types. Additionally, there is, on Russell's picture, no limit to the hierarchy of types; accordingly, there is no possibility of forming, at *any* level, a set containing all sets or the totality of all that exists, or the (closely related) Russell set. Somewhat similarly, in the now-standard Zermelo-Fraenkel axiomatization of set theory, two fundamental axioms guarantee the impossibility of forming a total set of all sets. First, the axiom of foundation prohibits the formation of any self-membered set. Second, the axiom of separation (or restricted comprehension) guarantees that a set can be formed as the extension of a predicate *only if* it is segmented out from some larger set already considered to exist. Thus the set of all sets, if it were to exist, would on the intuition underlying the axiom, have *already* to exist and would accordingly presuppose itself.

Both Russell's picture and the broader and looser picture enshrined in the ZF axioms and sometimes described intuitively as the "iterative conception" of sets[42] thus impose limitative or restrictive devices to foreclose the structural combination of negation, reflexivity, and totality, from the point of view of naïve comprehension, yield Russell's paradox and other related contradictions. The positive intuition underlying the application of these devices is, with respect to the question of the constitution of sets, basically *constructivist*; in particular, Russell's conception appeals to a picture of sets as hierarchically "formed" in temporally successive stages, and the "iterative conception" itself turns centrally on the idea of an iterated process or operation of set formation. On both conceptions, accordingly, the "set theoretical universe" is pictured as in some sense inherently "open" or uncompleteable, since there is and can be no end to the iteration of the process of formation. In this way the possibility of contradictions of the Russell type is apparently foreclosed; however, as I have argued elsewhere, the nature of the "operation" of set formation here remains obscure, and indeed subjects the idea of set constitution to an intuition of psychological, operative, or constructive "formation" that appears to be quite alien to it and unmotivated with respect to it (except perhaps in a *post hoc* fashion by the desire to

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[42] Boolos

avoid contradiction itself).[43] Moreover, it is plausible that the very application and motivation for the limitative devices involved in both of these approaches, which apparently preclude reference to or discussion of the *total* universe of sets, in fact *presuppose* just this reference even in stating or indicating what is precluded.[44]

As I have argued in *The Politics of Logic*, an alternative to this consideration of the Russell paradox and other related contradictions and limit-paradoxes as structures fatal to the integrity of any positive theory and thereby to be foreclosed or prohibited by prohibiting totality itself is to consider them, instead, as positive formal indications of the structure of totality and of its own internally constitutive logical structure. Here, the significance of contradictions of the Russell type is no longer that of demanding that restrictive maxims or limitations be placed on the idea of (unlimited) comprehension, but rather that of showing what is positively involved in the particular kind of relation of language to the world that is implied in this idea, including the structures of contradiction and antinomy that must necessarily be considered to be co-implied in it, given the paradoxes. Affording full and unrestricted rights to the principle of (unlimited) comprehension, in this way, in the context of a naïve set theory admitted to be inconsistent, means that it is not subjected to the intuition of any kind of constructivist, psychological, or iterative intuition, but rather considered to capture the positive structure of the relationship between (linguistic) intension and objective extension in itself, including the inherent logical and metalogical dynamics of the one and the many that characterize the predicative grouping of a diversity of individuals "under" any unitary concept or predicate.

A positive motivating basis for this conception of naïve (and inconsistent) set theory as capturing the inherent dynamics of predication can be found in some of Cantor's own statements about the motivations for the creation of set theory. For example, in 1883 Cantor wrote,

> By a 'manifold' or 'set' I understand in general any many [*Viele*] which can be thought of as one [*Eines*], that is, every totality of definite elements which can be united to a whole through a law. By this I believe I have defined something related to the Platonic *eidos* or *idea*.

Here, Cantor expresses the thought that the specific unity of set formation corresponds to or correlates with the kind of unity thought by Plato as the "one over many" of the *eidos* or *idea*; on this conception, the specific unity of the extension of an arbitrary concept, or (in the Platonic jargon) the participants of an linguistically specifiable idea, is understandable as a "whole" summarized or encompassed by the single idea itself, and the relationship of participation or predication is itself expressed by the 'ε' of set membership. On this picture, set membership is thus (borrowing T.E. Forster's nice phrase) an "allegory of predication", in the sense that the systematic structure of set membership and set relations (including, as I shall argue, its constitutive paradoxes) can itself be considered to capture or structurally indicate the underlying structure of predication as such. The picture receives further intuitive support

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[43] PofL; also Parsons, Hallett.
[44] Domain principle

from Peano's own motivations in introducing the symbolism still used for "element of" or "member of," the symbol 'ε' which Peano related to "est" or the "is" of predication.

As I have argued elsewhere, a consideration of the implications of naïve set theory can in this way provide a powerful metalogical basis for the structural and critical consideration of the predicative structure of language in relation to the world as such.[45] This is so, in particular, with respect to the question of *totality*, or of the significance of the ordinary and structural presupposition of a total universe of all that can be referred to, of the sayable or thinkable, or of beings as such. In particular, Russell's paradox and the related set-theoretical and semantic paradoxes show that this totality must be characterized at its limits by a structure that is inconsistent in a particular way. As Graham Priest has shown, this particular kind of limit-contradiction can be theorized as an "inclosure;" it results from the combination of three features which are plausibly structurally characteristic of any of the totalities of the thinkable, sayable, or existent as such. The first of these features is existence; the universe or totality must in some sense exist as a whole. The second is "closure" the universe or totality must be able to be referred to from some position; The third is diagonalization: given any arbitrary subset of the total set, there must be an element outside the subset. The combination of these features results, when the diagonalization operator is applied to the total set itself, in the contradiction of an element that is both inside and outside the total set.

As I have argued in *The Politics of Logic*, consideration of the specific structure of inclosures allows for a broader critical understanding of the structural dynamics of totalities at the limits and thereby offers a position from which it is possible to understand the specific meta-structural basis for the "normative" or prohibitive force of the specific prohibition of contradiction within them. In particular, it is possible on this basis critically to interrogate the overdetermined structure that we have already noted with respect to historical instances of the basis of the prohibition of the set-theoretical paradoxes as well as for the more general prohibition of contradiction as such. By means of this overdetermined structure, as we have seen, what is said to be impossible or incoherent is *also* positively prohibited, foresworn or enjoined against. Contradiction is thus both, in necessarily overdetermined fashion, an impossibility and a danger; as I have argued at greater length in *The Politics of Logic*, much of the constitutive and prohibitive force of the traditional law of non-contradiction results from the problematic conjunction of these incompatible presumed features of contradictions. By contrast, from a position that recognizes the necessity of inclosure as structurally characteristic of totalities insofar as they involve phenomena of self-reference or self-inclusion, it is possible to interrogate and critically challenge this "normative" force along with the specific mandates and practices it has historically facilitated and continues to support today. From the resulting "paradoxico-critical" position, the positive existence of the limit-paradoxes that show up in set theory thus has a basic structural significance in characterizing the structure of any linguistic totality as such and in pointing to the specific positions at which total regimes of thought,

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[45] Reference to PofL.

action, practice, or technology can be interrogated in terms of their structural constitution and potentially transformed.

What does this development of the meta-formal implications of set-theoretical paradoxes have to tell us, though, about the ontological situation of beings as such, both in relation to their being and to the *interpretation* of being as presence which, according to Heidegger, orients the whole of the metaphysical tradition from beginning to end? Here, it is helpful to briefly consider the radical and formally audacious consideration of set theory that has been undertaken by Alain Badiou under the overarching maxim that "mathematics is ontology." For Badiou, specifically, the maxim expresses that mathematics as founded on set theory in its standard, ZF axiomatization also captures all the underlying principles and structures of ontology, or of a theory of "what is expressible" of "being qua being".[46] The universality of set-theoretical structure in this sense captures the countability of all beings, for Badiou, and formalizes the conditions under which any "multiplicity" can be understood as presented or counted as one. In particular, the ZF axioms for Badiou give rise to a constitutive structure which is "the presentation of presentation" (p. 27) and which systematically displays "being qua being" in that it offers a systematic theory of the conditions of possible presentations, which yield, according to Badiou, the only "access to being" which is "offered to us" (p. 27). In particular, according to Badiou, there is and can be no *direct* presentation *of* being itself. However, it may still be the case, according to Badiou that an axiomatic structure, through the laws it lays down for the structure of all counting-as-one, *implicitly* presents being, or at any rate what is "expressible" of it, by presenting presentation itself. The presentation in axioms of the structure within which "being qua being can be rationally spoken of" is thus the same, according to Badiou, as the axiomatic presentation of the systematic conditions under which any multiplicity can be considered as presented or "counted-as-one". The result, according to Badiou, is a systematic formal theory of being which steadfastly refuses to locate it an "exceptional" position outside the structure of coherent discourse and transmissible knowledge by axiomatically presenting presentation itself in the rigorous formal axiomatization of ZF set theory. Badiou suggests that this presentation of presentation accordingly offers formal grounds for opposing all "ontologies of presence" which presuppose the possibility of a presentation of being as such, outside structure, on the basis of an exceptional position or a transcendent experience (Badiou sees the paradigm for these "ontologies" in Plato's conception of the Idea of the Good as *epekeina tes ousias* and thus as the supreme but exceptional condition for being). To these ontologies Badiou opposes a formalization of predication, a deductive invention, and an ideography (or "concept-writing," as in Frege's Begriffsschrift) that will jointly "oppose – to temptation of presence – the rigour of the subtractive, in which being is said solely as that which cannot be supposed on the basis of any presence or experience." (p. 27)

According to Badiou, this rigorous presentation of being qua being as the "presentation of presentation" is equally opposed to the "Heideggerian thesis of a withdrawal of being." Specifically, according to Badiou, "It is not in the withdrawal-of-its-presence that being foments the forgetting of its original disposition to the point of assigning us – us at the extreme point of nihilism – to a poetic "overturning"" (p. 27). Rather, according to Badiou, the "ontological truth" is that "it is in being foreclosed from

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[46] P. 8

presentation that being as such is constrained to be sayable, for humanity, within the imperative effect of a law, the most rigid of all conceivable laws, the law of demonstrative and formalizable inference." (p. 27) In particular, the axiomatic of set theory formulates a rigorous theory of the conditions under which multiples can be "counted as one" and thereby makes "multiples", which are generally conceived as in themselves inconsistent, presentable and *consistent* sets. In this sense, according to Badiou, the operation or structure of the "count-as-one," which is spelled out inexplicitly but with the positive force of law in the axiom system, formulates the "system of conditions through which the multiple can be recognized as multiple" at all.

This conception of the axiomatic structure of the "count-as-one" itself formulates the consequences of an "axiomatic decision" that is, according to Badiou, at the origin of his "entire discourse." The decision is that of the "non-being of the one." (p. 31). In the first pages of *Being and Event*, Badiou announces the decision that "the one *is not*" as a decision to "break with the arcana of the one and the multiple in which philosophy is born and buried, arcana of the one and the multiple in which philosophy is born and buried." (p. 23). The decision has the consequence that, on the one hand, there cannot be supposed to exist a One of all that exists, a universe or totality of beings; and on the other hand, that "the one, which is not, solely exists as *operation*" (p. 24), namely that of the "count-as-one" whose structure is formulated by axiomatic set theory. In Meditation Three of *Being and Event*, Badiou reads Russell's paradox and the related set-theoretical paradoxes as confirming the non-existence of the one-all or the totality of all that exists. In particular, according to Badiou, due to the paradoxes it is necessary to abandon the hope of explicitly defining the notion of a set or of set membership; similarly, it is obligatory to "prohibit paradoxical multiples;" this involves, in particular, to prohibiting formulas "which induce incoherency," including even the prohibitive formula ~(a e a) itself. The conception here, in other words, is of an effectively prohibitive axiomatic *control* of linguistic formulation whose dictates *themselves* cannot be expressed internal to the language itself regulated, in that any such expression would result in the "ruin of the language" by introducing inconsistency within it. (p. 43)

As Badiou notes, it is relevant in relation to the status of this prohibition that Cantor himself anticipated, even before Russell demonstrated his result, that the assumption of the existence of a set of all sets, as well as certain other "too large" sets, would lead to inconsistency; accordingly, he designated these "pure inconsistent multiplicities" and identified them with the divine or absolute (as opposed to the consistently formalizable "mathematical" infinities treated in his theory of transfinite ordinals and cardinals). With this recognition, according to Badiou, Cantor "wavers" between the onto-theological thought of a supreme infinite being of the absolute and a "mathematical ontology" for which paradox "fixes the point of non-being from whence it can be established that there is *a* presentation of being." Specifically, according to Badiou, set theory "designates" pure or inconsistent multiplicities as "pure non-being"; set theory thereby legislates on "what is not", thereby "enacting, under the effect of the paradoxes – in which it registers its particular non-being as obstacle (which, by that token, is *the* non-being)" the axiomatic decision of the non-being of the one-all. (p. 42) Mathematical set theory thus "indicates," "designates," "fixes," or "legislates on" non-being by fixing it as the "beyond" of inconsistent multiplicity, which occupies the place that would be occupied by the One-All if it could exist. In this respect, it constitutively *excludes* what is (from the perspective of being qua presentable) the non-being

of the inconsistent one-all, foreclosing it with the force of an axiomatic prohibition whose force itself cannot itself be explicitly stated. But there is nevertheless, according to Badiou, another kind of "figure" of what in the multiple does not conform to the consistent law of the "count-as-one," a kind of "phantom remainder" of the non-being of inconsistency that is prohibitively excluded from its operation. In particular, "once the entirety of a situation is subject to the law of the one and consistency, it is necessary, from the standpoint of immanence to the situation, that the pure multiple, absolutely unpresentable according to the count, be *nothing.*" (p. 53). This "nothing," though "by itself…nothing more than the name of unpresentation in presentation," is there, within presentation, a kind of "phantom of inconsistency" or the designation of "that undecidable of presentation which is its unpresentable." (p. 55). Badiou also terms this "nothing" "the void" and identifies it, in the context of ontology, with the empty set, which according to Badiou, amounts to "naming the void as multiple" (p. 59). As Badiou notes, the introduction of the empty set allows the canonical set-theoretical construction of the natural numbers from it alone by means of iterated operations of set formation. In this sense the void or empty set is, according to Badiou, "*the sole term from which ontology's compositions without concept weave themselves*" (p. 57)

The void or empty set thus manifests, within ontology, a kind of delicate point at which the inconsistency that is constitutive of being in itself and which cannot appear as such within (consistent) ontology is nevertheless allowed to appear by means of a pure "act" of auto-nomination:

> Naturally, because the void is indiscernible as a term (because it is not-one), its inaugural appearance is a pure act of nomination. This name cannot be specific; it cannot place the void under anything that would subsume it – this would be to reestablish the one. The name cannot indicate that the void is this or that. The act of nomination, being a-specific, consumes itself, indicating nothing other than the unpresentable as such. In ontology, however, the unpresentable occurs within a presentative forcing which disposes it as the nothing from which everything proceeds. The consequence is that the name of the void is a pure *proper name*, which indicates itself, which does not bestow any index of difference within what it refers to, and which auto-declares itself in the form of the multiple, despite there being *nothing* which is numbered by it.

> Ontology commences, ineluctably, once the legislative Ideas of the multiple are unfolded, by the pure utterance of the arbitrariness of a proper name. This name, this sign, indexed to the void, is, in a sense that will always remain enigmatic, the proper name of being. (p. 59).

Here, the non-specificity of the name of the void with respect to what it names is simply the necessary result of the non-being of the one. This non-being requires, according to Badiou, that the name or indication within ontology of the inconsistency that is incapable of being named as such take the form of

the self-consuming auto-nomination of the void. At the very limits of the possibility of presentation, there is therefore necessarily a singular and unique presence that subsequently grounds the whole hierarchy of ontological construction, a phantom-like remainder within the realm of ordered, constructed being of what constitutively escapes and precedes it, which in constituting the natural numbers, thereby makes possible the whole consistent realm of countable being.

As I have argued in *The Politics of Logic*, Badiou's axiomatic decision against the One-All is itself just one side of a duality of possible orientations of thought toward being that are open in the wake of Russell's paradox and the related paradoxes. The dual is that of *consistent incompleteness* and *inconsistent completeness*. The paradoxes themselves show the untenability of the combination of consistency and completeness which is characteristic of the two older orientations of (what I have called) "onto-theology" and "constructivism", and thus necessitate, as I argue there, that one or the other of these orientations (what I call the "generic" and the "paradoxico-critical") must be adopted if they are comprehended at all. But they leave open which one, and it is equally possible to take the "generic" orientation that Badiou adopts, which combines the application of the rigorous mandate of consistency to all that can be described or considered to exist with the denial that *any* situation can be complete or total, or the "paradoxico-critical" one that I defend in the book, which by contrast *affirms* the existence of a one-all or total universe along with its constitutive paradoxes and antinomies. Though there are various reasons for adopting one of the post-Cantorian orientations or the other, relative to specific problems, one reason for favoring the paradoxico-critical orientation is that it is from this perspective alone that it is possible critically to interrogate on formal grounds the force of the traditional prohibition of contradiction that figures in the force of the "law of noncontradiction", and thereby to allow the specific phenomena of constitutive inconsistency, in-closure, and undecidability at the limits positively to appear.

From the paradoxico-critical perspective, several objections can be made to Badiou's picture of the interrelationships of presence, being, and the nothing as figured or manifest in the empty set. To begin with, as we have already seen, Badiou's understands sets as the result of a "counting as one" which forces or permits the mutual consistency of the set's elements, allowing them to be presented within ontology as consistent beings. This is to appeal to an *operational* conception of set formation: sets exist as consistent and presentable only insofar as the "count as one" has somehow or at some time been performed. But the nature and basis of this performance are themselves obscure; moreover, it is unclear how any such operative conception of the "formation" of sets by means of any kind of act, performance, or temporal operation could underwrite a theory of ontology or of all that *can* be said of being as such. Here, Badiou's picture appears to replicate the problems that have been the focus of objections against the constructivist or hierarchical pictures (such as Russell's theory of types and the "iterative conception" of sets) that arose in the attempt to preserve the consistency of axiomatic set theory in the wake of the paradoxes. In particular, the prohibition of inconsistent totality appears to require the imposition of a hierarachical picture on which there is, or can be, no "formed" totality of all sets since the "formation" of ever-larger sets can only ever have proceeded so far through the iterated stages. The picture is complicated, in itself, by the consideration that any reasonable consideration of the foundations of actual mathematical claims and arguments apparently requires that not only finite

but also many infinite totalities must be considered to be already "formed" in this sense; it is thus incumbent upon a defender of the picture to clarify how such infinite totalities may be considered to be created in finite time. But even more problematic for the picture is the clear sense in which the "formation" of ever-higher levels itself appears to require, *even as an "open" and indefinitely extensible "possibility*," implicit or explicit appeal to the actual existence of the totality of the domain in which each stage of formation takes place. If there were not such an implicit or explicit appeal, it is reasonable to hold, it would not be possible to defend the intuition that the continuation of the process of formation "must always" be possible, or to make sense in operative terms of the supposed "operation" of the iteration of set formation itself. The coherent motivation of the hierarchical and operative picture would thus seem to depend on constitutive implicit or explicit reference to exactly what it is supposed to exclude: the totality of the set-theoretical universe, or of all that exists.

By contrast with the constructivist picture ensconced in Russell's theory of types and the iterative conception of sets, Badiou's conception of the "count as one" does not aim to capture an operative process viewed as taking place entirely *within* the "ontological" domain of hierarchically ordered existence. Rather, for Badiou the operation of the "count as one" is the condition for the possibility of any presentation or regime of presence, insofar as it allows what would otherwise be "pure inconsistent multiplicity" to be *consistently* presented. But with respect to the inconsistent totality that is held, on both pictures, not to exist, the operative intuition is much the same. On both kinds of pictures, it is the axiomatic structure that implicitly dictates the conditions for set formation which *also* implicitly formulates the prohibition of the inconsistent one-all, a prohibition which must not, officially, even be stateable as the prohibition *of* anything, since it must be impossible to name or designate what is thereby prohibited. The prohibition is nevertheless necessary in order to ensure or produce the existence of an ordered realm in which consistency can always be assumed. The assurance is founded on the mandate that Badiou formulates as the "most rigid of all conceivable laws," that of "demonstrative and formalizable inference" in accordance with the law of noncontradiction. According to Badiou, only the adoption of an axiomatic system can formulate this mandate in a way that does not involve naming that which cannot, on the picture, be named: that "being" which is, in itself "pure inconsistency" and which does not, on Badiou's own prior axiomatic decision, ever count as one in its totality.

As we have seen, though, this leaves the underlying *motivation* of the adoption of the axiom system essentially obscure, and moreover leaves the status of the prohibition and mandate themselves which are thereby adopted completely unclear. In fact, the problem is not just that the prohibition of inconsistency is here unmotivated, but that it actually undermines itself, in that it must apparently amount to the prohibition of what *cannot* be stated, described, or positively referred to in any case. The prohibition which yields the specific possibility of the "count-as-one" as an operation governed by the particular axiomatic system of ZF, as well as the adoption of this system to preserve consistency itself in the face of the paradoxes, must thus be the prohibition of the presentation of what is anyway unpresentable, the constitution of the regime of presentation and ontological being by way of the enjoinder against the presentation of what can in no way be.

This is, of course, the same overdetermination that we have repeatedly seen in relation to theories of negation and of the specific basis of the law of non-contradiction, from Parmenides onward. As we have seen, the overdetermination involved in the enjoinder against the presentation of what-is-not corresponds directly to the topological picture of negation, on which negation is pictured incoherently as, on one hand, drawing an ontic line between types of beings (those that "are" and those that "are not") and, on the other, drawing an absolute line around all beings as such. The incoherent overlap between the two moments of this picture, whereby the "realm" or domain of non-being is first designated, and then its designation is prohibited, makes for the overdetermination of force that appears to underlie the motivation for the application of the law of non-contradiction itself. The law must therefore appear to be affirmed and maintained from a position which is itself strictly impossible by the lights of its own mandate. This is the position of an actual undecidability of being and non-being, or of the recognition of the positive reality of contradiction, which the application of the law of non-contradiction officially prohibits. Badiou's conception of the count-as-one, the ontological realm of presence, and its axiomatic demarcation from the broader open horizon of being in itself as inconsistent multiplicity appears to replicate this picture, this time under the specific impetus of the paradoxes which demonstrate the impossibility of the combination of totality and consistency. The paradoxes lead Badiou to deny the existence of the one-all because of the inconsistency necessarily involved in it, but in so doing he remains constrained to *refer* to this inconsistency, and hence to the being "in itself" which is thus said not to exist.[47] Inconsistency then itself appears doubly and ambiguously, both as "being in itself" prior to the putatively determined operation of the "count-as-one" and as "non-being" from the perspective of axiomatic ontology or the theory of presentation. It is only under the condition of this double appearance of inconsistency that the mandate of consistency can itself be considered to be instituted and maintained by the adoption of the particular axiomatic system (here, ZF set theory) which, subsequently regulating ontological existence by means of a determined structural conception of consistency and constructability, is thereby considered to express everything "of being" that is expressible at all.

An alternative can be found in paradoxico-criticism's recognition of the necessity of the constitutive reference to totality, which also must be seen, in light of the paradoxes, as constitutively inconsistent. From the perspective of paradoxico-criticism, accordingly, there is not and cannot be any *absolute* prohibition of inconsistency; rather, inconsistency is recognized as, on the one hand, deeply characteristic of the being of totality as such and, on the other, as capable of being foreclosed or restricted only within certain *particular* and specific constituted domains of regulative force. It is always possible to prohibit contradictions, but only on the basis of a specific determination of what will *count* as one. Such a determination takes place with the constitution of a language, or a determinate configuration of intelligibility, and this constitution always *has* as one of its conditions a determination of the sense of negation by means of the constitution of a particular figure of the totality of beings or of all that is sayable about them. But although these constituted figures each themselves constitutively involve an idea of the totality which must accordingly itself be inconsistent, they are temporally variable;

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[47] In this sense, far from "making an end" to the Parmenidean theme of the one and the many, Badiou has just recaptured its deepest topological structure.

as we have seen in connection with Heidegger's radicalization of the ontological difference in the context of the history-of-being project, it here becomes possible to consider a deeper *temporal* determination of the characteristically metaphysical determination of "beings as a whole and as such" in the series of differing historical epochs of the being of beings. The epochality of each of these determinations reflects the character of beyng itself, which holds itself back and withdraws with respect to each epoch that it determines, and in the growing abandonment of beings by being, thought as beingness or the increasingly empty generality of the *koinon*. Here, in other words, both logical negation *and* the specific force of the logical law of noncontradiction are understood as the constituted result, in relation to specific metaphysical epochs, of the deeper differentiation that is characteristic of being in relation to beings (the ontological difference) and, even more deeply, of beyng in itself. This pre-originary difference, differentiating itself, itself produces the specific sense of any determined system of reference to the (inconsistent) totality of beings, on the basis of which a particular sense of negation and a subsequent regulation of inconsistency can appear.

To see things this way is not simply to deny, however, Badiou's intuition that there is nothing "outside" formal structure, or even the specific use of set theory in theorizing the structures of being, non-being and nothingness. In particular, as we have seen, on the paradoxico-critical orientation the relationship of set membership symbolized by 'ε' can be seen as an "allegory" or formally-indicative metaphorization of the logical structure of linguistic predication itself. This interpretation gains concreteness and motivation not only from Cantor's suggestion that the unity of the set can be specifically related to the unity of what Plato understood as the (predicative) idea, but also from the actual formal use of the structure of set membership as representing relations of subsumption under predicative concepts, as for instance in figuring the relationship of "satisfaction" in Tarski's approach to semantics and to truth-definition. If, however, set theory is appealed to in this way as illuminating the structure of possible predication *in general*, then the relevant set theory is not necessarily ZF; rather, the specific possibility of *inconsistent* predication, which appears positively necessary if we are to explicitly predicate anything of totality at all, must be included as at least a structural possibility. We can do so, and also put the formal intuition of a relationship between set theory and predication on a firm and general basis, by appealing to the naïve set theory essentially formulated by Frege in the *Grundgesetze*; in particular, here it is possible and necessary to affirm the axiom of *unlimited* comprehension, which calls for a determinate and existent extension for each linguistically meaningful predicate.

After Russell and Cantor, it is clear that to do so is to acknowledge the necessary structural existence of paradox, contradiction and inclosure as a constitutive feature of the phenomena of totality, sense, and truth themselves. With respect to the Fregean logicist project of grounding mathematics on set theory, this acknowledgment also points to a necessary "outside" of the constituted domain of arithmetic founded on the iteration of operations of set formation, what Badiou calls "ontology". The phenomenon of this inconsistent "outside" is, however, also characteristic of the structure of sense in relation to reference itself; for as is shown by Russell's paradox, sense can only be generally correlated with reference on pain of recognizing the total domain of sense as *constitutively* inconsistent. Thought in terms of its broader ontological determination, this inconsistency looks two ways, in an "inward" and an "outward" direction: inwardly, it points to the necessary structural contradictions which inherently

arise for any constituted domain of sense in relation to its totality and what it understands as the basis of its own constitution; outwardly, it points to the phenomenon of a specific *excess* of sense over reference, such that there is always "too much" sense in relation to the realm of reference, or too much structural *presentation* to be recaptured by any consistent regime of presence.[48] As we have seen in connection with Heidegger, this structural excess of sense can itself be understood, in relation to the temporal phenomenon of projection that is ontologically constitutive of sense as such, as the outcome of a more basic differentiation that is pre-original difference itself, and which underlies the historical constitution of every determinate regime of sense. Thought being-historically and as a radicalization of the ontological difference between being and beings, this pre-original difference ultimately grounds all such determinate regimes and makes for the very possibility of the imposition and maintenance of a determined conception of negation and contradiction within them. What *appears* therein as non-being, negation and privation thus has a more determining and global source in the primary and pre-originary excess of the differentiation of difference itself.

To put things this way is not actually to disagree with anything Badiou says about "being in itself" as inconsistent multiplicity or its foreclosure from specific presentation within a determinate axiom system designed to preserve consistency, such as ZF; indeed, it is a consequence of the inherent inconsistency of totality demonstrated by the paradoxes that the whole of beings, if it is to be thought or referred to at all, must be thought or referred to as *outside* any such system. However, it *is* to insist upon the cogency of a question about the possibility of presentation which is itself posed in a sphere that is not limited *a priori* to *consistent* presentation, and thereby to keep open the question about the broader ontological foundations for the specific phenomenon of consistency itself. As we have seen, Badiou answers this question only by the reference to a broader sphere of being as "inconsistent multiplicity" and to the force of an obscure operation of "counting as one" which constitutes the domain of presentation on the basis of the superior mandates of the axiomatic system. But the reference to "inconsistent multiplicity" which is thereby excluded must itself be incoherent if these mandates are in force, and the operation of the "count as one" and its force in maintaining consistency have the overdetermined structure we have seen repeatedly, that of the prohibition of the ostensibly impossible or the requirement of the ostensibly necessary. Approaching the broader ontological (or metalogical) situation in a less prejudiced manner, it must be acknowledged both that any axiomatic system capable of capturing *all* arithmetic relationships (and thus the "real structure" of beings insofar as they are countable) must be inconsistent, and on the other that the consistency of any system capable of capturing arithmetic relationships at all cannot be proven or guaranteed by its own internal means.[49] To acknowledge this is to acknowledge that the decisionist or axiomatic force of any mandate intended to enforce the consistency of a determinate system of presentation by differentiating, *from* the explicit or inexplicit totality of inconsistent being itself, a determinate regime of the maintenance of consistency is itself possible only on the broader basis of an understanding reference, implicit or explicit, to this broader totality itself. This is at the same time, by contrast with the delimitative gesture which results in the prohibition of the expression of what must be expressed in the very prohibition, to affirm the

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[48] For this "excess of sense", see The Politics of Logic, --
[49] This is the content of Godel's first and second incompleteness theorems, respectively.

unlimited power of language in relation to this totality, and to all the predicates of various types (including, eminently, "sense", "truth", or "being") which appear to involve it.

What, then, of Badiou's conception of what is for him the specific ontological *phenomenon* of the 'nothing,' its appearance in ZFC set theory at the very *foundation* of the hierarchical constitution of numbers as the empty set? From the perspective of the broader application of naïve set theory in view here, it is not necessary to deny the existence or uniqueness of the empty set, or to deny that it can be considered to 'present', in a particular sense of 'present', the inconsistent totality of being itself. As we have seen, the idea of a specific phenomenalization of the nothing, by means of which a first explicit relation to being itself (over against the totality of beings) becomes possible, is the key idea of Heidegger's position in "What is Metaphysics?" In his later development of the being-historical project, the possible phenomenalization of the "nothing" of any determinate epochal thinking of the being of beings is itself seen on the more radical basis of a pre-originary and *pre*-phenomenal differentiation of difference. This does not mean, however, that the grounding of each total epochal configuration does not "appear", within these configurations, as nothingness and nullity; indeed, that it does so in each case is the exact correlate of the assumption of a constitutive order of the founded and the founding within the field of ontic relations, which is characteristic of metaphysics in each of its configurations. From this perspective, therefore, it is not necessary to deny the specific phenomenon of void, or of ground as ab-ground, at the "bottom" of each foundationally constituted total order; but this phenomenon ultimately tells us more about the constitutive structure of founding and founded than about the broader ontological situation of the relationship of being and beings itself. From the paradoxico-critical perspective, indeed, as we have seen, it is necessary to think a priority of difference as *pre*-originary, which is to say that it is necessary to think of it as prior to *any* foundational order. From this perspective, there is indeed a void at the bottom of all constituted and founded things, and the intuition formulated in the standard construction that "weaves" the numbers from the void captures the necessity that any such order must indeed foreclose its *own* total foundation from any possible presentation. But *this* entire structure of the founding and the founded, including the very possibility of generating the ordinal numbers and of counting as such, must itself be thought as conditioned by a more original or pre-original difference which contains, in itself, no hierarchy and no privileged order of beings. If at the bottom of the construction of constructible things is the atomic void, it is thus also necessary to think as prior to the order of possible construction an infinite and bottomless affirmation of difference. "Before" the constitution of (consistent) hierarchy and before even the phenomenon of the "nothing" at its origin, it is accordingly necessary to think a pre-original difference at the root of phenomena, a difference that shows up or phenomenalizes itself, within any hierarchical order or within the order of (numerical, ordinal) hierarchy itself, only as irreducibly split between, on the one hand, the nullity of the foundation (the zero) and, on the other, the openness of the "indefinite" possibility of its hierarchical progression.[50] To consider the way in which the whole hierarchical regime of number, "woven" from the void but also thought as irreducibly "open" in its indefinite development, is thus constituted only under the condition of a specific prohibition of the inconsistent whose force must always be equivocal, and of a prohibitative limitation of language with respect to its own inherent

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[50] Miller vs. Badiou: Mark and lack (?) – also: ideal genesis of number (Plato).

powers of predication, is to consider a specific origin of number from a field of broader relations correlative to the "virtual" field induced or presupposed by sense itself; it is, in other words, to contemplate an "ideal genesis" of number, under the constraint of consistency, imposed upon a determinable but indeterminate field itself constituted by pre-originary difference.

From this perspective it is also necessary to challenge Badiou's specific proposition, according to which the empty set is the "proper name" of being, even *within* the context of the founded hierarchy that ZFC captures and the standard pictures of the realm of sets represent. In particular, this proposition can be opposed, in an obvious way, to Derrida's conception of the pre-originary difference that he figures as a *differance* and 'trace' that is, 'in a certain way, older than being." On Derrida's conception, in particular, "there will be no unique name, even if it were the name of Being." (p. 27). The point of his insistence here is explicitly *not* to oppose the metaphysical or ontotheological thought of a specific name of being to the thought, equally ontotheological (in the mode of "negative theology") of Being as an ineffable being or essence, transcendent in its perfection to all and any possibility of naming or description.[51] It is, rather, to point to the structurally *necessary* unnameability of *differance* as the pre-originary condition for all constituted structures and all possibility of reference itself.[52] In this way, the pre-originary difference at the ultimate root of all phenomenalization and presence does not have a name, not even the name "being in itself" and not even the name "inconsistency". The empty set is itself not such a name, and in naming the void it does not name inconsistent being in itself. What it *can* be considered to do, under the specific limitative condition of the *prohibition* of inconsistency, is to *indicate* pre-originary difference, or rather to trace it by means of a dynamic tracing that is also, simultaneously, erasure. In this precise sense, the empty set is not a name but an indicator, a formal indicator of the very meta-structural basis of form itself in the tracing of the determination that will, for Heidegger, separate presence from presencing, beyng "in itself" from its determined phenomenalization in metaphysics. As Derrida emphasizes, the mode of this indication communicates with that of an irreducible temporality, or even a constitutive undecidability of temporality and spacing, that situates the constituted time of numerical order and founded hierarchy in undecidable relation to a more complex and undecidable play of the trace, which is both temporally "older" and more immediate than the "original" temporality of being and even of *Ereignis* "itself."

Along these lines and following Derrida in a certain affirmation of the "play" of this trace, it is certainly possible to formulate, on the basis of the paradoxico-critical orientation, a further critique of Badiou's picture of the specific conditions for the kind of systematic theory of "appearances" that he calls, in *Logics of Worlds*, a "phenomenology," to be set alongside the "ontology" developed in Being and Event.

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[51] 'There is no name for it': a proposition to be read in its *platitude*. This unnameable is not an ineffable Being which no name could approach: God, for example." (p. 26)

[52] "Older" than Being itself, such a differance has no name in our language. But we 'already know' that if it is unnameable, it is not provisionally so, not because our language has not yet found or received this *name*, or because we would have to seek it in another language, outside the finite system of our own. It is rather because there is no *name* for it at all, not even the name or essence of Being, not even that of "difference," which is not a name, which is not a pure nominal unity, and unceasingly dislocates itself in a chain of differing and deferring substitutions." (p. 26)

This conception of phenomenology depends upon, in particular, the intuition of an imposed and hierarchical order of structure, itself committed to a constructivist and atomist picture of composition, and ultimately incapable (as I have suggested elsewhere) of grounding in any motivated way the distinction it presupposes between the order of things in themselves and that of their phenomenally constituted appearances.[53] Since I have developed this critique elsewhere, I will not repeat it here; what is important to note in the present context is just that Badiou's conception of a "phenomenology" of the determinate structuring of appearances as distinct from the general ontology of situations itself presupposes, in each case of what Badiou understands as a phenomenally structured world, the prior imposition or constitution of what he calls a "transcendental", a determining structure of relations whose own positive ontological and temporal conditions of existence Badiou does little to clarify.

On the other hand, though, within the ambit of the question of the basis of *presence in general* – the distinctive Heideggerian question which must be posed, it seems, in a way that is both broader and more specified than the question Badiou treats under the heading of a "phenomenology" of appearances (broader because it is equally phenomenological *and* ontological; more specified because it presence is here understood as irreducibly both spatial *and* temporal) – it is possible on this basis to reconsider Badiou's specific rejection, in the opening pages of *Being and Event*, of the "Heideggerian thesis of the withdrawal of being". As we have seen here, this Heideggerian thought of withdrawal, developed first as the ontological difference and second, more deeply, as the epochal withholding of beyng itself, points toward or communicates with a thought of pre-originary difference out of which the specific structure of what Heidegger designates as the truth of Beyng and Ereignis must themselves be thought. Under the condition of the paradoxical "closure" of the metaphysics of presence in the exhaustion of its constitutive structure of representation, this points to the position from which this truth can again be thought as the leap to what is wholly other, the "other" beginning of another history. What is ultimately at stake here, therefore, is not the nostalgic recovery of an origin, or the thought of the recapitulation of a presence full in itself but inaccessible to structure. It is thus a misreading (at least of this strand of Heidegger's text) to suppose, as Badiou does, that it envisions the withdrawal of being from presence only as the prelude to a poetic or mystical recapitulation of what is itself a figure of presence, or of the full and adequate presentation, beyond structurally determined sense, of the general extra-structural (e.g. "extra-logical", poetic, religious or mystical) conditions of presentation themselves. Rather, as I have suggested, the thought of withdrawal is itself the thought of a structurally inherent undecidability characteristic of structure as such, and in fact positively indicated on the basis of the very dynamics of structure and constitution in relation to their own constitution and regulative force. What withdraws is not, then, something simply exterior to structure, but it also not something that can be simply named within it; it is, rather, indicated in the metalogical reflection that considers and decomposes the possibility of structuration and reference themselves. In withdrawing, it traces; the trace is the trace of the presentation of presence, or of the successive determination of the inconsistent

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[53] In particular, in the "axiom" of "materialism", according to which every atom of appearing is also a real (ontological) atom, we see the basic and basically ungrounded assumption of an atomistic correspondence within structure. With Heidegger, we should rather see phenomenology and ontology as the *same* topic, and both as having unitary conditions in what relates the field of possible ontical presencing itself to its 'exterior' (structural or temporal or ontological) conditions.

totality by way of the specific mandate of consistency throughout the history of metaphysics. Such a conception of what withdraws as the structurally indicated *temporal* trace of what is never simply present but is nevertheless problematically presupposed in every ontological-ontic structure of sense and reference, and every conception of the normative force of logic in relation to negation and contradiction, might be the specific condition for a critical recovery of Heidegger's conception of the truth of being in our time.

V

As we have seen, on a straightforward reading of the solution suggested by the Eleatic visitor in the *Sophist* to the problem of falsehood and negativity posed by Parmenides, the solution grounds the specific possibility of negativity, and thereby falsehood, in the specific phenomenon of non-being which is itself made possible by the limited mixing of difference with the other great types under the overarching condition of the logical koinon. In a passage in Difference and Repetition, however Deleuze points to the possibility of a different reading of Plato, one that elicits the properly "dialectical" moment of questioning which precedes and also envelops this positive solution itself in the text of the *Sophist*:

> We are not concerned at the moment with the distinction which should be drawn between the two instances of the problem and the question, but rather with the essential role which both together play in the Platonic dialectic – a role comparable to that which the negative will play later, for example in the Hegelian dialectic. However, it is precisely *not* the negative which plays this role in Plato – so much so that we must consider whether or not the celebrated thesis of the *Sophist*, despite certain ambiguities, should be understood as follows: 'non' in the expression 'non-being' expresses *something other than the negative*. On this point, the mistake of the traditional accounts is to impose upon us a dubious alternative: in seeking to ground negation, we are satisfied if we manage to posit, in being itself or in relation to being, some sort of non-being (it seems to us that this non-being is necessarily the being of the negative or the ground of negation). The alternative is thus the following: either there is no non-being and negation is illusory and ungrounded, or there is non-being, which puts the negative in being and grounds negation. Perhaps, however, we have reasons to say *both* that there is non-being *and* that the negative is illusory. (p. 63)

As we have seen above, taking seriously the implications of the pre-originary difference which is pointed out, in different ways, by Heidegger, Deleuze, and Derrida, allows us to discern an origin of negation in the more basic structure of difference and differentiation; on the Heideggerian position, this more basic structure underlies, in particular, the constitution of any total domain of reference to beings, whereby it also appears as limit-contradiction and paradox and thereby gives significance to the specific "non" of non-being. As I have tried to show, the picture can in fact be independently motivated through a consideration of the structure of specifically *logical* negation, such as occurs in Frege's own discussion of negation and is further articulated in his picture of sense. In developing the conception further, Deleuze

points to a specific priority of the *problem* or of the *question* in the differential grounding of negation and non-being, indicative of a primary structure "in Being" itself:

> Neither the problem nor the question is a subjective determination marking a moment of insufficiency in knowledge. Problematic structure is part of objects themselves, allowing them to be grasped as signs, just as the questioning or problematizing instance is a part of knowledge allowing its positivity and its specificity to be grasped in the act of *learning*. More profoundly still, Being (what Plato calls the Idea) 'corresponds' to the essence of the problem or the question as such. It is as though there were an 'opening', a 'gap', an ontological 'fold' which relates being and the question to one another. In this relation, being is difference itself. Being is also non-being, *but non-being is not the being of the negative*; rather it is the being of the problematic, the being of problem and question. Difference is not the negative; on the contrary, non-being is Difference: *heteron*, not *enantion*. For this reason non-being should rather be written (non)-being or, better still, ?-being. In this sense, it turns out that the infinitive, the *esse*, designates less a proposition than the interrogation to which the proposition is supposed to respond. (pp. 63-64).

The claim, according to which the infinitive "being" itself should not be considered to have, primarily, a referential meaning but should rather be considered in terms of the specific structure of interrogation and response, finds ample confirmation in Frege's own conception of the basis of negation in relation to the constitution of the realm of sense itself. As we have seen (section II above), Frege's primary appeal in arguing for a realm of indifferently true or false contents of thought graspable in thought is the structure of the interrogative question: since it must be possible to comprehend a question prior to knowing its answer, it must be possible to grasp the contents of indifferently true as well as false sentences as well. For Frege as for Deleuze, in other words, the specific structure of the question has a general priority *over* negation and non-being with respect to the constitution of the domain of sense itself; this priority extends to the very determination of the structure of sense as such, and cannot be treated as simply one separable element or external factor with respect to it. This provides an alternative, as I have tried to show, to any picture that accounts for the phenomenon of negativity in terms of the specific appearance of phenomenalization of non-being among beings; in a deep sense, this is the key to overcoming the basically mimetic conception in which falsehood is understood as illusion.

As I have argued, this relationship between the origin of negativity and the constitution of sense points to a different sort of determination of the negative, not out of non-being or its phenomenalization, but out of the inherent reflexive dynamics of totality itself in relation to itself and what it encompasses; in particular, I have argued that the specific structure of logical negation cannot appear except correlatively with the constitutive structure of limit-paradox and contradiction which is structurally characteristic of *any* total constituted domain of sense. Here, it becomes possible to consider that negation and contradiction have an actual structural basis, not in any psychological attitude, act, or indeed in any ontic relationship whatsoever, but indeed in the inherent *metalogical* dynamics of totality

and consistency as they show up in metalogical structures such as that of Russell's paradox.[54] To consider this structure as determinative of negation is, as Deleuze says, not to point to any subjective determination or any contingent insufficiency in knowledge; rather, it is to consider the question of the basis of logical structure from quite a different position than that involved in any subjectivist, psychological, or indeed ontic conception. It is to consider, in particular, the priority here of a very special kind of question in relation to the structure of negation, non-being, and falsehood: the kind of question that asks after the conditions of possibility of a logically determined field of content *in general* from a position that is not simply exterior to it. This is the sort of question that is posed in the ill-defined field sometimes discussed as "metalogic", where it leads to the specific results of Cantor, Russell, and Godel; as we have seen, it is also the kind of question posed by Heidegger in asking after the ultimately temporal basis of the sense of beings in their differential relation to Being itself. As Deleuze suggests, discerning this kind of problematic, in Plato's text, behind or enveloping the specific kind of solution given by the Visitor in the Sophist can also elicit the specific sense of the dialectic involved in Plato's own conception of the "method" of synthesis and diaeresis, prior to its later fixation in the Hegelian idea of determinative negation. As Deleuze suggests, to understand Plato in this way is to see the dialectic as a process of differentiation, prior to and at odds with representation, capable of bringing out that aspect of what Plato thinks as the Idea that is itself linked to being itself, prior to and independent of mimesis and identity.

It can also, as Deleuze says, indicate the way to a reading of Heidegger that brings out what, in his text, retains the status of the posed problematic, with its specific priority in relation to structurerd sense. In particular, as Deleuze points out in a brief "Note on Heidegger's Philosophy of Difference," there are many *indicia* in Heidegger's corpus of a more originary difference at the root of all posing of the ontological problematic and ultimately responsible for its structure. First, in the 1949 preface to *The Essence of Reasons*, Heidegger designates the ontological difference as the "not between beings and Being"; as we have seen, this points toward a more radical determination of the ontological difference itself in the late, being-historical project, now thought *temporally* as the withdrawal of Being from beings. Second, as Heidegger explains in *The Essence of Reasons* itself, the ontological difference is primordially related to questioning itself; in particular, it is the "being of questions", whereby, as Heidegger says there, particular domains or determinate fields are marked out for possible coherent questioning. (We shall develop this consideration of the relationship of the demarcation of fields to questioning and the basis of both in ontological difference further in chapter 7, below). As Deleuze further notes, this means that "difference is not an object of representation"; in particular, in ontological difference there appears a primary difference that cannot be subordinated to identity or related as a third term to the two supposedly self-standing terms of Being and beings. In fact, as Deleuze also notes and as we have seen, Heidegger himself would come to repudiate his own earlier conception of the "transcendence of Dasein" which figures, in *The Essence of Reasons* and other early texts, as such a third term; this repudiation, as we have seen, is intimately related to the thorough repudiation of identity and similitude that Heidegger carries out in the Beitraege and which allows him to criticize the specific way in which *omiosis* and mimesis figure in Plato's own conception of the *idea* as

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[54] Cf. Bova (2010); also *The Politics of Logic,*

koinon. This leads, as Deleuze points out, to the late position expressed in "The Principle of Identity," on which difference, which cannot be subordinated to identity, must be thought in terms of a "same" that precedes identity and is rather the "belonging-together of what differs, through a gathering by way of the difference." (p. 66) Each of these claims points to a deepening recognition, Deleuze suggests, that "the Heideggerian *Not* refers not to negation but to questioning"; in particular, the ontological difference itself and its progressive deepening point to the ever-deepening posing of the question of a differential ground at the heart of the ontological problematic of the sense of the being of beings, or the historical problematic of the truth of being itself.

Deleuze himself endorses all of these suggestions of a primary 'correspondence' between difference and questioning at the level of the ontological problematic; by pointing to this correspondence Heidegger has given "renewed splendour to the Univocity of Being." Deleuze asks only whether Heidegger has in fact fully succeeded in it:

> If it is true that some commentators have found Thomist echos in Husserl, Heidegger, by contrast, follows Duns Scotus and gives renewed splendour to the Univocity of Being. But does he effectuate the conversion after which univocal Being belongs only to difference and, in this sense, revolves around being? Does he conceive of *being* in such a manner that it will be truly disengaged from any subordination in relation to the identity of representation?

Deleuze does not answer the question decisively; but he poses, in response, the further suggestion that Heidegger does not in fact completely succeed in thinking the univocity of Being which, in its repetition, owes nothing to identity and representation: "It would seem not, given his [Heidegger's] critique of the Nietzschean eternal return." (p. 66)

As I have argued, the thought of a pre-originary difference at the basis of negation, non-being and totality allows for a rigorous metalogical position from which the nature of contradiction and the force of the law of non-contradiction can be considered and interrogated on its deeper ontological ground. It allows us to see, in particular, how this force is maintained on the overdetermined basis of the edict, originally formulated in Parmenides, which prohibits the impossible and demands the necessary of thought in relation to being as against non-being. This edict and its force, as we have also seen, captures in a basic sense the relationship between thought and being in what Heidegger treats as the "first" beginning, also co-determining the official conception of the nature of non-being in the *Sophist*, the basis of the explicitly stated law of non-contradiction in Aristotle, and logical pictures of the relationship of thinking and being up to Frege and the early Wittgenstein. On Heidegger's treatment in the Beitraege, the specific relationship of being and thinking that is conceived here, beginning explicitly with Plato's conception of the idea, as representation and identity, culminates with the contemporary configuration of machination and lived experience, in which everything becomes calculable and experiencable on the basis of representation and being as beingness or the *koinon* maximally withdraws. But in the historical maximization or completion of this withdrawal, Heidegger also sees the possibility

of the futural reversal or leap in which, beyond the effectivity of trafficking with beings that is characteristic of our present is suddenly reversed into the disclosure of the truth of beyng itself that will close the epoch of metaphysics as a whole and inaugurate a wholly other history.

As I have argued elsewhere and will attempt to verify in part II, below, the "normative" force with which the logical or rational prohibition of contradiction is maintained in determinate languages and systems of thought is, viewed from a metalogical perspective, coeval with or actually identical with the value and regulative assumption of an instrumental "effectivity", or of the general guarantee by technical means of the unproblematic and reliable functioning of rule-governed systems for the regulation and production of beings. The development of this value reaches a kind of limit, as I shall argue, with the contemporary technological regime of "information" and computational technologies of "information processing." Here, as Heidegger himself clearly points out, the idea of universal calculability, as it is presupposed and maintained in the practices, activities and organization of everyday life around the planet, has a basic and indicative significance with respect to the character of the present and its continuing "metaphysical" determination. Moreover, it is no longer possible, for reasons Heidegger did not appreciate as well as the ones he did, to hope to find any simple "exterior" to this unlimited domain of calculability, at least among existing activities and practices (for instance, particularly, those that are seen as determined by existing "cultures" and "ways of life"); rather, what an ontologically and being-historically grounded understanding of the present actually requires is a logically and temporally penetrating critique of the very ideas of practices, techniques, and technologies themselves as they produce and underlie the contemporary global configuration. Here, the metaphysical "reign" of logic is manifest in the actual basis of computing technology in the mechanization of (Fregean) logical relations, which makes possible the definition of a "universal" calculating machine that structurally underlies all actual programmable computers. Thought not just as the basis for specific technologies but as the character of the contemporary interpretation of beings, this regime is characterized by the countability and measurability of all things, save perhaps for an artificially created domain of what is conceived of as the "human", "emotional," or "incalculable" and relegated to the (actually strictly correlative) domain of lived experience. But the regime is prepared, from a long way off (both historically and logically speaking) by the actual conception of number, countability, and measurement as the conceptual and practical basis for the demarcation of domains of beings (up to and including the domain of the "objective" itself) in which the calculative handling of, and trafficking with, beings is thereby possible. The dynamics of this preparation are figured or actually instantiated by the fates of Frege's logicism, in relation to the assumption of a universally comprehensive language adequate, in its demarcation of sense, to the infinite countable totality of the world.

Seen in these terms, the late-Heideggerian critique of the contemporary metaphysics of technological enframing has as its necessary correlate an ontologically grouned critique of the law of noncontradiction as it operates, historically and in contemporary life, in producing and regulating determinate configurations of thought and practice. This force of the law of noncontradiction is clearly related, in a basic sense, to what is envisioned as the force of logic and logical thinking themselves, both as "intrinsic" characterizations of thinking and in relation to a world conceived as thinkable in its totality. This force, I have argued, can be understood not only from a being-historical position but also from a

metalogical one, in which logic itself confronts and provides terms for understanding the basis of its own force, evincing the ultimate ground of the force of coherent reasoning in limit-contradiction and of the effectively decidable in the underlying undecidability of being.

What remains to be asked is just the question of the *temporality* of this basis: how is the effectiveness of logic in regulating thinking supported by or actually constituted on a temporal basis that is not that of eternal presence but rather rooted in the more complex arche-temporal structure of disclosure and truth itself? As has often been noted, Aristotle's own formulation of the principle of non-contradiction, according to which "It is impossible for the same thing to belong and not to belong at the same time to the same thing and in the same respect"[55] depends on two conceptual elements which appear extrinsic to the "logical" character of the principle itself (which might be expressed, in and of itself, as ~(A . ~A) The first is the reference to "respects" in which something may belong, and the second is the reference to time ("at the same time"). While the first element introduces the Aristotelian regulation of "belonging" or predication according to "respects" which unfolds in the systematic structure of substance and accident, species and genera, the second introduces a particular regulation of becoming, a segmentation of time in relation to the simultaneity of the "now", which domesticates the contradictoriness of becoming by spreading it out and dispersing it through the punctual succession of moments. As we shall see in more detail in part II, though, the actual dialectical basis for this regulation is more originally visible in Plato's own struggles, in the late dialogues, with and against the paradoxes of an "unlimited becoming" which appears to manifest the basic character of temporal becoming itself and threatens, as is repeatedly marked in Plato's text, to undermine every stable identity by letting all things flow off into their opposites and every process of becoming overleap its limits. This problem of "becoming-unlimited", often identified with a sophistic position, but also that of Heraclitus, according to which the rights that must be accorded to becoming and change in relation to being end, finally, with becoming overtaking all being and making everything unintelligible, is opposed in the late dialogues by a variety of figures of limitation, counting, and measure, including the constitutive reference to a compositional method of the logical "synthesis" of linguistic elements conceived on the model of the limited and regulated phonemes or atomic elements of language in relation to the unlimited continuity of voice. But there is also, in the late Plato and marked more by allusion and allegory than explicit description, the suggestion of a *prior ideal genesis of number and discrete order* itself, on the basis of the irreducible dialectical dynamic of the one and the "indefinite" dyad.

As we shall see in more detail in part II, the interrogation of the being-historical basis for the contemporary configuration of the dominance of calculability and machination thus ultimately involves, in reading the history of this basis in the specific metalogical features of the metaphysical tradition back to Plato, uncovering the deep problematic of becoming-unlimited as it underlies the being of number. This also necessarily involves, as we shall see, considering in a basic way the structure of the unlimited and the infinite itself, as it is shown or evinced by using contemporary metalogical and formal methods, and also as it still appears as a kind of foreclosed but dangerous remainder in Plato's texts, prior to its subsequent domestication in Aristotle's conception of potentiality. This domestication is itself strictly

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[55] *Metaph* IV 3 1005b19–20

correspondent, in Aristotle, to the first definition of "logic" in terms of the syllogistic forms; but it forecloses a more original significance of the relationship of the *logos* and the form as idea, which is thought by Plato in terms of the capacity of the logos, before or beyond representation, to capture the real of "what is", of being in itself. The analytic up to this point has attempted to show how the nature and force of logic, as it thought from Plato to Frege, constitutively includes and structurally evinces a basic ontological problematic of truth with respect to which it operates both as putative solution and regulative delimitation. But is it possible to bring into view, on this basis, the more original relation of *logic* to *time*?

(Chapter 5 of Draft MS: *The Logic of Being: Heidegger, Truth, and Time*)

"Not empiricism and yet realism in philosophy, that is the hardest thing." -Wittgenstein

"A human is that being which prefers to represent itself within finitude, whose sign is death, rather than knowing itself to be entirely traversed and encircled by the omnipresence of infinity." -Badiou

I

In his 1951 Gibbs lecture, "Some basic theorems on the foundations of mathematics and their philosophical implications," drawing out some of the "philosophical consequences" of his two incompleteness theorems and related results, Kurt Gödel outlines a disjunctive alternative which, as I shall argue here, captures in a precise way the situation of contemporary ontology in its ongoing consideration of the relationship of formalism to the real of being:

> Either mathematics is incompletable in [the] sense that its evident axioms can never be comprised in a finite rule, i.e. to say the human mind (even within the realm of pure mathematics) infinitely surpasses the powers of any finite machine, or else there exist absolutely unsolvable Diophantine problems of the type specified…(where the case that both terms of the disjunction are true is not excluded so that there are, strictly speaking, three alternatives).[1]

A consequence of this aporeatic situation of contemporary thought, as I shall try to show, is that the longstanding philosophical debate over the relative priority of thought and being that finds expression in discusssions of "realism" and "anti-realism" (whether of idealist, positivist, or conventionalist forms) can only be assayed from the position of what I shall call a *meta-formal* reflection on the relationship of the *forms* of thought to the *real* of being. This isexactly the kind of reflection exemplified by Gödel's argument in the Gibbs lecture. Moreover, if Gödel's argument is correct, and if it bears (as I shall try to show it does) not only on the question of "mathematical reality" narrowly conceived but, more generally, on the very "relationship" of thought and being that is at issue in these discussions, it is also not neutral on this question of relative priority, but rather suggests a (necessarily disjunctive) kind of *realism* – what I shall call "metaformal" realism -- that differs markedly both from "metaphysical realism" and from the newer varieties of "speculative realism" on offer today.

The type of realism I shall defend here is not primarily a realism *about* any particular class or type of objects or entities. Thus it is not, *a fortiori*, an *empirical* realism or a naturalism (although I also do not

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[1] Gödel (1951), p. 134.

think it is *inconsistent* with positions that march under these banners).[2] In particular, its primary source is not any empirical experience but rather the experience of formalization, both insofar as this experience points to the real-impossible point of the *actual relation* of thinkable forms to being and insofar as it schematizes, in results such as Gödel's, the intrinsic capacity of formalization problematically to capture and decompose its *own* limits. As such a position on the form of the possible relationship of thought to being, it is (as I shall argue here) relevant to the "ontological" problematic of the possible thought of being "itself", and is even requisite for a furtherance of this problematic on realist terms today. In particular, because meta-formal realism is not an ontic realism about any particular domain of entities, but rather unfolds the inherent structural forms of thought in relation to the sense of "being", it can support an *ontological* realism that is appropriate to the formal indication of the "relationship" of ontological difference between being and beings and also to the formally indicated problematic of the underlying structure of time as it is "given" in relation to "being as such."

Such an ontological realism is, as I shall argue here and in the following chapters, also requisite in order to develop the ontological problematic of sense and time in abeyance of any reduction of it to psychology, anthropology, or anthropologically grounded "cultures" or "social practices." Whether or not one agrees with the exegetical claim that Heidegger himself, after *Being and Time,* increasingly seeks to distance himself from and repudiate a residual "anthropologism" or humanism that still finds expression there in the "preparatory" fundamental analysis of Dasein (a repudiation that appears to find expression, for instance, in the forceful terms of the 194- "Letter on Humanism"), the sort of realism that I argue for here is at least a *possible* position relevant to the ontological problematic, both as developed in *Being and Time* and as it yields Heidegger's later interrogation of the "truth" of Being independently of any relation to entities. As such, as I shall argue, it is requisite (probably uniquely) for a realist ontological conception of time that avoids any derivation of time from the constitutive capacities of the representing and thinking subject. It also provides a concrete formal basis for critical arguments and positions that are unmistakably Heidegger's own. For on one hand, as I shall argue, the attitude or position of meta-formal realism as I shall develop it here provides a formal basis for the critique of any position that puts the *representing subject* at the basis of the possible thought of being by indicating the formal-ontological configuration that first underlies the ontological possibility of there being anything like a subject to begin with. On the other hand, and on the same realist terms, it provides a concrete basis for the critique of the identification of being with effective *actuality* [Wirklichkeit], that Heidegger sees as deeply characteristic of metaphysical thought and practice, most of all in its contemporary culmination in the regime of technology and totalizing "enframing" [Gestell].

In *The Politics of Logic*, I systematically interrogated the consequences of formalism and formalization in this sense for contemporary political, social, and intersubjective life according to the various orientations possible today for thought in its total relation to being, seeking to locate, in each case, the actual point and limits of the effective formal capture of the real in thought. In particular, I suggested there that both of the orientations I presented as "post-Cantorian" demand a *realist* attitude grounded in this experience of the transit of forms, and capable of acknowledging their inherent difference from anything simply *created* or *produced* by finite human thought. As the name "post-Cantorian" is meant

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[2] I return to the issue of the relationship of realism to materialism in section IV, below.

to index, one decisive basis for this distinctive kind of realism is the chain of consequences following from the Cantorian event and the problematic accessibility of the infinite to mathematical thought, up to and including Gödel's incompleteness results, as these consequences offer to challenge and reconfigure the traditional conception of the human as an essentially finite agent of thought. As I also already suggested there, the metaformal realism I shall develop more fully here might be formulated precisely, referring in passing to the Lacanian motto according to which "the Real is the impasse of formalism," as a realism *of* the "Real" in something like Lacan's sense. The "Real," in this sense, is thought as one of the three "registers" of psychological development; here it is both an inherent limit-point and an obscurely constitutive underside for both of the other two "registers" of the Imaginary and the Symbolic and structurally articulates the subject's necessarily displaced or "barred" position in relation to what Lacan characterizes as the "thing" or the "object small a".[3] Thought in this way, the "real" in this sense is to be sharply distinguished both from "reality" in the sense of actuality and from any realm, regime or domain of actually existing objects. But as Lacan himself occasionally suggests, the problematic of "access" to the Real, at the structurally necessary point of the symbolic impasse which is, for him, formally constitutive of the very structure of the subject in the order of the symbolic, is by no means unrelated to the "ontological" problematic of the structural "place" of being as such in relation to the factical life and structured language of the being that thinks. As I shall argue here, this problematic, first developed (in *Being and Time*) as that of the constitutive structure of the kind of entity – Dasein – that is ontic-ontological in its constitutive relationship to being itself, and later (after the mid-1930s) as that of the truth of being in itself that first makes possible something like a "clearing" in which being can come to light as time, is one that both suggests and demands the rigorously formal realism that I shall defend, on partially independent grounds.

To arrive at the disjunctive conclusion he draws in the lecture, Gödel draws centrally on a concept central to twentieth-century inquiry into the foundations of mathematics, that of a "finite procedure." Such a procedure is one that can be carried out in finite number of steps by a system governed by well-defined and finitely stateable rules, a so-called "formal system." As Gödel points out, there are several rigorous ways to define such a system, but they have all been shown to be equivalent to the definition given by Turing of a certain specifiable type of machine (what has come to be called a "Turing machine").[4] The significance of the investigation of formal systems for research into the structure of mathematical cognition and reality lies in the possibility it presents of rigorously posing general questions about the capacities of such systems to solve mathematical problems or prove mathematical truths. For instance, one can pose as rigorous questions i) the question whether such a system is capable of proving *all* arithmetic truths about whole numbers; and ii) whether such a system is capable of proving a statement of its own consistency. Notoriously, Gödel's first and second incompleteness

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[3] Of course, Lacan's concept of the "Real" is complex and undergoes many changes of specification and inflection over the course of his career. I do not take a view here about how precisely to define it or which formulation is most important, but seek only to preserve the link that is constitutive for Lacan between the Real and formalization at the latter's point of inherent impasse. For a very exhaustive and illuminating treatment of Lacan's concept, see Eyers (2012). I also discuss Lacan's motto and Badiou's reversal of it into his own claim for a "theory of the pass of the real, in the breach opened up by formalization..." in Livingston (2012), pp. 188-192.

[4] This is a formulation of the "Church-Turing" thesis, which holds that the structure of a Turing machine (or any of several provably equivalent formulations) captures the 'intuitive' notion of solvability or effective computability.

theorems, respectively, answer these two questions, for *any* consistent formal system capable of formulating the truths of arithmetic, in the negative: given any such system, it is possible to formulate an arithmetic sentence which can (intuitively) be seen to be true but cannot be proven by the system, and it is impossible for the system to prove a statement of its own consistency (unless it is in fact *inconsistent*).

Gödel's argument from these results to his "disjunctive conclusion" in the lecture is relatively straightforward. The first incompleteness theorem shows that, for any formal system of the specified sort, it is possible to generate a particular sentence which we can "see" to be true (on the assumption of the system's consistency) but which the system itself cannot prove.[5] Mathematics is thus, from the perspective of any specific formal system, "inexhaustible" in the sense that no such formal system will ever capture *all* the actual mathematical truths. Of course, given any such system and its unprovable truth, it is possible to specify a *new* system in which that truth is provable; but then the new system will have its own unprovable Gödel sentence, and so on. The question now arises whether or not there is some formal system which can prove *all* the statements that *we* can successively see to be true in this intuitional way. If *not*, then human mathematical cognition, in perceiving the truth of the successive Gödel sentences, essentially *exceeds* the capacities of all formal systems, and mechanism (the claim that human mathematical coginition is, or is capturable by, a formal system) is false; this is the first alternative of Gödel's disjunction. If *so*, however, then there *is* some formal system that captures the capacities of human mathematical thought. It remains, however, that there will be statements that are undecidable for this system, including the statement of *its* consistency, which is itself simply an arithmetical statement. Thus it is impossible, on this alternative, simultaneously to identify the underlying principles on which actual mathematical cognition is based and to claim that these principles are both consistent and capable of deciding all mathematical problems. In this case there are thus classes of problems that cannot be solved by any formal method we can show to be consistent *or* by any application of our powers of mathematical cognition themselves; there are well-defined problems which will remain unsolvable, now and for all time.

We can further specify the underlying issue, and move closer to discerning its deep philosophical significance, by noting that, by Gödel's second theorem, the undecidable Gödel sentence for each system is equivalent (even within the system) to a statement, within that system, of its own consistency. As Gödel emphasizes, it is (given classical assumptions) an implication of the *correctness* of any system of axioms that we might adopt for the purposes of arithmetic demonstration that the system be consistent; but then it is an implication of the second incompleteness theorem that if we are in fact *using* a specific (and consistent) formal system to derive all the mathematical truths (that we know) we could not know that we are. For if we could know this, i.e. if we could know the truth of the assertion of the consistency of the system, we would thereby know a mathematical truth that cannot be derived from that system. Accordingly, as Gödel says, it is

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[5] I here state the first theorem, roughly and intuitively, appealing to a notion of "truth" that is in some ways problematic. For discussion of the issues involved in the difference between this and other, less potentially problematic statements, see Livingston (2012), chapter 6.

…impossible that someone should set up a certain well defined system of axioms and rules and consistently make the following assertion about it: All of the axioms and rules I perceive (with mathematical certitude) to be correct and moreover I believe they contain all of mathematics.[6]

Thus if a system is (knowably) consistent it is, by that token, and *demonstrably* incomplete; if it is complete, we cannot know it to be consistent (and hence we cannot know it to be correct). Accordingly, on the assumption that we are in fact using a finite procedure to demonstrate mathematical truths, the assumption of the consistency of the system we are actually using is shown to be *essentially* unsecurable in any way that is itself consistent with our (in fact) using (only) that system at all.

Again, by considering the question of the axiomatization of mathematics, we can see how the issue is connected to the problem of the accessibility of the infinite, and the higher levels of infinity. Specifically, in order to axiomatize arithmetic set-theoretically without contradiction, it is necessary to introduce axioms in a step-by-step manner, and in fact, as Gödel suggests, this process can be continued infinitely: thus

> Instead of ending up with a finite number of axioms, as in geometry, one is faced with an infinite series of axioms, which can be extended further and further, without any end being visible and, apparently, without any possibility of comprising all these axioms in a finite rule producing them.[7]

The successive introduction of the various levels of axioms corresponds to the axiomatization of sets of various order types; in each case the introduction of a new level of axioms corresponds to the assumption of the existence of a set formed as the *limit* of the iteration of a well-defined operation.

But each axiom "entails the solution of certain Diophantine problems, which had been undecidable on the basis of the preceding axioms;" in particular, according to a result that Gödel had achieved in the 1930s, the consistency statement for any given system of axioms can be shown to be equivalent to a statement asserting the existence of integral solutions for a particular polynomial.[8] Since consistency is undecidable within the system itself, so is the problem of the truth-value of the statement concerned, but it becomes decided in a stronger system which adds, as a new axiom, a statement of the former system's consistency (or something equivalent to this).[9] But since the problem of the truth of the statement about the solutions to a polynomial is itself simply a number-theoretical problem, it follows that each particular system, if it *is* consistent, cannot solve some mathematical problem; and that *if* human cognition is equivalent to some *particular* system then there is some problem of this form (equivalent to the statement of its own consistency) that *it* cannot solve either. This is then an "absolutely undecidable" problem. If, however, there is no formal system to which human cognition is

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equivalent, then for *any* specified machine the mind can prove a statement which that machine cannot, and accordingly "the human mind … infinitely surpasses the powers of any finite machine."[10]

Gödel's argument in the 1951 article also turns centrally on Turing's demonstration in 19—of the unsolvability of the "Halting Problem" first suggested by Hilbert. The halting problem is the problem of finding a general procedure for determining whether any given algorithm (or Turing machine) will eventually halt, given any particular input, or will run on forever. As Turing demonstrated, there can be no such algorithm, since, supposing for *reductio* that one exists, it would then be possible to specify a Turing machine which halts if and only if it does not. The result implies not only (as Turing points out) the existence of real numbers whose decimal expansion is *uncomputable* (in the sense that there is no finitely statable procedure for determining the digits of the expansion) but also that first-order logic and stronger formal theories are *undecidable* in the sense that there is no finite *decision procedure* capable of determining, of any given formula, whether it is a theorem of the system or not.[11] As I shall suggest in the next several chapters, this systematic undecidability of formal, axiomatic systems has significant consequences for the "ontological" theory of the finite, the infinite, and their relationship to thought and practice. In particular, if the essential undecidability that Turing demonstrates henceforth marks a formally demonstrable limit to the effectiveness of formal procedures, this transforms in a basic way the question of the *accessibility* of the infinite to "finite" thought. If there is (as Turing's result demonstrates) no procedural means to decide the following of a given formula from a given formal system, and if (as Gödel's result demonstrates), for any such system (of enough strength to express arithmetic) there will be sentences that cannot be proven or refuted by any systematic means, then it is no longer possible *in general* to consider the truth of sentences to be decidable by any finite, procedural means. Thought meta-formally in a broader philosophical context and relevantly to the problematic relationship of thought to being in itself, this suggests, as I shall argue in more detail, the essential limitation of the faculties, capabilities or capacities of a *representing subject* with respect to the inexhaustibility of the infinite-Real.[12] This further suggests, as I shall argue in more detail over the next

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[11] Undecidability in this sense – that of the undecidability of systems -- should be distinguished from the necessary existence, demonstrated by Gödel himself, of *sentences* in any system strong enough to capture arithmetic which are "undecidable" in the sense that the system cannot prove either the sentence or its negation.

[12] The issue can, again, be connected to that of the status of the most famous unsolved (and, as we now know, unsolvable) problem of set theory, Cantor's problem of the size of the continuum. From the work of Gödel himself in 1939 and Cohen in 1962-63, we now know that the continuum hypothesis (CH), which holds that the size of the continuum is the same as that of the first non-countable ordinal, cannot be demonstrated or refuted on the basis of the standard ZF axioms of set theory. Gödel himself thought, for a time at least, that the status of the continuum hypothesis might be resolved by the addition of one or more *new* axioms, in particular new axioms affirming the existence of certain "large" cardinals. If we were able intuitively to establish or otherwise have insight into the truth of some such axiom capable of resolving the status of the CH, this might provide evidence for the first horn of Gödel's disjunction, on which the power of the human mind to have insight into evident axioms true of mathematical reality essentially exceeds the capacities of axiom systems such as ZF. However, although the program of investigating the implications of such additional axioms continues actively today, none of the axioms that have so far been considered actually suffice to establish the truth of the CH, and none of them appear in any direct way "intuitively" motivated. Thus, the results of the inquiry so far might rather reasonably be taken to support the second horn of Gödel's disjunction, on which there are simply unsolvable problems; indeed, it might

several chapters, an essentially and formally demonstrable limit to the concept of the representing subject that begins in its modern form with Descartes and continues in Leibniz, Kant, Hegel, and German Idealism. Such a subject attains specific access to the infinite only by means of methodically specified rules or procedures applicable to the finitude of a kind of being constitutively limited in space and time, while on the other hand the specific sense of the infinite as such is thought, within this conception, as the infinite and unformalizable excess of a divine-Absolute, thus inaccessible as such to human cognition. This twofold conception, which receives its foremost expression in Kant as the dualism of the finitely constituted subject of faculties which stands under the necessity of schematizing the deliveraces of empirical affection under the categories and the divine intellect capable an immediately creative intuition, is itself overcome in a twofold way by the complex of results that runs from Cantor to Turing, which demonstrate on the one hand the actual accessibility of the mathematically infinite to formal thought and, on the other, the inherent limitation of finite procedures in attaining to it. Besides thereby pointing to the formal and historical limits of the modern philosophy of subjectivity, Turing's result and the related ones to which Gödel appeals also, as I shall argue, have important implications for the ontological character and totalizing scope of what is called "information technology" today. In particular, if Turing thus demonstrates the inherent limits of the effectivity of formal procedures at the very moment at which he constructs the first formal definition of the structural architecture of a general computing machine, his result can be read as pointing to an ultimately inherent *ineffectivity* that thus accompanies the formalization of procedures and the imposition of "abstract" rule-based forms of reasoning and practice as their generally obscured but nevertheless structurally necessary underside. It is in terms of this specific structure of ineffectivity, as I shall argue in more detail, that the possibility of anything like a "reversal" or "overcoming" of the "metaphysical" essence of contemporary technology and its claim to global dominance can today be thought.

II

The two options left open by Gödel's disjunctive conclusion correspond directly to the two post-Cantorian orientations of thought, or positions on the relation between thought and being, that I called in *The Politics of Logic* the "generic" and "paradoxico-critical" orientations. On the first of Gödel's disjunctive options, the power of the human mind to grasp or otherwise comprehend truths beyond the power of any finite system effectively to demonstrate witnesses an essential *incompleteness* of any finitely determined cognition and a correlative capacity on the part of human thought, rigorously following out the consequences of the mandate of consistency, to traverse by means of a "generic" procedure the infinite consequences of truths essentially beyond the reach of any such finite determination. On the second of the options, the essential undecidability of any such system witnesses, rather, the necessary *indemonstrability* of the *consistency* of any procedural means available to the human subject in its pursuit of truth, and thereby to the necessary existence of mathematical problems that are absolutely unsolvable by any specifiable epistemic powers of this subject, no matter how great.

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well be thought that the problem of the CH is one such, and that its unsolvability bears witness to an essential ontological feature of indeterminacy or undecidability characteristic of the universe of sets itself.[12]

Both orientations, as I argued in the book, as well as the necessity of the (possibly non-exclusive) decision between them, result directly from working through the consequences of the systematic availability of the *infinite* to mathematical thought, as accomplished most directly through Cantor's set theory and its conception of the hierarchy of transfinite cardinals. More broadly, as I argued in the book, what is most decisive for the question of the orientations available to thought today is the consequences of the interlinked sequence of metamathematical and metalogical reflection running from Cantor, through Gödel's incompleteness theorems, up to Cohen's demonstration of the independence of the Continuum Hypothesis from the axioms of ZF set theory; it is thus not surprising that Gödel's own "philosophical remarks" about the implications of his own results should replicate the general disjunction in a clear and specific form.

The two "post-Cantorian" orientations are to be distinguished from the two "pre-Cantorian" orientations of *onto-theology* and *constructivism.* As I suggest in the book, each of the four orientations can be identified on the basis of the specific relationship it envisions between thought and being in connection with the idea of the *totality* of *what is* (in Heidegger's jargon, "Seiendes") as such. Both the onto-theological and constructivist orientations can be distinguished from the "post-Cantorian" ones in that they presuppose, though on different grounds, that this totality exists unproblematically in that it is possible for it to be both complete and consistent. In particular, whereas the onto-theological orientation assumes an infinite or transcendent consistent totality that is in itself never completely accessible to "finite" human cognition, the constructivist orientation constitutively involves the assumption of a knowable and consistent totality (for instance of what can be experienced or what can be referred to by means of a particular language) that is regulated, limited, or constructed by subjective procedures, activities, or forms. Because both of the "pre-Cantorian" orientations develop their respective conceptions of the thinkability of being in terms of the thought of a consistent and complete totality, they both amount to primarily *ontic* orientations toward what they figure as the totality of (what Heidegger would call) present-at-hand (*Vorhanden*) beings. Whereas onto-theology, understanding this totality as a complete and consistent whole quite independent of the capacities or activities of subjects or thinkers, captures most forms of realism that have been articulated in the metaphysical tradition, constructivism, in lodging the combination of consistency and completeness in the constitutive activities or abilities of a subject of experience, dialectical self-recognition, or linguistic institution, encompasses most forms of subjective, transcendental, speculative and linguistic idealism (or anti-realism). If, however, the set-theoretical and semantic paradoxes already indicate the untenability of the conjunction of consistency and completeness that both "pre-Cantorian" orientations assume, then the orientation of thought toward being can subsequently only be thought, as I have argued in the book, in one of the two "post-Cantorian" ways: either in terms of the generic orientation, which preserves consistency while sacrificing completeness (thus maintaining the consistency of rules of inference while sacrificing the existence of a total world to which they apply), or the paradoxico-critical orientation, which develops the thought of the *constitutively inconsistent* whole. As we shall see, the impossibility of the joint ("pre-Cantorian") assumption of consistency and completeness receives further confirmation, and is put on a farther-reaching basis, in relation to the constitutive ideas of practice, method, and procedure, by means of Gödel's and Turing's undecidability results. These results, as we shall see, jointly bear witness to an essential undecidability at the limit of all possible procedures,

methods or activities of human (or any) rationality, insofar as these procedures, methods and activities are determined by rules in any sense. The formally indicated limit of the powers of the thinking subject then becomes visible as the closure of the metaphysical assumption of complete and consistent totality, and thereby of the whole historical epoch that Heidegger understands as that of the "metaphysics of presence".

Because both of the "pre-Cantorian" orientations develop their understanding of the relationship between thinking and being on the basis of the presupposition of the completeness and consistency of the *ontic* totality, they are equally (and in parallel fashion) overcome by the thought of the ontological difference. As Heidegger recurrently emphasizes in his discussions of the metaphysical tradition, the various configurations and approaches of metaphysics, beginning with Parmenides, always have in view the ontic totality of present-at-hand beings and always think this totality on the basis of the assumption of its joint consistency and completeness. What Heidegger calls the history of "onto-theology" is, as we have seen (chapter 1 above), in fact identical with the history of this assumption, and so the ontological displacement that it undergoes through Heidegger's thinking of the ontological difference and its radicalized consequences also provides ontological terms for the transition from the "pre-Cantorian" to "post-Cantorian" orientations.

It is true that Heidegger does not distinguish sharply between the two versions that this assumption can take: the "onto-theological" (in our sense) version which situates the consistent totality in a divine intellect or cosmological unity beyond the powers of finite or human thought and the constructivist one that identifies positive existence as what is thinkable by the finite subject. This unclarity in Heidegger's own retrospective discussion is, doubtless, at the root of the contemporary interpretive tendency which, while grasping to some extent the terms and implications of Heidegger's critique of onto-theology, nevertheless assimilate to him some form of the thesis that assimilates the "accessibility" of being as such to the powers of a thinking subject. Heidegger then appears as a kind of anti-realist with respect to being as such, and it is not difficult to locate in his writing, particularly in *Being and Time*, the conception of a structural "transcendence" which, as in Kant, is then thought to underlie the constructive relationship of something like a "human" subject – albeit now the living and factical subject of "emdodiment" and practices rather than the "intellectual" or "worldless" subject of Descartes, Kant, and (it is supposed) Husserl -- to what is thinkable of being as such. The conception has the additional merit of conforming well with a prevalent (and essentially constructivist) conceit of contemporary belief, according to which, if there is no "ultimate" theological referent to hold together the totality of the world as an intellectually thinkable unity, such access to being as it is possible "for us" to have must instead be facilitated, in irreducibly pluralistic fashion, by the variety of bodies, languages, and situated cultures. As we shall see in this chapter and the next one, however, an explicit identification of the metalogical issues at stake in the four orientations, and in particular to the inherent and essential meta-formal realism essentially presupposed in *both* of the post-Cantorian ones, points to a very different conception of the ontological problematic that is already suggested by Heidegger in *Being and Time*, albeit only developed fully in the course of his radical critical encounter with Kant in *Kant and the Problem of Metaphysics* and his subsequent development of the "grounding" question of the truth of being in contrast to the "guiding question" of beings. On this conception of the ontological problematic,

it deconstructs the idea of a constitutively essential basis for ontology in "human" thought, language, culture, embodiment and practices just as thoroughly, and on substantially the same basis, as it does the "theological" intuition of the transcendent Absolute. As such, this conception, as we shall see, substantially underwrites the possibility of a realist conception of the ontological difference and of the ontological structure of time.

Most of the discussion in the philosophical literature over the broader implications of Gödel's theorems so far has been directed toward the question of the truth or falsity of *mechanism*. This is the question whether the mathematical thought of an individual subject, or perhaps of the whole community of mathematicians, can "in fact" be captured by some formal system. Gödel himself, particularly in his later years, was, as is well known, a dedicated anti-mechanist, and sometimes referred to his incompleteness theorems as providing evidence against mechanism; more recently, philosophers such as Lucas and Penrose have followed Gödel in arguing for this conclusion. Gödel also sometimes suggested that the truth of the first disjunct of his disjunctive conclusion in the Gibbs lecture, on which mechanism is false, might be established by means of independent (perhaps partly empirical) considerations. Nevertheless, the recent literature witnesses a consensus that (as Gödel himself seems to affirm in the lecture) the only conclusion relevant to the mechanism debate that can really legitimately be drawn from the incompleteness results themselves is the disjunctive one: *either* mechanism is false, and the human mind (or the community of mathematicians) has access to mathematical truths that cannot be proven by any formal system *or* mechanism is true and there are well-specified problems that cannot be solved by any means whatsoever.

Additionally, there are some good reasons to think that the "hypothesis" of mechanism cannot in fact be specified clearly or uniquely enough to use the incompleteness theorems to establish anything about its truth or falsity at all. Thus, for instance, in a recent very comprehensive review of discussion about Gödel and mechanism, Stuart Shapiro concludes that "there is no plausible mechanist thesis on offer that is sufficiently precise to be undermined by the incompleteness theorems."[13] One reason for this is that any proposal to treat the cognition of a subject, or human mathematical cognition overall, as embodying a specific formal system will clearly involve a significant degree of idealization with respect to actual practice; actual mathematicians make mistakes, and any determination of which formal procedure they are "actually following" would thus require a motivated distinction between what counts as mistaken performance and what does not. Similarly, any determination of *what* class of performance is to count as evidencing the postulated formal system is bound to be somewhat arbitrary; do we consider, for example, the behavior of just the *best* mathematicians, or all who are formally trained in (some kind of) mathematics at all, or perhaps of everyone who is even (minimally) competent in mathematics at all? Finally, even if these worries about the idealization of performance can be overcome, one might wonder whether there is any "well-defined" way to consider questions involving the totality of *all* formal systems, as we must in fact do if we are to consider the truth-value of *either* term of Gödel's disjunctive result.[14]

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[13] Shapiro (1998), p. 275.
[14] I am indebted to discussion with Reuben Hersh for this point.

For all of these kinds of reasons, it seems that it is not possible to draw any unequivocal conclusions directly from Gödel's incompleteness theorems about the hypothesis of mechanism with respect to human mathematical capacities. Nevertheless, despite these worries relevant to mechanism and idealization, it is possible to see the upshot of Gödel's "disjunctive conclusion" in the lecture as bearing relevance, beyond the issue of mechanism as well as the confines of "philosophy of mathematics" narrowly construed, to somewhat different philosophical issues.[15] In particular, it points to a distinctive and non-standard, but comprehensive position of *realism*, what I shall call *meta-formal* realism.[16] For this realism, the decisive issue is not, primarily, that of the reality of "mathematical objects" or the possibility of understanding them as determinate independently of the routes of access to them (epistemic or otherwise) involved in the exercise of our human capacities. It is, rather, that both terms of Gödel's disjunction capture, in different ways, the structural point of contact *between* these capacities and what must, on *either* horn of the distinction, be understood as an infinite *thinkable* structure determined quite independently of anything that is, in itself, finite. Thus, each term of Gödel's disjunction reflects the necessity, given Gödel's theorems, that any specification of our relevant capacities involve their relation to a structural infinity about which we must be realist, i.e. which it is not possible to see as a mere production or creation of these capacities.

On the first alternative, this is obvious. If human mathematical thought can know the truth of statements about numbers which are beyond the capacity of *any* formal system to prove, then the epistemic objects of this knowledge are "realities" (i.e. truths) that also exceed any finitely determinable capacity of knowledge. It does not appear possible to take these truths as "creations" of the mind unless the mind is not only credited with *infinite* creative *capacities*, but understood as having actually already *created* all of a vastly infinite and in principle unlimitable domain. But on the second alternative, it is equally so. If there are well-specified mathematical problems that are not solvable by any means whatsoever, neither by any specifiable formal system nor by human cognition itself, then the reality of *these problems* must be thought of as a fact determined quite independently of our capacities to know it (or, indeed, to solve them).[17] On this alternative, we must thus acknowledge the existence of a reality of forever irremediable problems whose very issue is the inherent undecidability that results from the impossibility of founding thought by means of an internal assurance of its consistency. In this way the implications of the mathematical availability of the infinite, on either horn of the disjunction, decompose the exhaustiveness of the situation underlying the question of realism and idealism in its

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[15] I thus follow Feferman (2006), p. 11 in considering that, even if there are problems with applying Gödel's reasoning directly to the question of mechanism, "…at an informal, non-mathematical, more every-day level, there is nevertheless something to the ideas involved [in his argument for the "disjunctive conclusion"] and something to the argument that we can and should take seriously."

[16] In *The Politics of Logic* (p. 291), I called this position simply "formal realism". I add the prefix 'meta-', here, to reflect that what is concerned is not primarily an attitude (e.g. a Platonist one) about the "reality" or "actual existence" of forms, but rather the implications of the *transit* of forms in relation to what is thinkable of the real, the transit that can, in view of Cantor's framework, be carried out beyond the finite.

[17] Gödel says this about the second term of the disjunction: "… the second alternative, where there exist absolutely undecidable mathematical propositions, seems to disprove the view, that mathematics (in any sense) is only our own creation…So this alternative seems to imply that mathematical objects and facts or at least *something* in them exist objectively and independently of our mental acts and decisions, i.e. to say some form or other of Platonism or "Realism" as to the mathematical objects." (pp. 135-36).

usual sense: that is, the question of the relationship of a presumptively finite thought to its presumptively finite object.

The actual underlying reason for the realism which appears forced upon us on either alternative is the phenomenon Gödel describes as that of the *inexhaustibility* of mathematics, which results, as we have seen, from the possibility of considering, given any well-defined ordinal process, its infinite limit (or totality). On the first alternative, this inexhaustibility yields a structurally necessary *incompleteness* whereby each finite system by itself points toward a truth that it cannot prove but which is nonetheless, by this very token, accessible to human thought. On the second, it yields an equally necessary *undecidability* which leaves well-specified mathematical problems unsolveable by any means (finitely specified or not) by any means whatsoever. [18] The form of the relevant realism is, in each case, somewhat different: the orientation underlying the first disjunct corresponds, as I argued in *The Politics of Logic*, to a realism of *truth beyond sense*, a position that affirms the infinite existence of truths and the infinite genericity of our dynamic insight into them beyond any finitely specifiable language or its powers, while the realism of the second consists is a realism of *sense beyond truth*, affirming the existence of linguistically well-defined *problems* whose truth-value remains undecidable under the force of any powers of insight whatsoever. But in either case, reflective thought about human capacities must reckon with the consequences of their structurally necessary contact with an infinite and inexhaustible reality essentially lying beyond the finitist determination of the capacities of the human subject or the finitely specifiable powers of its thought. In this way, the consequences of Gödel's theorem, however we interpret them, engender a structurally necessary realism about the objects of these powers that is the strict consequence of the entry of the infinite into mathematical thought.

It would probably not be difficult to show that each of the controversies between varieties of "realism" and "idealism", signed by prominent names in the history of philosophy, unfolds in direct and demonstrable connection with varying conceptions of the infinite and its availability to thought; one could consider, for instance, the difference between Plato's late conception of the Idea as owing its genesis to the ongoing struggle between the principle of the One and that of the *apeiron dyas*, or the unlimited dyad, and Aristotles merely *potential* infinity; or the difference between Leibniz's harmoniously ordered infinite continuity of monadic powers, up to the divine itself, and Kant's determination of the infinite as thinkable only in the form of the infinitely deferred, regulative idea). Nevertheless, wherever the actual infinite *has* been thought philosophically prior to the twentieth century, it has been thought simply as a theological (or, more broadly, onto-theological) Absolute. The singular significance of the event of Cantor thus lies, as Badiou has emphasized, in its rendering a de-absolutized infinite accessible to non-theological thought, in making mathematics as the "science of the infinite" the possible site for a renewed rigorously formal thinking of the powers and limits of thought.

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[18]Feferman () has demonstrated that there is a kind of "completeness" of arithmetic truths that is obtainable by the transfinitely repeated application of so-called "reflection principles", each of which amounts to adopting as a new axiom for a new system certain assumptions about the consistency of an earlier system (or the truth of its results). By means of an appropriate transfinite procedure through these principles, it is indeed possible, as Feferman shows, to obtain the totality of arithmetic truths. However, this procedure is itself not specifiable in a recursively enumerable way, and so does not provide anything like a general effective procedure for determining arithmetic truth. See Shapiro () and Berto () for discussion.

As Gödel immediately goes on to point out, the only position from which it appears possible (while accepting Gödel's assumptions about mathematical reasoning and the incompleteness theorems themselves) to resist the "disjunctive conclusion" is a *strictly finitist* one according to which "only particular propositions of the type 2+2=4 belong to mathematics proper…"[19] and no *general* judgments applying to an infinite number of cases are ever possible. This kind of position would indeed avoid the disjunctive conclusion, since there is no way to apply the incompleteness theorems themselves consistently with it. However, as Gödel points out, the strict finitist view is very implausible as a view of mathematical reasoning, since it ignores that "it is by exactly the same kind of evidence that we judge that 2+2=4 and that a+b=b+a for any two integers a,b"; and it would moreover appear to disallow the use of even such simple "concepts" as "+" (which "applies" to all integers). Outside these very severely limited finitistic point of view, on the other hand, it appears inevitable that the disjunctive conclusion will apply, and thus we will be forced to acknowledge the validity of one or both of its disjuncts.

It is thus that the inherent character of reasoning in mathematics invokes the infinite, and marks the consequences of its availability to thought. As is evident in Gödel's interpretation of the implications of his own metaformal results, this kind of realism draws on the rigorous consequences of the formal thought of the infinite, and thus cannot be sustained solely within a position of finitism.

The attitude I am calling "metaformal realism" might certainly be developed as a position within the philosophy of mathematics itself. Developed in this way, it would bear a resemblance to a "methodological" realism about mathematics, for example of the kind suggested by Maddy (2005), that characteristically looks to mathematical practice itself as the source for its "ontological" claims and assumptions. This kind of realism has the advantage that it does not entertain, or attempt to solve, "metaphysical" problems about the "existence" of mathematical objects, except insofar as these problems are formulable and resolvable, in a motivated way, within mathematical practice itself (here, including the kind of "metamathematics" or "metalogic" that Gödel uses to produce his incompleteness theorems).

It is important to distinguish this kind of attitude from "Platonism" as it is traditionally construed. In particular, as Badiou (1998) has argued, there is no need to invoke, even in service of a realist attitude that here takes the event of the infinite and the consequences of mathematical practice seriously, the "Platonistic" claim of the "real existence" of mathematical objects. As Badiou suggests, the "Platonist" attitude of object-invoking realism is in fact quite alien to Plato's own concerns; in particular, it relies upon a "distinction between internal and external, knowing subject and known 'object'" which is, as Badiou says, "utterly foreign" to Plato's own thought about thought and forms.[20] Plato's fundamental concern is not, as Badiou argues, at all with the question of the 'independent existence' of mathematical objects, but rather with the 'Idea' as the name for something that is, for Plato, "always already there and would remain unthinkable were one not able to 'activate' it in thought."[21] Similarly, this is, as Badiou emphasizes, not an attitude of accepting or *believing in* the existence of sets or classes

[19] Gödel (1951), p. 135.
[20] Badiou (1998), p. 49.
[21] Badiou (1998), p. 49.

corresponding to well-defined monadic predicates, but rather one of maintaining, quite to the contrary, that what correlates to a well-defined concept may well be "empty or inconsistent"; it is thus a *metalogical* inquiry into the structure of forms for which, as Badiou emphasizes, "the undecidable constitutes a crucial category" and in fact becomes the central "reason behind the aporetic style of the [Platonic] dialogues," wherein thought constantly proceeds through forms to their own inherent points of dissolution or impasse. Whether or not we follow Badiou in his desire to redeem for this attitude the name of "Platonism," against its standard, ontological mis-approriation, what is most important to note is that what is involved here is thus not any direct attitude of realism toward objects of any kind but rather only a philosophical reflection of the internal consequences of the meta-formal inquiry into forms and their limits, including the open dialectic of finite and infinite thought.

Because this attitude, along with Plato himself, accords mathematical experience a certain privilege as, precisely, a non-empirical experience of forms, the realism suggested by it *can* be worked out, as I have said, as a position within the "philosophy of mathematics" itself. But it seems to me that the kind of realism exhibited here can also find fruitful application more broadly, to domains other than simply that of mathematics. For as I argued in *The Politics of Logic*, the consequences of formalism and formalization in their contemporary practical and theoretical development are by no means limited to mathematics, but extend to a broad range of phenomena and many aspects of contemporary social and political life. As a leading example of this (though there are certainly others) one might consider the pervasiveness of informational and computational technologies and the forms of abstract social organization they make possible, themselves grounded in the technology of the computing machine which was directly made possible by the development of the implications of the concept of a formal system in thinkers such as Hilbert, von Neumann and Turing. If this and many other developments of twentieth century praxis and organization are indeed, as I argued there, intimately linked to the project of formalization in its various dimensions, then a realism that is, as I have suggested, itself directly linked to the aporeatic result of this project's development may be singularly appropriate to contemporary critical and reflective thought.

Here, as I argued in the book, the relevance of leading developments in mathematics and metamathematics is thus not limited to the "philosophy of mathematics" narrowly construed, but extends to the broader impications of the ongoing project of formalization itself. If, accordingly, the *metaformal realism* I am recommending here arises in an intrinsic way from the structure of forms in their capture of life, then a rigorous understanding of the relationship of thought to being may today require such a position, which takes account of the implications of the dimensions of the infinite as they occur at the horizon of our contemporary understanding of ourselves and the world. The specific relevance of mathematics and metamathematics, in this connection, does not lie in the identification of a particular realm or region of entities, but rather in the way that mathematics, *as* the "science of the infinite", possesses the ability to capture and schematize the constitutively "infinite" dimension of form itself. As I argued in the book, this infinite dimension of forms is a constitutive part of the thinking of form, even when it is dissimulated or foreclosed, ever since Plato, and is inherently involved, as well, in every contemporary project of the analysis of logical form or the discernment of the formal determinants of contemporary life and practices. This twentieth-century inquiry into formalism has, as I

argued in the book, many interacting dimensions, including (but not limited to) the philosophical inquiries, both "analytic" and "continental," which in the twentieth century interrogate the structures of language as essential guidelines to their inquiry into forms of life. As such, its results capture the most important implications of contemporary reflective inquiry for the constitutive idea of the rational human subject or agent of capacities and thought.

In particular, as is clear in relation to Gödel's development of his results, this metaformal realism, with its constitutive conception of the powers of thought in relation to a real determined as infinite, marks the unavailability of any traditional opposition between the finitude of the human subject and a transcendent matter thought under the heading of the absolute. If, on the contrary, thought is capable, in its capacity for formalization, of rigorously conceiving an infinite-real to which it is immediately adequate (whether this capacity be thought as itself infinite, or as grounded in the finite systematics that comprise a formal system), then it is no longer possible to oppose an attitude of realism (in the traditional sense) to one of idealism according to the different positions taken on thought's capacity to know its object in itself.

Metaformal realism, as I have discussed it here, is an essentially *disjunctive* position, split between affirming the consequences of two quite distinct and mutually incommensurable orientations of post-Cantorian thought, the generic and the paradoxico-critical. As we have seen, Gödel's own disjunctive result witnesses just this disjunction with respect to the powers of human thought in relation to a mathematical reality which the constitutive thought of the infinite determines as the inexhaustible-real: this is, in Gödel's terms, the essential distinction between, on one hand, the assumption of an inherent and transcendent power of human thought to bear witness to consistency by exceeding the powers of any finitely specifiable system of rules, and on the other, an inexhaustible inscription of the undecidable as such, including the undecidability of consistency itself, in the very structure of mathematical reality. Because he was a committed anti-mechanist, Gödel favored the first disjunct (on which the human mind is non-mechanical) and sometimes argued against the tenability of the second on independent grounds, holding both that it ignores the inherent capacity of the human mind to innovate with respect to its guiding axioms and principles and that the existence of absolutely unsolvable problems is untenable since it would imply that "it would mean that human reason is utterly irrational by asking questions it cannot answer, while asserting emphatically that only reason can answer them."[22]

However, once we have acknowledged the implications of the availability of the infinite to mathematical thought and made the general decision for meta-formal realism at all, there are some important senses in which the second disjunct, corresponding to the orientation of paradoxico-criticism, is not only not excluded but also enjoys advantages over the choice for the first disjunct (which Gödel himself preferred). In particular, besides being more obviously compatible with materialism because not in any way at odds with mechanism, the paradoxico-critical outlook makes it possible to preserve an outlook and practice that continues the classical orientation of *criticism* with respect to the capacities and practices of the human subject, in the altered conditions post-Cantorian thought. To gain a sense of

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[22] Wang (1974), p. 324, discussed in Feferman (2006), p. 12. The former point, about the non-static nature of the mind, is made against Turing's own position in Gödel (1972), remark 3, p. 306.

these ongoing critical implications, one might usefully juxtapose Gödel's remark about reason posing problems that it cannot solve with the infamous opening lines of Kant's first *Critique*:

> Human reason has this peculiar fate that in one species of its knowledge it is burdened by questions which, as prescribed by the very nature of reason itself, it is not able to ignore, but which, as transcending all its powers, it is also not able to answer.

Kant, of course, was a transcendental idealist; and within the fourfold framework of orientations of thought I developed in *The Politics of Logic*, Kant's thought remains a paradigm of the pre-Cantorian constructivist (or criteriological) orientation, which is defined by its attempt to assay the boundaries of knowledge from the exterior position of a limit-drawing project committed to saving jointly the ideas of completeness and consistency. In the post-Cantorian context, it is no longer possible to save these ideas jointly, and so the constructivist orientation and its associated kind of idealism are both rendered untenable. But by making the paradoxico-critical decision for the combination of a rigorous inquiry into totality with the implication of irreducible paradox at the boundaries, it is possible to maintain the properly critical register of Kant's thought of reflective reason in its ongoing dialectic with itself, and to situate this thought within, as I have argued, a rigorously *realist* position with respect to the relation of thought and being itself. To do so is to transpose the ultimate ground for the development of such a dialectic (now thought more in a properly Platonic rather than a Kantian or Hegelian sense) decisively away from the (pre-Cantorian) Kantian oppositional figure of opposition between the finitude of sensory affection and the absolute-infinite divine intellect capable of intellectual intuition, and to reinvent the possiblities of critique on the ontological real ground of the objective undecidability of problems that are problems for (finite or infinite) thought *in itself*, given to it at the point of its very contact with the real of being as such.

What, then, are some of the concrete effects of this transposition for contemporary reflective and critical thought? As I argued in *The Politics of Logic,* most generally, the necessity, in a post-Cantorian context, of the forced choice between inconsistent completeness and incomplete consistency indicates, as is confirmed by Gödel's development of the philosophical consequences of his own results, that it is impossible *by* finite, procedural means to confirm rigorously the *consistency* of the finitely specifiable procedures of our social-political, practical, and technological worlds. This suggests, as I argued at more length in the book, that it is impossible by finite means to ensure the *effectivity* of our practices, or procedurally to found whatever faith we may maintain in their ongoing extensibility and capability of continuation. This faith, if it is to be founded at all, must be founded in an essentially infinite capacity of insight and fidelity, bordering on the mystical, to a Real matter of consistency with respect to our own practices that can itself never be guaranteed by any replicable or mechanical procedure; *or* it must be ceaselessly decomposed and deconstructed at the point of the inherent realism of the problematic and undecidable that is necessarily introduced if this faith cannot be assured at all. Such are the consequences, as I have argued in *The Politics of Logic*, of the transformative event of the development of formalization in the light of the accessibility of the mathematical infinite that characterizes our time; and such are the stakes, as I have tried to confirm here, of the metaformal realism that this event rigorously motivates and demands.

The metaformal realism thus indicated has several further distinctive features, which I briefly adumbrate:

1. Metaformal realism is neither a "metaphysical realism" nor an "empirical realism."." In particular, because it is grounded solely in an *internal* experience of the progress of forms to the infinite, it avoids any need to posit an empirical or transcendent referent beyond the effectiveness of forms and formalization and does not ground its realism in any such referent. Because of the way it turns on the entry of the infinite into mathematical thought, it does not require that one assure oneself of the existence of a world "in itself" and independent of thought. It is thus completely distinct from any realism of a "mind-independence" variety, which always requires a problematic doctrine of the bounding of thought in relation to its empirical objects. It also does not require, and does not encourage, the possibility of a "view from nowhere" or a "single unique description of reality."
    Rather, we have here a rigorous internal development of the limitology of thought from within thought itself, a development of "thought thinking itself" which is nevertheless not 'dialectical' and does not attest, either, to the power of thought consistently to appropriate *everything* within itself. For all of these reasons, metaformal realism does not involve the difficult metaphysical and epistemological questions (how is it possible to know or have access to a "thing in itself"? What is the status of the "world independent of the mind"?) which recurrently appear to make forms of "metaphysical realism" untenable and have often been taken to motivate a contrasting position of idealism (or pragmatism, or 'internal realism,' etc.)

2. Metaformal realism is thus a *reflective*, not a 'speculative' realism. It develops all of its consequences internally, from internal reflection on the limitology of thought and its inherent formal features. It thus has no need to posit an object of *speculation* simply external to this limitology or to engage in the uncertain investigation of the features of such an object. If it is, as I shall try to show, engaged in an inherent dialectic of thought with being, this dialectic is thus not a *speculative* dialectic of "determinate negation."[23]

3. Metaformal realism de-absolutizes the world as a transcendent object of thought. As I argued in *The Politics of Logic*, the twentieth-century inquiry into forms, pursued in its narrower aspect as the inquiry of "metamathematics" or "metalogic," has the consequence of consigning formal thought about the totality of the world (indeed, thought about totality in general) to an unavoidable disjunction, what I called there the "metalogical duality" between consistent incompleteness and inconsistent completeness, essentially the same alternatives involved in Gödel's 'disjunctive' conclusion. This means, as well, a basic diremption of any figure of thought that countenances a (complete *and* consistent) Absolute, and forces a choice between

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[23] I refer here, in passing, to the distinction between "reflection" and "speculation" drawn by Hegel in the "Preface" to the *Phenomenology of Spirit*, para. 59. That I thus distinguish the post-Cantorian orientations of metaformal realism from Hegel's pre-Cantorian speculative dialectic should not exclude that metaformal realism, particularly in its paradoxico-critical variant, nevertheless exhibits a number of important parallels to aspects of Hegel's system, particularly in its treatment of the nature of contradiction *prior* to its dialectical sublation or resolution; for discussion of some of these relationships to Hegel, see *The Politics of Logic*, pp. 253-54.

acknowledging the essential incompleteness of consistent thought or countenancing the existence of the totality of the world only under the heading of the reality of the inconsistent.

III

In contemporary philosophical discourse, no project has done more to illuminate the issue of realism and its underlying formal determinants than Michael Dummett's. Familiarly, in a series of articles and books beginning in 1963 with the article "Realism," Dummett has suggested that the dispute between realism and anti-realism with respect to a particular class of statements may be put as a dispute about whether or not to accept the principle of *bivalence* (i.e., the principle that each statement is determinately true or false) for statements in the class concerned.[24] Though this issue yields differing consequences in each domain considered, the acceptance of bivalence generally means the acceptance of the view that all statements in the relevant class have truth values determined in a way in principle independent of the means and methods used to verify them (or to recognize that their truth-conditions actually obtain when they, in fact, do so); the anti-realist, by contrast, generally rejects this view with respect to the relevant class. Dummett did not envisage that this comprehensive framework would or should support a single, *global* position of metaphysical "realism" or "anti-realism" with respect to all domains or the totality of the world; rather, his aim was to illuminate the different kinds of issues emerging from the traditional disputes of "realism" and "idealism" in differing domains by submitting them to a common, formal framework.[25] From the current perspective, however, it is just this aspect of formal illumination which is the most salutary feature of Dummett's approach. For by formally determining the issue of realism with respect to a given domain as one turning on the acceptance or nonacceptance of the (meta-)formal principle of bivalence with respect to *statements*, Dummett points toward a way of conceiving the issue that is, in principle, quite independent of any *ontological* conception of the "reality" or "ideality" of *objects* of the relevant sort. In particular, it is in this way that Dummett avoids the necessity to construe realism and anti-realism in *any* domain as involving simply differing attitudes toward the ontological status of its objects (for instance that they are "mind-independent" or that, by contrast, they are "constituted by the mind"). What this witnesses, *along with* what I have called meta-formal realism, is the possibility of a purely formal and reflective determination of the issue of realism that connects its stakes directly to those of the truth of claims, thereby instantly short-circuiting the laborious and endlessly renewable dialectic of the "actual relationship" of mind to world.

Dummett's framework is sometimes glossed in terms that suggest that, for him, the adoption of realism or anti-realism in any particular case turns primarily on our judgment about the (primarily epistemological) issue of whether a certain type of entities can be considered to be real in themselves, independently of our access to them or ability to possess evidence for their existence. But that this kind of formulation is, at best, highly misleading, both with respect to Dummett's own motivations and the

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[24] Dummett (1963); for some later reflections on the development of the framework and issues related to it, see Dummett (1978).

[25] Dummett (1978), pp. xxx-xxxii.

actual merits of the framework he recommends, can be seen from the introductory formulation of the issue of realism and anti-realism in the original article "Realism" itself:

> For these reasons, I shall take as my preferred characterisation of a dispute between realists and anti-realists one which represents it as relating, not to a class of entities or a class of terms, but to a class of *statements*, which may be, e.g., statements about the physical world, statements about mental events, processes or states, mathematical statements, statements in the past tense, statements in the future tense, etc…[T]he realist holds that the meanings of statements of the disputed class are not directly tied to the kind of evidence for them that we can have, but consist in the manner of their determination as true or false by states of affairs whose existence is not dependent on our possession of evidence for them. The anti-realist insists, on the contrary, that the meanings of these statements are tied directly to what we count as evidence for them, in such a way that a statement of the disputed class, if true at all, can be true only in virtue of something of which we could know and which we should count as evidence for its truth. The dispute thus concerns the notion of truth appropriate for statements of the disputed class; and this means that it is a dispute concerning the kind of *meaning* which these statements have.[26]

There are two points here that bear important implications for the issue of how best to characterize realism and anti-realism. The first is that, on Dummett's formulation, it is an issue, not of the reference of terms or the existence of objects, but of the way in which the truth-values of statements are determined. The second, following from the first, is that the question of realism within a given domain is not directly an epistemological question about our knowledge of (or 'access to') entities, but rather a semantic question about the basis of the *meaning* of statements. As Dummett points out, both points are helpful in characterizing the real underlying issue and separating it from other issues that have become confused with it in the history of discussion of realist and idealist (or nominalist and universalist, etc.) positions. For example, in the traditional debate between phenomenalists and realists about material objects, which has sometimes been put as a debate about their "existence", Dummett argues that his framework allows the actual question of realism to be separated from what is in fact a conceptually different one, the question of *reductionism* (i.e. of whether 'material objects' can in fact be reduced to something like sense-data). Somewhat similarly, with respect to mathematics, concentrating on the question of the reference of terms tends, Dummett suggests, to "deflect the dispute from what it is really concerned with"; in particular, "the issue concerning platonism relates, not to the existence of mathematical objects, but to the objectivity of mathematical statements."[27] Here again, a framework primarily directed toward the question of the meaning of statements is more useful than one concerned primarily with questions of the existence of objects. This is, at least in part, because in mathematics (as opposed to some other cases) it is generally implausible to suppose we can have "access" to the relevant "objects" independently of a recognized procedure (i.e. a calculation or a proof) for establishing the truth of statements about them; and on the other, that such a procedure is also generally taken to be *sufficient* for whatever access to mathematical objectivity we can enjoy.

Although this kind of consideration finds application quite generally, it is certainly no accident that the historical dispute which forms the basic model for Dummett's formal framework itself is the dispute between formalists and intuitionists about the foundations of mathematics in the 1920s and early 1930s. Partisans of the two positions reached deeply opposed conclusions about the nature of reasoning about the infinite, but for both positions the idea of a *finite (i.e., finitely specifiable) procedure* or process of demonstration plays a central role. In particular, whereas the formalist position allows the axioms and rules of a formal system to extended classically, by means of such a procedure, to arbitrarily extended reasoning about the infinite *provided* that the system can be shown to be consistent, intuitionism generally restricts the positive results of mathematics about the infinite to what can be shown by means of a finite, constructivist procedure of proof.

In the 1973 article "The Philosophical Basis of Intuitionistic Logic," Dummett considers the question of what rationale might reasonably serve as a basis for replacing classical logic with intuitionistic logic in mathematical reasoning (hence, in his framework, for replacing realism with anti-realism).[28] As Dummett emphasizes here, the decision between realism and anti-realism depends ultimately on our conception of how *sense* is "provided" for mathematical statements, and in particular whether we can conceive of these statements as having sense quite independently of our means of recognizing a verification of them. It is thus, ultimately, as Dummett sees it, general issues about the *capacities* or *practices* that we learn in learning a language and deploy in speaking one that determine, given his framework, equally general issues about whether realism or anti-realism is better justified in any given domain. As in the earlier article "Realism," Dummett here emphasizes that this primary issue is not an epistemic or ontological, but rather a semantic one. Thus, "Any justification for adopting one logic rather than another as the logic for mathematics must turn on questions of *meaning*"; and again, "it would be impossible to construe such a justification [i.e. for adopting classical or intuitionistic logic] which took meaning for granted, and represented the question as turning on knowledge or certainty."[29] In fact, Dummett suggests, there are just two lines of argument that could plausibly be used to support the replacement. The first turns on the idea that "the meaning of a mathematical statement determines and is exclusively determined by its *use*"; beginning from this assumption, it is plausible to hold that any difference between two individuals in their understanding of mathematical symbolism would have to be manifest in observable differences of behavior or capacities. The second turns on considerations about learning, and in particular on the thought that what it is to learn mathematical reasoning is to learn how to *use* mathematical statements (i.e. when they are established, how to carry out procedures with respect to them, how to apply them in non-mathematical contexts, etc.).[30] On either assumption, it is then reasonable, Dummett suggests, to hold that *since* meaning is exhausted by use (in one way or the other) we cannot claim that a notion of truth, understood classically as imposing bivalence on all mathematical statements independently of the use we actually make of them, can any longer serve as the "central notion" for a characterization of the meanings of mathematical statements. In place of the classical notion of truth, Dummett suggests, we must substitute a notion grounded in the practices of which we have actually gained a mastery; in particular, we must replace the classical notion of truth

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[28] Dummett (1973).
[29] Dummett (1973), p. 215.

with the claim that "a grasp of the meaning of a statement consists in a capacity to recognize a proof of it when one is presented to us."[31] (p. 225). This, in turn, allows the recognition that certain classical arguments and proof-procedures are unjustified from this perspective, and should accordingly be replaced with intuitionistic ones.

Dummett thus presents the best route to the adoption of intuitionistic logic in mathematics as motivated by considerations very different from those that motivated arguments to the same conclusions for classical intuitionist thinkers such as Brouwer and Heyting; in particular, as Dummett points out, whereas intuitionism was motivated for those thinkers primarily by the requirement that mathematical objects be present or given in subjective, private experience, Dummett's arguments turn on what is in some ways the exactly opposite idea, namely that of the mastery of a socially learned and publically evident intersubjective *practice*. In fact, Dummett suggests against the views of the early intuitionists, there is *no* plausible route from the view that mathematical entities such as natural numbers are "creations of human thought" to the application of intuitionistic logic, unless we are prepared to adopt a very severely restricted (and implausible) view of mathematical practice (including rejecting unbounded quantification over all numbers, etc.)[32] For this reason, Dummett suggests as well that there is no good reason to think that any successful argument for anti-realism in mathematics can turn on considerations bearing simply on the supposed ontological peculiarities of the mathematical domain; both of the reasonable arguments that one might make turn, instead, on considerations about the link between meaning and use which have nothing special to do with mathematics and would seem to be applicable much more broadly, to any number of classes of sentences "about" widely differing kinds of things.

By posing the issue of realism vs. anti-realism, not only in the mathematical case but more generally, as turning on the question of the provision of sense, Dummett shows that the question of realism in a particular domain is most intimately related, not to the question of the ontological status of, or our epistemological access to, its objects, but rather to the question of the coherence and range of the procedures by means of which the *meanings* of statements about the domain are learned and manifested. But this is none other than, again, the question of the way that the infinite becomes available on the basis of a finite procedure. For the intuitionist (and by analogy, the anti-realist more generally), it is possible to establish the existence of an object only if it can be shown to result from its actual construction in a finite number of steps or from a finite, constructivist proof (i.e. one that does not involve reasoning over arbitrarily complex infinite totalities); by contrast, for the formalist (realist), all that is needed is to show that it is possible to refer to the object without contradiction within a specified formal system. And it is just here, with regard to the specific question of what is involved in the learning and pursuit of a finite procedure, that the possibility of meta-formal reflection of the sort that I have portrayed Gödel as engaging in proves to be decisive. For Gödel's own incompleteness theorems, of course, result directly from a rigorous meta-formal consideration of the range and capacities of formal systems (in Hilbert's sense and related ones). In particular, Gödel's first theorem shows that for any such system, there will be a number-theoretical sentence that is beyond its capacity

to prove or refute, and the second theorem shows that no such system can prove its own consistency (assuming that it *is* consistent). In this way Gödel's results render the formalist conception of finite procedures unsuitable for anyone who wishes to assert the realist position that the statements of number theory have determinate truth-values, independently of our ways of verifying them; but on the other hand, in invoking under the heading of the "inexhaustibility" of mathematics an essential reference to a reality that marks the point of impasse of any given finite procedure, Gödel's argument shows the intuitionist strictures to be untenable as well.

Just as Gödel's theorems themselves thus overcome the debate between intuitionism and formalism, narrowly construed, by conceptually fixing and reflecting upon the contours of a central concept (that of a finite procedure) commonly appealed to by both, the meta-formal realism I have discussed as suggested by Gödel's argument provides a new basis for critically interrogating the central concept of a *rule of use*, as it figures in both "realist" and "anti-realist" conceptions of the structure of language. In particular, as I argued in more detail in *The Politics of Logic*, we may take considerations analogous in some ways to those which establish Gödel's second incompleteness theorem to demonstrate, the incapacity of a finitely specifiable system of such rules to establish its *own* consistency. It is then apparently possible to draw, with respect to our actual practices and institutions of linguistic use, a conclusion directly analogous to that drawn by Gödel with respect to mathematical reasoning specifically: namely that *either* the consistency of our regular practices can only be known, and assured, by a deliverance of an essentially irregular insight that essentially cannot be subsumed within them or determined by them insofar as they can be captured by rules; *or* it cannot be known at all and thus can *only* be treated as a perpetually deferred problem. On either assumption, the claim of consistency is shown to be, from the perspective of the regular provision of sense, the point of an impossible-Real that always escapes, drawing along with it any possibility of an internal systematic confirmation of the infinite noncontradictory extensibility of the rule to ever-new cases. It is in this way, as I have argued, that the phenomenon that Gödel calls the "inexhaustibility of mathematics" points toward a metaformally justified realism of the impossible-Real, correlative to what we may describe as our essential openness toward the infinite and based in metaformal reflection about the limits and transit of forms. In so doing, it unhinges any possible claim of the humanistically conceived "finite" subject finally to ground itself, or to secure by its own means the ultimate sense of its language and life.

What, then, of Dummett's own arguments for anti-realism in various domains? The general form of this argument is the one we have already seen with respect to mathematics. It turns most centrally, as we have seen, on the question of how sense is "provided" for the range of statements characteristic of the entities of a given domain. In particular, on the assumptions about the basis of sense that Dummett attributes to the late Wittgenstein (correctly or incorrectly), sense must be provided or established for any range of sentences by means of the establishment and learning of a (public, intersubjective) *practice*. On Dummett's various arguments, this makes it incoherent, in a variety of domains, to suppose that sense could have been provided or determined independently of procedures for verifying truth in those domains; according to Dummett, it is for this reason, for instance, that one must be anti-realist about descriptions of "private" experience, and these considerations at least suggest anti-realism about the past (though as Dummett admits, matters are more complex here owing to the internal

complexity of the notion of the (current) verification of (past) events itself). The general argument goes through, as we have seen, on the assumptions that i) sense is provided by means of a practice which essentially *involves* laying down various well-defined procedures of verification and ii) this provision of sense is *not intelligible except by means* of the specification and establishment of these procedures. However, these assumptions are at least contestable in a context where (as I have argued with respect to the kind of metaformal reasoning Gödel applies) sense appears to be "provided" through finite instances of teaching and learning, but in a way that essentially outstrips any description of them as finite *procedures*; and truth is demonstrated, not by any simple application of established verification procedures, but on a constitutive *reflection* on their scope and limits that is itself *irreducible* to any antecedently given procedure.   More generally, since Dummett's argument turns on the thought that sense, if it is to be determinate, must first be "provided" by the human activity of instituting such procedures, it can be resisted where we have good independent reason to consider sense to be "given" in a way that essentially outstrips these procedures. Such an independent reason is provided, as I have argued, by the metaformal reflection that underlies Gödel's results and thereby demonstrates what he calls the "inexhaustibility" of mathematics, and more generally by the problematic accessibility of the infinite and transfinite to thought that is broadly witnessed in the results of Cantor, Gödel and Turing.

More narrowly, Dummett has at least sometimes suggested an argument from Gödelian incompleteness itself to anti-realism about mathematics. The argument is that, since as Gödel shows there are undecidable sentences for every consistent formal system capable of expressing arithmetic, there must be sentences, for any such system, that cannot be verified as true or false by means of its proof procedures. Assuming that truth an falsehood are intelligible only in terms of intra-systematic proof, there must then be, for any such system, sentences that are neither true nor false, and it may be thought to follow as a corollary that an intuitionist logic must therefore be adopted to treat them. This conclusion is, of course, very different from the disjunctive one Gödel himself draws from his incompleteness results, whose two alternatives must both be understood, as we have seen, as robustly realist. In fact, to argue *from* undecidability to intuitionist logic in the way that Dummett at least sometimes suggests is in a certain way to ignore the deeper underlying reasons *for* undecidability. For the argument involves *assuming* that proof can only be intelligible as an intra-systematic notion; whereas Gödel's first theorem itself depends on "verifying" the undecidability of the Gödel sentence for a particular system from an essentially *extra*-systematic perspective. And the possibility of this verification bears witness to that of a kind of "insight" into reality that is not simply the outcome of a proof procedure in any particular formal system. If we can assume that the Gödel sentence for a particular system, construed simply as an arithmetical sentence, has reference to the "actual" natural numbers, it is natural to put this "insight" as the insight into a truth about them that the system in question essentially cannot prove (if it is consistent). But in fact to appreciate the more general possibility of a genuine extra-systematic insight into the Real here, it is not necessary to conclude, as Gödel himself most often does, that the Gödel sentence for a particular system is an arithmetical truth in this sense. Even on the other horn of the disjunctive conclusion, where what is demonstrated is not a particular arithmetic truth but simply the undecidability of a sentence for a particular system, *this* undecidability is still demonstrated as a positive fact about this system (again on the assumption that it is consistent), and it is also possible to draw the more general conclusion that *every* formal system will

evince some such sentence. What is gained with this insight, even if it is not a successive insight into the "truths" about natural numbers, conceived "Platonistically" as existences in and of themselves, is nevertheless a general meta-formal insight into the real limitations of all regular formal systems as such insofar as they are capable of touching on truth. On this horn of the disjunction, it thereby points, as I have argued, to an irreducible insistence of problems unsolvable by any procedural means, an insistence that must itself be considered an irreducible mark of their reality.[33]

With respect to this problematic insistence of the Real at and beyond the limits of finite procedures, which shows up, as I have argued, only when the very idea of a finite procedure is subjected to critical and meta-formal reflection, along with the constitutive ideas of the finite and of capacities that underlie it, the question that Dummett characteristically asks about the relationship between the instituting or specifying of "use" and that of procedures of verification is thus not the most telling one. Rather, the real question is prior to this: it is the question of how *any* institution – or its communication in teaching or learning – can suffice to determine an infinite totality of truths about objects in a certain domain to begin with. But this is just the question underlying Wittgenstein's "rule-following" considerations in the *Investigations*, and Dummett's failure to discern the tension between Wittgenstein's critical inquiry into the very idea of rule-following and the "official" conception of "meaning as use" marks a real limitation of his reading of him.[34] As Wittgenstein argues, it is evidently no answer to this question to hold that the infinite number of truths about objects in a particular domain are determined "all at once" by means of the inscription of a symbolic formula or an experiential intuition of its "meaning." To say that language, or the use of a word, is a "practice" or "institution" is thus not to say that it is determined or determinable, once and for all, by means of a finitely specifiable regular procedure specified or specifiable in advance; but rather that its form is shown in what we do from case to case of new applications. Specifiable "procedures" for verification are given along with this general form as it is lived, and as emerge from it by means of explicit formal reflection. But this does not mean that the understanding of the truth or falsity of claims that is shown in these instances and given in this form must be constrained by them in such a way that it is not possible to maintain their "realist" reference to things as they are in themselves and to the correlative determinacy of truth and falsehood.[35]

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[33]Feferman completeness; Wittgenstein's model-theoretic argument (Putnam, etc.)

[34] This failure is doubtless responsible for Dummett's attribution to Wittgenstein, in a famous and critical review of the latter's *Remarks on the Philosophy of Mathematics*, of a "full-blooded" conventionalism on which the result of a new calculation must be spontaneously decided in each case.

[35] Something similar can be said, as well, about Wittgenstein's own complex and much disputed suggestions in the *RFM* about the Gödel sentence and the meaning and bearing of Gödel's proofs. In particular, though Wittgenstein is certainly dismissively critical of the thought that Gödel, in proving the unprovability of the Gödel sentence, has proven a new mathematical *truth*, this does not mean, as I have argued in the Politics of Logic, that what Wittgenstein says cannot be seen as itself suggesting a kind of realism with respect to mathematical *problems* (essentially, on the paradoxico-critical rather than the generic side of the distinction between the two post-Cantorian arguments). For instance, in a helpful reading of these remarks, Putnam and Floyd suggest that Wittgenstein can be seen as anticipating the thought that Gödel's result may show (only) that there is no model of ZFC that includes (only) the natural numbers. Though this suggests that Gödel's result does not after all establish any truths about a "realm" of the natural numbers themselves supposedly given in advance, it is nevertheless a telling meta-formal result *about models,* and one that must apparently have a "realist" construal if its real significance is to come into view. (cf. my "Badiou, Mathematics, and Model Theory").

Moreover, as the results of Gödel and Turing show, there in fact *must* be, given any formal procedure of verification of a certain type, "realist" truths that cannot be established thereby, whether of the actual truth-value of propositions, e.g. of the Gödel type, or about the irreducible insistence of *problems* that, though completely determinate in themselves, essentially evade *any* procedural/regular solution.

Viewed this way, the realism that is recommended on either horn of Gödel's disjunctive conclusion in fact has implications far beyond the domain of "mathematical" truth itself. In particular, a similarly motivated meta-formal realism is recommended wherever it is possible (or suggested on independent grounds) to be realist about *sense* itself. We obtain this realism as soon as we recognize that the *constitution* of sense in any particular domain is not simply the result of its *construction*, whether by means of the capacities or activities of a finite "human" subject or indeed by the institution of finitely specifiable regular procedures, rules, or norms of "intersubjective" practice. As we have seen, Dummett's framework has the salutary benefit of resituating the question of realism as a question of the determinacy of sense rather than as the old question of the constitution of objects in relation to our ways of knowing about them. But in applying it and especially in arguing for anti-realism, he tends to assume that sense *must* be "provided" by means of socially instituted practices, if it is to be provided at all. What meta-formal realism points to, by contrast, is the possibility of a realism about the "provision of sense" that separates it from any constructivism, whether of a subjectivist, social-pragmatist, or finitist kind. From the current perspective, the problem of this constitution is not distinct from the problem of the accessibility of the infinite to thought itself. For (linguistic) sense is in itself infinite, if only for the reason that knowing or understanding the sense of a single term involves, in principle, knowing how to apply it in an infinite number of cases. If, as I have argued, the complex of results running from Cantor, through Gödel, to Tarski, shows the irreducibility of this access to any finitely specifiable procedure, it also thus motivates a realism about sense and its givenness that outstrips any determination of this givenness in terms of (finitely specifiable) capacities, abilities, faculties or practices. Although, as we have seen, this does not by itself demand or establish realism about any particular domain of entities or referents, it is the appropriate meta-formal basis for an "ontologically" realist position about sense in its constitutive relation to the being of beings. For this reason, as we shall see over the next few chapters, it can also be the basis of a robust realism about *time* in its fundamental structure, in opposition to the "metaphysical" ultimately anthropological intuition, running from Aristotle to Kant, that locates its basis in the activities, procedures and capacities of a thinking subject of consciousness.

IV

I have suggested that what I have called meta-formal realism provides a rigorous and appropriate basis for a development of Heidegger's own problematics of sense and time; besides providing for an underlying realism with respect to these structures and indeed to the question of givenness itself, it relates them to some of the most significant developments of contemporary formal reflection. The question may here arise, though, whether any such application of formal methodology (or methodology developed in accordance with the results and techniques of modern, symbolic logic) can really be made

with respect to what Heidegger calls "fundamental ontology" or (later) "the history of Being" at all. For did not Heidegger himself resolutely and repeatedly oppose the application of the "empty" and "merely caulculative" methods of formal, symbolic logic or "logistics" to the question of Being itself? As I have noted, my attempt in this book is not primarily to develop an exegetically faithful reading of Heidegger, but rather to contribute to the development of several interrelated problems that he first pointed out, so it is a matter of relative indifference whether the specific kind of position that I have summarized as metaformal realism can indeed be attributed to Heidegger himself. Nevertheless, it is worth briefly considering the substance of his critique of the application of formal methods to ontology in order to more completely specify the underlying problematics themselves.

It is certainly true that Heidegger often, and throughout his career, opposes any conception according to which the techniques and methods of formal/symbolic logic, for instance of the kind developed by Frege, Russell and Whitehead, can by themselves determine ontological questions or clarify ontological problems. Already in the very early 1912 article "Recent research in logic," for example, Heidegger suggests that calculative "logistics" of the sort developed by Russell in *The Principles of Mathematics* is characterized by inherent "limits" in that it tends to "conceal the *meanings* of concepts and their *shifts in meaning*," thus leaving "the deeper sense of principles…in the dark". Logistics in this sense, according to Heidegger, is "simply not familiar with the problems of the theory of judgment" and its "mathematical treatment of logical problems" thus reaches "limits at which [its] concepts and methods fail, more precisely, there where the conditions of [its] possibility lie."[36] In Heidegger's subsequent work, the dominance of logistics (sometimes identified or associated with "positivism") and its substitution for "true" logic is often seen as, more broadly, representative of a broader regime of "calculative thinking" which is characteristic of the contemporary epoch of technology and its privileging of the real in the sense of "actuality" [wirklichkeit]. A passage from the Nietzsche lectures of 19—may be considered typical of this:

> The precedence of what is real [wirklich] furthers the oblivion of Being. Through this precedence, the essential relation to Being which is to be sought in properly conceived thinking is buried. In being claimed by beings, man takes on the role of the authoritative being.

> As the relation to beings, that knowledge is adequate which is used up by reification in accordance with the essential manner of beings, in the sense of the real as calculable and ensured. Knowledge thus becomes calculation. The sign of the degradation of thinking is the elevation of logistics to the rank of true logic. Logistics is the calculable organization of the unconditional lack of knowledge about the essence of thinking, provided that thinking, essentially thought, is that projecting knowledge which unfolds in virtue of Being in the preservation of truth's essence.

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[36] Nevertheless, in the article Heidegger praises Frege's work, especially in "On Sense and Reference" and "On Concept and Object" as "not yet appreciated in their true significance, let alone exhausted," and as essential not only for "any philosophy of mathematics" but also for "a universal theory of the concept." (p. 33)

Heidegger thus connects the "elevation" of logistics in the sense of calculation to the status of a "true logic" with the more general "precedence" of the real which involves a conception or interpretation of all that is real in being in terms of its capacity to act on and affect beings. This regime is prepared, according to Heidegger, from long ago by the metaphysical interpretation of Being in terms of beings and by the privileging of "thatness", "reality," or "actuality" as the basic character of beings. Within this interpretation, Heidegger suggests, the techniques of mathematical "calculation" or "construction" attain the significance of demonstrating the existence of "something effective within a context of calculative proof." These techniques of calculation and construction thus become the basis for the constitution of the idea of effective causality that underlies "modern" physics and technology and thereby comes to dominate the knowledge and practices of the modern age. With this dominance of the actual in the sense of causally acting and effecting, the "essential determination" of the history of Being is "carried out to its prefigured completion."[37]

Heidegger thus sees the calculative techniques of symbolic and mathematical logic as, on the one hand, "empty" with respect to the actual structure and nature of presence and presencing themselves and, on the other, symptomatic in their growing dominance of the "metaphysical" conception of Being in terms of beings as it moves toward completion. The position is in a certain way overdetermined with respect to the actual "content" of the techniques of mathematical logic themselves: though these techniques are in themselves empty and incapable of supporting "thinking, essentially thought", nevertheless their contemporary dominance, in connection with the regime of technology that they make possible, points in an important and even privileged way to what is most preeminently to be thought today. Despite this air of overdetermination, though, one might easily conclude from what Heidegger says that no methodology or result that essentially depends on formal or mathematical logic can play any positive role in furthering the ontological problematic itself, either in the sense of the "fundamental ontology" of Dasein or in the later sense of the history of being.

The methodology of meta-formal reflection that I have discussed, and which is modeled by Gödel's reasoning about the implications of his own results, does in fact depend essentially and in an obvious sense on the techniques of symbolic logic and mathematical proof; and so it might be thought, along

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[37] The usual name for thatness, existence, testifies to the precedence of Being as *actualitas* in this interpretation. The dominance of its essence as *reality* determines the progression of the history of Being, throughout which the essential determination once begun is carried out to its prefigured completion. The real is the existing.

The existing includes everything which through some manner of causality *constituitur extra causas*. But because the whole of beings is the effected and effecting product of a first producer, an appropriate structure enters the whole of beings which determines itself as the co-responding of the actual produced being to the producer as the highest being. The reality of the grain of sand, of plants, animals, men, numbers, corresponds to the making of the first maker.

It is at the same time like and unlike his reality. The thing which as reality can be experienced and grasped with the senses is existent, but so is the object of mathematics which is nonsensuous and calculable.

"M exists" means: this quantity can be unequivocally constructed from an established point of departure of calculation with established methods of calculation. What is thus constructed is thus proven as something effective within a context of calculative proof. "M" is something with which one can calculate, and under certain conditions must calculate. Mathematical construction is a kind of constitution of the *constituere extra causas,* of causal effecting.

these lines, that it just cannot be applied to the ontological problematics with which Heidegger is concerned. But in fact, none of the considerations that Heidegger introduces bear in any substantive way against the application of metaformal reasoning that I have suggested here.

First, as we have seen, what is in view with the kind of metaformal reasoning that I have discussed is not at all simply the mechanical application of a "formal" technique of symbol-manipulation, but rather a reflective illumination of the very conditions under which any such logical technique is possible and gains any possible relationship with truth. This reflective illumination, as we saw also in connection with the twofold consideration of truth and meaning in chapter 3, may more closely be compared to the task of what was traditionally called "transcendental" (rather than formal) logic in its evincing of the structure of the givenness of things themselves. But second, and more importantly, far from simply applying an effective technique of empty calculation that is assumed to have universal scope in itself, the "limitative" results of Gödel and Turing point exactly to the formally inherent limits of the actual effectiveness of any such technique. As such, they are themselves formally diagnostic of the configuration of thought and practice that simply *assumes* in advance the unlimited applicability of calculative techniques. Indeed, by demonstrating the necessary existence of the undecidable, the uncalculable, and the ineffective that accompanies *any* formal definition of technical or regular effectiveness, they also provide formally motivated terms for the fundamental critique of this configuration. This result of formally based reflection on formal methods – whereby these methods are inherently limited, in their relationship to truth, by an essential *ineffectivity* that necessarily accompanies them wherever they are applied – is anticipated in detail (as we have seen in chapter 1, above) by Frege's own conception, in opposition to the dominant psychologism, of logic as the site of an insistence of what is (precisely) real without being actual in the sense of "effective." But the inherent ineffectivity accompanying any total or calculative regime of thinking is only really rigorously demonstrated and positively verified, as we have seen, by the paradoxical and limitative results (including Russell's paradox, Gödel's theorems, and Turing's argument) that follow in quick succession from the completion of the "foundationalist" project itself.

In this respect, again, far from being opposed to Heidegger's consideration of the role of the dominance of "calculative" thought and its assumption of unrestricted applicability in the history of Being, the metaformal results of Gödel and Turing in fact confirm Heidegger's critique and point in a formally rigorous way to the very "closure" of the metaphysical regime of "actuality" that Heidegger himself attempts to describe. Here, it is thus not necessary to oppose the thinking that emerges from reflection on the scope and limits of formal/symbolic logic to the Heideggerian ontological problematic; rather, given the specific positive character of the limitative results that arise from this reflection, they can be seen as directly contributing to the development of this problematic and even confirming it by other means. Heidegger's own animadversions against the usefulness of symbolic logic (or the assumption of its unlimited applicability) are thus no reason to reject the application of metaformal reasoning I have suggested here. Aside from this, though, are there any positive arguments to be found in Heidegger's *corpus* that suffice to establish that formal reasoning of a "logical" or "mathematical" character *cannot* shed light on phenomenological or ontological issues?

By contrast with statements simply asserting the "emptiness" of formal/symbolic logic, or genealogical/historical descriptions of what Heidegger sees as the role of "logic" as such (and primarily in its Aristotelian or Hegelian forms) in the development and fixation of the metaphysical tradition, such positive arguments are much harder to find in Heidegger's texts. One such, however, is suggested in the course of a critical discussion of Husserl's phenomenology in Heidegger's (early) Freiburg lecture course, "Ontology: The Hermeneutics of Facticity," from the summer of 1923. Here, Heidegger challenges what he sees as Husserl's presupposition of "mathematics and the mathematical natural sciences" as a *model* "for all scientific disciplines," which according to Heidegger suggested, in the earlier development of Husserl's phenomenology, that phenomenological description itself be "[elevated]...to the level of mathematical rigor:"[38]

> Nothing more needs to be said here about this absolutizing of mathematical rigor. This is not the first time it has surfaced, but rather it has for a long time dominated science, finding an apparent justification in the general idea of science which appeared among the Greeks, where one believed that knowledge was to be found in knowledge of universals and - what is seen to be the same thing - knowledge of what is universally valid. But this is all a mistake. And when one cannot attain such mathematical rigor, one gives up.
>
> Fundamentally, one does not even realize that a prejudice is at work here. Is it justified to hold up mathematics as a model for all scientific disciplines? Or are the basic relations between mathematics and the other disciplines not thereby stood on their heads? Mathematics is the least rigorous of disciplines, because it is the one easiest to gain access to. The human sciences presuppose much more scientific existence than could ever be achieved by a mathematician. One should approach a scientific discipline not as a system of propositions and grounds for justifying them, but rather as something in which factical Dasein critically confronts itself and explicates itself. To bring mathematics into play as the model for all scientific disciplines is unphenomenological- the meaning of scientific rigor needs rather to be drawn from the kind of object being investigated and the mode of access appropriate to it.

According to this argument, in other words, it is inappropriate to treat mathematics as the "model" for the phenomenological description of what is given in experience, or methodologically to impose the kind of rigor that is characteristic of it here. This is because, as Heidegger argues, phenomenology is not a topical area or a categorical field but rather a method of developing the "how" of access into what is present in intuition, just as it gives itself to experience there. Since it is concerned with the mode of access in this way, phenomenological description has to be developed according to the kind of access

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[38] This attribution of this position to Husserl is in fact puzzling in at least two ways. First, of course, given Husserl's longstanding and decisive critique of naturalism and the natural attitude, it can hardly be said (whatever the role of mathematics itself in serving as a model for phenomenological description) that he *generally* privileged "mathematical natural science" as a model for phenomenological investigation. But second, although it is indeed suggested in the *Logical Investigations* that mathematics in the sense of a "mathesis universalis" can serve as a formal structure for all *logical* theory, by 1923 Husserl had already clearly rejected the idea that the *phenomenological* structure of experience itself could always be mathematized in a formally exact way: see, e.g. Ideas I (1913) section ---.

that is characteristic of the particular field or kind of object being investigated in each case, and it is accordingly a mistake to take the characteristic universality and universal transmissibility of mathematical knowledge as a methodological or thematic model for all "scientific" inquiry. In this respect, in fact, Heidegger suggests, this characteristic universality and accessibility of mathematics makes it in fact the "least rigorous" of disciplines, in that it means that it fails to involve the complexity or singularity of the "scientific existence" that the human sciences themselves presuppose and attempt to theorize.

From the perspective of meta-formal reflection that I have suggested here, it should be said, first, that there is no need to presuppose the purported "universality" and accessibility of mathematical *objects* in order to apply the lessons of "metalogical" or "metamathematical" reflection to the problems of (phenomenological) access and givenness. As we have seen, the attitude of meta-formal realism should, on the one hand, be sharply distinguished from the (vulgar) "Platonist" attitude of assuming or presupposing the timeless existence of a range of mathematical objects universally accessible due to their privileged residence in a kind of *topos ouranos* quite alien to anything specifically involved in "our" form of life; while, on the other, the positive results on which meta-formal realism turns provide grounds for a formally based reconsideration of what is involved – in the theory of proof, the force of rules of inference, and the provision of axioms themselves – in anything that can reasonably be seen as the "accessibility" of mathematical "objects" to begin with.

Second, though, and along the same lines, though, it should also be asked what kinds of accessibility *do* characterize mathematical knowledge, and what is the form underlying these kinds of accessibility in the facticity of a life, here determined not simply in terms of any factual-anthropological conception of the "human" but in a way structurally corresponding to its proper modes of givenness and presence themselves. For mathematics is after all, among other things, an activity undertaken in the course of such a life among other activities of theoretical reflection and practice; and without yet assuming anything determinate about the ontological mode of existence of its objects, it is certain that the problem of access here raises quite specific and difficult problems which must be confronted by *any* phenomenological or ontological theory of givenness or presence as such. Especially in connection with the idea of the infinite, which receives (as we have seen) a fundamental and transformative articulation in the work of Cantor and the developments which follow him, these are problems of "access" that are not in fact limited to the "philosophy of mathematics" in a narrow sense, but rather raise questions bearing on the structural form of "our" mode of life (for instance, the nature and meaning of its long-discussed "finitude") itself. As I have tried to argue here, there are also not distinct from the problems constitutively involved in any account of "our" access to *meaning* or *sense* and indeed of its own basic constitution, insofar as this basic constitution *always* involves the "infinite" character of the one over the (unlimited) many. These are the problems visibly taken up in an original fashion (although not resolved) by Plato in the heroic dialectics of his late attempts at a revision of the classical "theory of forms;" and, as I have tried to show (especially chapter 2) they are also problems that can by no means be avoided by an ontological hermeneutics in its own development of the question of access and accessibility, most of all where this question overlaps with the problem of truth. Here, indeed, as I shall attempt to demonstrate over the next several chapters, the insistence of these problems points in a

basic structural way to the original problem of the givenness of time, insofar as it can be experienced or measured at all.

In particular: hermeneutic attention to the formal basis and ontological constitution of constituted time will verify that time as such is never just "there" before us to be counted by means of an activity or process of an agent simply external to it. Rather, as I shall attempt to show, it is always *doubled* as both counting and counted, as the experienced and the thinkable, as hence as the time of the world in which we live and the time of sense with which we think. Metaphysical thought opposes the "realm" of the thinkable and that of the experienceable as the timeless and the intra-temporal; but the ontological/hermeneutic formal interpretation of the basis of the possibility of countable time will reveal the more original problematic horizon of this determination. Since Aristotle, and up to Kant, metaphysics also thinks the basis of counting, hence the basis of "experienced" time, in the self-relational activity of a self or subject which also constitutes its original temporal form. But there is also a genesis of sense, and of the being of number, that owes nothing to the subject. This will becomes clear in relation to what Plato thought as the ideal genesis of number, where it points to an original problematic of the finite and the infinite in relation to the ideal conditions of being and becoming that gains resonance once more through the development of the metalogical problematic today.

For these reasons, over the next several chapters of the investigation, we shall take up the old problem of "mathematical existence" on a renewed ontological-hermeneutic ground, not with a view to establishing or securing the model of mathematical objectivity as absolute existence, but as the concrete problem of the form of sense as it communicates with the structure of temporality and with presence "in general." The investigation will lead us to consider such matters as the possible "givenness" of the infinite to thought, the peculiar temporal character of "historical" languages which are nevertheless capable of expressing judgments and truths "once and for all," and the mysterious thought of a superior "ideal genesis" of forms that Plato appears to assay, in his last writings and unwritten doctrines, on the model of an actual origin of numbers from the superior principles of the one and the unlimited many themselves. The aim will be a substantial clarification, relevant to the contemporary "ontological" situation, of the problem of the sense and truth of Being insofar as it comes to light as time.

Sense, Finitude and Time: Kant, Heidegger, Wittgenstein

(Chapter 6 of Draft MS: *The Logic of Being: Heidegger, Truth, and Time*)

1.

In *Being and Time*, Heidegger famously argues that Dasein, or the kind of being that we ourselves are, is essentially structured by the possibility that is most ultimate and unavoidable for us, namely that of our death. As our "ownmost, non-relational possibility… not to be outstripped," (1927: 264) the possibility and "indefinite" certainty of death includes and encompasses all other possibilities for the individual Dasein, including the possibility of becoming certain, Heidegger says, of the *totality* of one's own potentiality-for-being (1927: 266). In particular, in "anticipation" or "authentic being-toward-death," Dasein achieves an individualizing freedom in which it comes "face to face," in the attunement or mood of anxiety, with the "possible impossibility" of its own existence. It thereby can liberate itself from an ordinary or "inauthentic" mode of fleeing into a "lostness" and neglect wherein possibilities are pre-determined by the claims of the "they" [Das Man] which have always already decided the appropriate "tasks, rules and standards" for one's actions and motivations (1927: 268).

By contrast with the "inauthentic" temporality determined as an infinitely continuing sequence of homogenous "now" moments, the finitude of Dasein in relation to death constitutes a "primordial" and "authentic" temporality that is primarily directed toward the future in its creation and engagement of possibilities. (1927: 330-331). This primacy of the futural relation to one's own possibilities, as well as the "Being-already in…" which characterizes authentic Dasein's present and the "being-already-in" in which Dasein has the possibility of "taking over" its own "having been" (325-326) together articulate the unified structure of temporality as "ecstatic," or as *the primordial 'outside-of-itself' in and for itself*." (329). Though temporality is thus separated into the three interlinked "ecstases" of the past, present and future, the future in the sense of the "anticipatory resoluteness" of Dasein in relation to death retains a priority which allows it to unify the three (339). This unity is not the unity of an extant thing or an entity which would thus "emerge from itself"; rather, its unity is that of a "process of temporalizing in the unity of the ecstases" (329). Through this temporalization of temporality, it is possible that there arises as a secondary structure the "'time' which is accessible to the ordinary understanding" and in which the basic ecstatic character of primordial time is "levelled off," namely that of the "pure sequence of 'nows', without beginning and without end." (329). On this conception, the 'infinite' time about which it is possible to say (for instance) "time goes on" or "time keeps passing away" is "derived" [abeleitete] from the more basic structure of essentially finite "primordial" time insofar as it "temporalizes itself" in a certain way (331). In particular, through the possibility of counting and measuring time, which is itself grounded more basically in Dasein's primordial temporality, it becomes possible that a kind of time that is understood as "public" on the basis of the countable availability of the "now" gains the character of a "world-time" which is knowable as the time "'wherein' entities within-the-world are encountered." (417-419). Nevertheless, because of its underlying "ecstatico-horizonal" constitution, this world-time basically retains "the same transcendence" as that of the "world" itself; as transcendent in this way, it is both " 'more Objective' than any possible Object" and "'more subjective' than any possible subject" (419). As, in this way, the "earlier" condition of possibility

for anything physical as well as psychical, this world time is itself neither objective nor subjective since it constitutes this "earlier" itself. (419). Heidegger thus does not exclude the possibility of an alternative development of world-time, one which would not simply result in its "leveling" into public forms but would nevertheless retain its capacity to condition "objective" as well as "subjective" processes; indeed, Heidegger sees a basic problem here, one also connected with the problem of *truth* with which Division 1 of Being and Time concludes.[1] Heidegger also does not deny that any conception of time must acknowledge its "going on" and containing an unlimited number of things in the future despite my own "no-longer existing" (des Nicthmehrdaseins meiner selbst) (330); in response to the questions raised by these phenomena, he says simply that they cannot imply objections to the idea of the finitude of *primordial* temporality because they do not "treat" it at all. On the other hand, it is characteristic of the "ordinary" way of interpreting time that it characterizes this time as the publically available, "levelled-off" sequence of present "nows" that thereby, Heidegger says, renders unrecognizable its own actual "origin in the temporality of the individual Dasein." (425).

As thus ecstatco-horizonally grounded, temporality thus remains based in the primarily futural structure of Dasein's projection upon possibilities, wherein it is linked essentially to the basic structure underlying the intelligibility and meaningfulness of entities, or what Heidegger calls their *sense* (1927: 151). In the discovery or disclosure of entities in their possibilities by Dasein, they are able to be understood in such a way that their *way of being* is itself also simultaneously understood; there is thus an essential link between the determinate sense of beings and the overarching structure of projection whereby "something is intelligible as something" to begin with. But because sense is not ultimately a property of entities, but rather an existential structure of Dasein, this possibility also remains linked to Dasein's own constitutive structure of "being in the world." In particular, as the disclosedness of the underlying structure of the "there" or "da," understanding always relates to the *whole* of being-in-the-world (1927: 152), sketching out in advance the specific structure and relations that entities within the world are taken to have. In this way, all inquiry about the "ground" or basis of entities remains a questioning about sense, Heidegger suggests, and is ultimately rooted in the question whose articulation is the central task of *Being and Time* as a whole, the question of the meaning or sense of Being itself. This question, both with respect to its development as a question of sense in Division 1 and as a question of time in Division II, remains determined in a basic way by what Heidegger sees as the essential finitude of Dasein in relation to its "ownmost" possibility of death.

In *Kant and the Problem of Metaphysics*, published in 1929 but drawing centrally on the interpretation of Kant already worked out in the "Logic: The Question of Truth" lecture course of 1925/26, Heidegger specifies, through a detailed and radical reading of Kant, a partially related but also somewhat different way in which human finitude can be seen as underlying the structure of sense. On Heidegger's reading, Kant's program in laying out the grounding for any possible metaphysics in the *Critique of Pure Reason*

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[1] "Has ['time'] then any 'Being'? And if not, is it then a mere phantom, or is it something that is 'more being' [seiender] than any possible entity? Any investigation which goes further in the direction of questions such as these, will come up against the same 'boundary' which has already set itself up to our provisional discussion of the connection between truth and Being. In whatever way these questions may be answered in what follows – or in whatever way they may first of all get primordially formulated – we must first understand that temporality, as ecstatico-horizonal, temporalizes something like *world*-time, which constitutes a within-time-ness of the ready-to-hand and the present-at-hand." (419-420) (transl. slightly modified).

depends, at its core, on a conception of human pure reason as essentially finite (1929: 28). This finitude of reason, according to Heidegger, should not be understood as simply a matter of deficiencies or lacks in the human capacity for accurate knowledge; rather, it is primarily an aspect of the "essential structure" of human knowledge itself. (p. 28). In particular, for Kant, human knowledge primarily takes the form of *intuition*, the specific form of representation whereby knowledge is related directly to an individual object. The essential finitude of human knowledge, thus understood, is illustrated by the contrast Kant draws between this knowledge and the possible knowledge of a divine or absolute intellect, which would be capable, according to Kant, of an intellectual kind of intuition that would actually *create* the intuited object. By contrast with this, for Kant as Heidegger reads him, although human knowledge is always a synthesis of intuition and conceptual understanding, it is characteristically finite in that it stands under the necessity of *representing* objects which it cannot produce by itself and which therefore must be given to it from elsewhere (1929: 31-32). For a divine intellect which did not stand under this necessity, it would also not be necessary to think (but only to intuit) in order to have all of its objects adequately; but since human cognition is thus constrained, even in thought, its characteristic finitude does not only apply to the "faculty" of intuition but also to conceptual thinking by means of what Kant characterizes as the understanding and indeed, in a more basic sense, to the unity of the two. (31)

The basis of this unity for Kant becomes more clearly visible, according to Heidegger, in considering the way in which this conception of essential finitude determines the Kantian idea of the *transcendental*. In particular, Kant characterizes objects of knowledge in a twofold sense, both as appearances, insofar as they are knowable to us, but also as what the appearances are appearances *of*, i.e. unknowable things in themselves. Since appearances, by contrast with things in themselves, stand under the specific limitative conditions of the forms of intuition, their nature as appearances is determined by the essential finitude of human intuition. (37-39) This is again to be contrasted with the infinite knowing that would be capable of knowing its objects as things in themselves. This contrast is, Heidegger suggests, the actual meaning of Kant's claim that things in themselves lie "behind" appearances: the point here is not that there are two types of possible objects of finite intuition, one lying behind the other, but rather that knowledge of beings *as* they are in themselves is essentially closed to human beings as essentially finite knowers (38).

For the same reason, according to Heidegger, it is necessary that human knowledge always involves an element of receptivity and that this element be *sensory* in that it operates through organs of sensation that allow the essentially finite Dasein to be affected by particular external objects. (32) Nevertheless, genuine knowledge is not simply knowledge that immediately represents [*unmittelbar…vorstellt*] an object in itself; rather it must also be able to make this object "as revealed accessible with respect to both what and how it is for everyone at all times" [*offenbares fur jedermann und jederzeit in dem, was und wie es ist, zuganglich machen konnen*]. In this sense, "the intuited is only a known being if everyone can make it understandable to oneself and to others and can thereby communicate it." ["*Das Angeschaute ist nur erkanntes Seiendes, wenn jedermann es sich und anderen verstandlich machen und dadurch mitteilen kann.*" (p. 33)] Kant understands this requirement as fulfilled insofar as knowledge involves not only intuition but "representation in concepts" (*das Vorstellen in Begriffen*). This determinative representing of something is, however, itself an "assertion of something about something" or a predication. (*Bestimmendes Verstellen aber ist in sich ein Aussagen von etwas uber*

etwas (Pradikation).   The basis of this possibility of determinative representing, however, is itself the "faculty of judging" [*Vermögen zu urteilen*], or what Kant terms the "understanding".   In the actual act of determinative judgment, the faculties of intuition and understanding are united in a synthesis and thereby "mediately" related to the determined object. This synthesis "accomplishes" the making-evident [*Offenbarmachen*] of this particular entity as an object. Through this particular kind of synthesis and its particular structure, the object itself becomes available or actually available "in truth".[2]

This raises the question of the nature of the nature of the specific kind of synthesis between intuition and understanding that must occur for judgment in general to be possible. The problem of the basis of this synthesis is in fact, Heidegger suggests, the deepest problem of the whole project of the *Critique of Pure Reason* in its attempt to lay a critical ground for any possible systematic metaphysics. His attempt to solve it leads Kant to envision a mediating "common root" in the soul for both intuition and thinking; Kant characterizes this "common root" as a "power of pure imagination" which operates as a "blind but indispensable function of the soul."[3] This power is actually at the basis, Kant says, of all synthesis whatsoever and thus acts as the general function underlying all possible representation (Kant 1787: A 78/B103), including what Kant describes in the Transcendental Deduction as the necessary condition for all possible objective representation, the transcendental unity of apperception, has the form of a standing capability to unify intuition and the understanding.   But this capability itself remains dependent upon the deeper "productive" synthesis of the imagination:

> The representing of unity, as pure thinking, necessarily has the character of the 'I think.' The pure concept, as consciousness of unity in general, is necessarily pure self-consciousness. This pure consciousness of unity is not just occasionally and factically carried out, but rather it must always be possible. It is essentially an 'I am able.'… Only as the constant, free "I can" does the "I think" have the power to allow the Being-in-opposition of the unity to stand against itself [*vermag das 'ich denke' sich das Dawider der Einheit entgegenstehen zu lassen*], if in fact linking remains possible only with reference to an essentially free comporting. The pure understanding, in its original holding of unity before itself, acts as Transcendental Apperception.

> Now what is represented in the unity which is held before itself in this way [*der durch sie vorgehaltenen Einheit*]? Perhaps it is simultaneously the universe of all beings [*das All des Seienden*], in the sense of the *totum simul*, which the *intuitus originarius* intuits? But this pure thinking is certainly finite, and as such it cannot from itself, through its representing, set the being in opposition to itself, not to mention simultaneously setting everything in its unity. The represented unity first awaits the encountered being; and as such awaiting, it makes possible the encountering of objects which show themselves with one another. As non-ontic, this unity bears [*trägt als nicht-ontische*] the essential tendency of a unifying of that which is not yet

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[2] Heidegger writes: "Durch solche Einigung (Synthesis) bezieht sich das Denken mittelbar auf den Gegenstand. Dieser wird in der Einheit einer dekenden Anschauung offenbar (wahr)." As we shall see, Heidegger's hesitation between "offenbar" and "wahr" points to an inherent structural question, which Heidegger evidently sees as at least implicit in the structure of Kant's theory, about the specific relationship between the cognitive relationship to objects and the truth of judgment.

[3] Die Synthesis überhaupt ist, wie wir künftig sehen werden, die bloβe Wirkung der Einbildungskraft, einer blinden, obgleich unentbehrlichen Funktion der Seele, ohne die wir überall gar keine Erkenntis haben würden, der wir uns aber selten nur einmal bewuβt sind." (A78/B103).

unified in itself. That is why, following the clarification of Transcendental Apperception, Kant says of the unity which is represented in it: it "presupposes a synthesis however, or includes one." (p. 77; transl. slightly modified)

This deeper, presupposed synthesis is the "pure synthesis of the imagination," which is, according to Kant, the "ground of the possibility of all knowledge" as its necessary *a priori* condition (A 118). According to Heidegger, though, this conception of the productive power of the imagination as the basic *a priori* condition for the possibility of any synthetic untification itself presupposes the givenness to intuition of *time.* As the unitary form of both inner and outer sense, time in its givenness as a form of ordering also conditions, according to Kant, all "modifications of the mind" (A 99 and Heidegger, p. 79). In particular, as Kant explains in the "Schematism" chapter, the pure power of the imagination is the capacity to link intuition and the understanding by forming an image or schema which is the image of a horizon within which particular objects can be encountered and experienced. (p. 86) As such a "forming" of the horizon which also gives rise to the possibility of its being seen in a unified "look," the schematism also makes visible, according to Heidegger, "the ground for the possibility of transcendence"; but since "transcendence is, as it were, finitude itself" this is also a "making-sensible" of the basic structure by means of which a finite creature can intuit anything at all (p.87).

According to Kant, the schema for a concept is, in particular, a "representation of a universal procedure of imagination in providing an image for a concept."[4] Such a representation is necessary in general in order to account for the possible subsumption of an object under a concept, and is particularly so when the object of an empirical intuition subsumed under a pure concept of the understanding. For pure concepts or categories such as that of causality, unlike empirical concepts such as that of a *plate* or pure geometric concepts like that of a *circle*, are in no obvious way "homogenous" to what is subsumed under them. Whereas, for example, the roundness that is thought in the concept of the circle can be intuited in an actual plate, what is thought in the categories cannot be sensibly intuited at all. It is therefore necessary to explain how concepts in general, and pure concepts in particular, can apply to appearances. (A 137/B 176) Kant's answer to this question is the invocation of the "transcendental schema" as a "third thing," or "mediating representation," between the category and the appearance which is homogenous to both; such a "third thing" will be simultaneously intellectual and sensible. (A 138/B 177) Thus understood, the schema is the "formal and pure condition of sensibility to which the employment of [a] concept of understanding is restricted;" at the same time, the schema of a particular concept is the "representation of a universal procedure of imagination in providing an image for [the] concept" and thus allowing the concept, which is itself a rule, to be applied to its various instances. For instance, in the case in which I think a "number in general" for which I do not provide a direct image, my thought is not itself an image or directly related to one but is rather the "representation of a method whereby a multiplicity [i.e., one having that number]…may be represented in an image in conformity with" the concept in question (A 140/B 179-180). In the case of empirical or mathematical concepts, the schema thus operates as "a rule for the determination of our intuition" in accordance with which an image is provided for a concept. (A 141/B 180) By contrast with this, in the case of *pure* concepts or categories, there is and can be no such image or (accordingly) any "method" for providing one; here, the schema is thus simply "the pure synthesis, determined by a rule of that unity, in accordance with

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[4] "Dise Vorstellung nun, von einem allgemeinen Verfahren der Einbildungskraft, einem Begriff sein Bild zu verschaffen, nenne ich das Schema zu diesem Begriffe" (Heidegger, p. 92; Kant, A 140/B 179-180).

concepts, to which the category gives expression."[5] (A 141-142/B 180-181). In either case, however, the schema is, as Heidegger glosses it, a "representing of the rule" that the concept is which in a certain way "bring[s] the rule into the sphere of possible intuitibility". (pp. 93-94).

In this way, the schemata allow for the possibility of the basic connection between the intuition and the understanding by presenting or representing concepts in such a way that they become intuitable; such presentation itself manifests the basic structure of transcendence which consists in the finitude whereby human thought and intuition are jointly conditioned by the necessity of representing something exterior to themselves. But the schemata of pure concepts are in fact themselves nothing other than pure, *a priori* and transcendental determinations of time. Heidegger suggests, in particular, that the schema of the category of *substance* is, for Kant, the most basic "pure image of time" [*Ihr Schema muß die Vorstellung des Zugrundeliegens sein, sofern es sich im reinen Bilde der Zeit darstellt.*][6]

According to Kant, specifically: "The schema of substance is the permanence of the real in time, that is, the representation of the real as a substrate of empirical determination of time in general, and so as abiding while all else changes." (A 143/B183).[7] As Heidegger interprets it, this is the image of a constantly successive sequence of "nows" which is also *permanent* and eternally *persisting* in the sense of never running out. In this "pure sequence of nows" that "now time" [Jetztfolge] represents, time is always "now" [Nun ist die Zeit als reine Jetztfolge jederzeit jetzt.] (101) As the constant substrate of this constantly "flowing" sequence, time as schematized in the schema of substance is that which endures, giving "the pure look of something like lasting in general" (101). In this way, through the schematism that thus renders the "pure image of persistence" visible, "a being which as such is unalterable in the change can show itself for experience." [*so daß…für die Erfahrung ein im Wechsel unveränderliches Seiendes also solches zeigen kann*]. (102). This schematization of time as such thus functions, according to Heidegger, as "the ground for the inner possibility of ontological knowledge." It does so by giving to experience a "preliminary enclosedness to the horizon of transcendence." (102) In this giving of a "unique, pure, universal image" of time, it thus gives an image to the "single and pure ontological horizon" which is the condition for the possibility that any "begin given within it can have this or that particular, revealed, indeed ontic horizon." (102). As such a "pure self-giving" it makes visible to a finite creature the very structure of its own finite transcendence.

Given the structure of this finite transcendence, it is necessary for a subject thus constituted that it can be affected by something outside itself, but also in such a way that it "bears and makes possible in general the pure concept (the understanding) that stands in essential service to intuition" (p. 172). This

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[5] A 140-142/B 18-181.

[6] This despite the fact that, as Heidegger recognizes (p. 97) Kant says very clearly, a page or two earlier, that the schemata of *pure* concepts of the understanding, such as substance, "can never be brought into any image whatsoever:" "Dagegen ist das Schema eines reinen Verstandsbegriffs etwas, was in gar kein Bild gebracht warden kann, sondern ist nur die reine Synthesis gemäβ einer Regel der Einheit nach Begriffen überhaupt, der die Kategorie ausdrückt, und ist ein transzendentales Produkt der Einbildungskraft, welches die Bestimmung des inneren Sinnes uberhaupt nach Bedingungen seiner Form (der Zeit) in Ansehung aller Vorstellungen betrifft, sofern diese der Einheit der Apperzeption gemäβ *a priori* in einem Begriff zussamenhängen sollen." (A 142/B 181) (For some discussion of the issue, see section IV below).

[7] [Das Schema der Substanz ist die Beharrlichkeit des Realen in der Zeit, d. i. die Vorstellung desselben als eines Substratum der empirischen Zeitbestimmung uberhaupt, welches also bleibt, indem alles andre wechselt.]

possibility of affection from without in such a way as to facilitate the understanding characterizes what Kant treats as the temporal form of both inner and outer sense. Because it is a general possibility, this possibility of being affected from without but in such a way as to facilitate the concept must also characterize, according to Kant, the "formal conditions" of the way in which we represent all temporal relations of succession, coexistence, and endurance. For Kant, however, these "formal conditions," being purely relational, do not and cannot represent any thing in itself but must instead represent things only insofar as they are "posited in the mind". (B 67) This is what leads Kant to consider the basic temporal form of inner sense as "nothing but the mode in which the mind is affected through its own activity (namely, through this positing of its representation" (B 67-68) or, as Heidegger puts it, as the mind's "pure self-affection". As Kant further suggests, this self-affection itself further conditions the possibility of the apperceptive "consciousness of self," whereby the self appears to itself "as it is affected by itself." Thus the ultimate significance of human finitude for Kant, according to Heidegger, lies not simply in the fact that the finite intellect is necessarily affected from without, in sensation, by something other than it, but indeed that this possibility of affection from without is itself dependent upon a pure *self*-affection which, in yielding the form of time, pre-constitutes the apperceptive unity of the self to begin with.[8]

But although Kant thus sees the way in which the givenness of time as a kind of universal self-givenness conditions all possibility of representation and thus of objects of experience, he nevertheless understands this givenness itself in a way that is ultimately paradoxical or contradictory. This is because he understands this givenness, in ambiguous fashion, as both the result of an active and "productive" capacity of synthesis and as shaped by a formal condition with respect to which it is passive and receptive. As the agency ultimately capable of uniting the faculties of the intuition and the understanding, the transcendental power of imagination must unite receptivity and spontaneity in an original and non-composite way. (p. 140) Accordingly, since the transcendental imagination is, according to Heidegger, the ultimate basis for the givenness of time, time itself must be given, in a paradoxical way, both receptively "from without" and spontaneously "from within". This characteristic and paradoxical original duality of spontaneity and receptivity is also characteristic, according to Heidegger, of Kant's practical philosophy of the person, insofar as within it reason is grounded in respect for a law which I give myself. (p. 143-146.) In this respect, I submit myself to the law; but in so doing, I also submit myself to myself as pure reason. In this dual structure of self-submission, Heidegger again sees the paradoxical originally receptive/spontaneous structure of the power of imagination at the basis of the possibility of action:

> The self-submitting, immediate, surrender to [*sich unterwerfende unmittelbare Hingabe an*]… is pure receptivity; the free, self-affecting of the law [*freie Sich-vorgeben des Gestzes*], however, is pure spontaneity. In themselves, both are originally one. And again, only this origin of practical

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"In pure taking-in-stride [*im reinen Hinnehmen*] the inner affection must come forth from out of the pure self [*aus dem reinen Selbst*], i.e., it must be formed in the essence of selfhood [*Wesen der Selbstheit*] as such, and therefore it must constitute [*ausmachen*] this [*diese selbst*] in the first place. Pure self-affection provides the transcendental, primal structure of the finite self as such. Thus it is absolutely not the case that a mind exists among others which, for it, are also something related to it, and that it practices self-positing. Rather this 'from-out-of-itself-toward… and back-to-itself' [*'Von-sich-aus-hin-zu … und Zurück-auf-sich'*] first constitutes the mental character of the mind as a finite self." (p. 173).

reason in the transcendental power of the imagination allows us to understand the extent to which, in respect, the law as much as the acting self is not to be apprehended objectively. Rather, both are manifest precisely in a more original, unobjective, and unthematic way as duty and action, and they form [*bilden*] the unreflected, acting Being of the self [*Selbst-sein*]. (p. 146).

In this original receptive/spontaneous structure of pure self-affection is thus, according to Heidegger, to be found the ultimate basis for the constitution of the finite self to begin with. Indeed, insofar as both operate as unchanging and perduring conditions for all possible representation, Heidegger suggests, time and the "I think" of transcendental operation are, for Kant, ultimately the same. (p. 173). But if the "I" of the "I think" gives itself time through the original structure of a pure self-affection that is irreducibly both spontaneous and receptive, this means that it is also first constituted by this very giving. It thereby becomes possible, according to Heidegger, to challenge Kant's official view, according to which neither the "I" nor time itself are in fact "in time". Indeed, without simply denying this official view, it here becomes possible to ask whether Kant's attribution of permanence to both might in fact point to a deeper way in which both are temporal, indeed to the possibility that the "I", far from being simply atemporal, is "so 'temporal' that it is time itself, and that only becomes possible, according to its ownmost essence, as time itself" (p. 174-175). Indeed, if the originally reflexive receptive/spontaneous structure of self-affection is indeed the unified basis for the "I" of apperception and the self-givenness of time, it is necessary to consider this structure to be the "guide" for any possible "decision" regarding the temporality or timelessness of the "I". This "guide" itself points, according to Heidegger, to the renewed possibility of an ontologically clarified interpretation of the basis of the "ordinary" concept of time as a sequence of nows in the structure of the original self-affection that is constitutive of the finite self:

> Concerning the timelessness and eternality of the I, not only is nothing decided, but it has not subsequently been questioned within the transcendental problematic in general. The I, however, is "fixed and perdurung" in this transcendental sense as long as it is temporal, i.e. [as long as it is] as finite self.

> Now, if these same predicates are attributed to time, that does not simply mean: time is not 'in time.' On the contrary, if time as pure self-affection allows the pure succession of the sequence of nows to spring forth for the first time, then this, which springs forth from it and which, so to speak, is caught sight of [*erblickt wird*] for itself alone in the customary 'time-counting,' ["*Zeitrechnung*"] essentially cannot be that which is sufficient to determine the full essence of time.

> Accordingly, if we are to come to a decision regarding the "temporality", or the timelessness, of the I, then the original essence of time as self-affection must be taken as our guide [*Leitfaden*]. (p. 176; transl. slightly modified).

If the "I" of transcendental apperception which forms the basic unity of thought must be thus be placed in an essential relation to the pure self-affection that is also the basic form of time, it is also necessary, according to Heidegger, to rethink in this way the temporal status of the constitutive forms and rules of pure thought itself. This is so, according to Heidegger, even with respect to what Kant sees as the "highest principle of all analytical judgments", namely the principle of non-contradiction. As Heidegger notes (p. 167) in introducing the principle, just after the schematism chapter, as the basic principle

underlying all analytic knowledge and a *sine qua non* of all knowledge whatsoever (whether analytic or synthetic), Kant emphasizes that the principle, as a "merely logical one", must not be understood as limiting its claims to those involving relationships of time. Thus, it is necessary, according to Kant, to replace what he cites as the traditional formulation of the principle, namely "It is impossible that something should *at one and the same time* both be and not be" with an alternative formulation making no mention of time at all. Whereas a thing (A) which *is some way* (B) may very well be not-B at a later time, to build the determination of time into the principle of non-contradiction itself violates what Kant sees as the basic atemporality that should rightly characterize all genuine principles. (A 152-153/B 191-193) Accordingly, he suggests replacing it with a version that does not treat the opposed predicates (B and not-B) as separable from the thing itself (A), but rather as involved in the very concept of the thing. If, for example, one says, in accordance with the principle that a man who is unlearned is not learned, it is necessary to add the condition "at the same time"; but if one says simply that no unlearned man is learned, the claim is immediately analytical with no reference to time at all. The later formulation, rather than the former, actually shows, according to Kant, the real character of the principle of noncontradiction as the highest and most general condition for all thought. (A 153/B 192-193).

If, however, as Heidegger suggests, the basic structure of the "I think" of apperception must be reconsidered in its relationship to the underlying structure of self-affection at the basis of time, then even Kant's attempt to interpret the principle of noncontradiction as extra-temporal in this sense must also be rethought on this basis. Kant, remaining "oriented toward the nonoriginal essence of time" which does not yet have in view the original unified basis of time and thought in self-affection, must deny that the principle of noncontradiction has a temporal character (p. 177). He can legitimately argue, in fact, that the inclusion of the reference to time would mean that the principle was limited in its scope to "empirical, accessible beings within time", whereas as a logical principle governing *all* thought – analytic as well as synthetic -- it should not be so limited, and therefore that it is in itself not subject to any temporal form or determination (p. 176). More generally, given that Kant considers temporality only in terms of the question of what is "within" or "outside" time in the non-original, secondary sense, it would indeed be "illogical", as Heidegger agrees, for him to understand the "I" in general as "within time"; for – given that time is also the general form of inner as well as outer sense, for Kant -- to do so would be to "determine what time itself is originally with the help of a product derived from it." (p. 177).   Kant thus denies "with full justification" the attribution of any kind of "temporal form" to the I of apperception and to pure reason itself, a denial which he then with equal justice extends to the deletion of the "at the same time" in the initial formulation of the principle of noncontradiction.

The issue is, as Heidegger notes, essentially connected to the question of the basis of any possible recognition of an object; for as Kant suggests, whereas the principle on its first (uncorrected) formulation apparently presupposes the possibility of re-identifying a given object (A) over time as the same despite its varying (and even contradictory properties), the second, corrected version of the principle, by determining objects only in terms of their "concept", does not. In the first edition version of the "Transcendental Deduction,"[9] Kant considers, in addition to the mode of synthesis of "apprehension in intuition" and that of "reproduction in imagination," a third and more basic synthesis of "recognition" which grounds all concepts of objects in general. Although the synthesis of recognition

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[9] A103-110

is explicitly linked to the transcendental unity of apperception, its own characteristic relation to temporality remains, as Heidegger notes, obscure (p. 167). Insofar as it is possible to maintain that the "I think" of transcendental apperception remains simply outside time, it is also possible for Kant to find in it the underlying principle of unity and persistence that allows for the principle of noncontradiction to appear capable of applying to all objects as such, insofar as they are thinkable at all, without bringing them into any specific relation to time.

Within the scope of Kant's assumption of the secondary, derived conception which places both the "I" and its thought outside the realm of the "within-time", the correction which consists in deleting the "at the same time" is thus justified. Nevertheless, by bringing into view the more original link between time and the basis of thought in the basic structure of self-affection, it is possible, Heidegger suggests, to interpret this "at the same time" in a wholly different way. Here, in particular, though it is no longer simply a matter of the co-presence of beings within time, it may nevertheless be seen as involved in the actually *temporal* character of thought and the self in a more basic and original way:

> And yet – just as certainly as it is that the "at the same time" ["*zugleich*"] is a determination of time, so little does it have to mean the "within-time-ness" of beings ["*Innerzeitigkeit*" *von Seiendem*]. Rather, the "at the same time" expresses that temporal character which, as preliminary "recognition" ("*pre-paration*") ["*Vor-bildung*"], originally belongs to all identification as such. However, this lies solidly at the ground of both the possibility and the impossibility of contradiction. (p. 177).

Thought in this way, the possibility of recognition at the basis of any possible judgment of identity does not depend on the ontic co-presence of beings in the "at the same time" of a present moment; accordingly, the formulation of the principle of noncontradiction does not have to exclude it. Rather, it points back to the "belonging together" of thought and intuition, or of spontaneity and receptivity, in the "unity of the same essence," one which is predicated on the original constitutive structure of temporal self-affection that is also the original form of the givenness of time (p. 177). It is this structure, brought out and viewed as the unified root of time and the "I" of transcendental apperception that conditions all thought, that thus originally originally and basically "makes possible the finitude of human subjectivity in its wholeness" by showing that the self, while not simply "within time" is, "in its innermost essence...originally time itself." (p. 177)

In the concluding pages of the Kant book, this leads Heidegger to outline the further project of an ontological analysis of finitude which would investigate the meaning of Being as such in its constitutive relationship to the finitude of human beings. (p. 200) This is, Heidegger says, none other than the question of what "Being" itself means [*bedeutet*] given that it is (as Heidegger says) understood in advance in *every* question. (p. 201). In that this pre-understanding is a constant feature of Dasein wherein its own structure becomes evident to it as a kind of "irruption into the totality of beings, so that ... the being in itself first becomes manifest, i.e. as being," it also points to the essential structure of Dasein through which it *allows* beings to be. But this, as we have seen through the analysis of Kant, nothing other than the essential finitude of Dasein, which determines the way in which it encounters beings in general determined as transcendent or "exterior" to it. (p. 206). In this specific way, the analytic of finitude points directly to the question of how "transcendence carries out the projection of the Being of the being" always already in advance. But this projection is, as we have seen, nothing other

than the structure of the sense of beings, whereby they are first made capable of intelligibility and meaningfulness to us. It is in this analysis of finitude as the basis of sense, Heidegger suggests in closing, that we must accordingly situate the question of the possibility of truth in general, and thereby also to a "basic need" in our everyday existence to understand something like Being, as well as the positive possibility of actually achieving this understanding by means of an explicit interpretation of this existence. The analysis, in bringing into view for the first time the structure of Da-sein itself as the "transcendental primal structure" of temporality is thus also, simultaneously, a "fundamental ontology" that opens up the meaning of Being along the renewed and radicalized guideline of time (p. 218).

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The analysis of finitude that Heidegger discovers in Kant thus sees the possibility of sense as resting in the capacity of an essentially finite intellect to project possibilities of meaning into a potentially infinite domain of objects and circumstances, the world as such. Neither Heidegger nor Kant understands this possibility primarily in terms of language, or understands sense, thus conceived, as primarily a property of linguistic signs. Nevertheless, as I shall argue in this section, a structurally related conception of human finitude and its relationship to sense is formulated early on in the development of the tradition of analytic philosophy in explicitly linguistic terms, and becomes decisive in producing many of its most characteristic projects and results. On this conception, which I shall call the *structural-recursive* conception of sense, linguistic meaning arises from the rule-governed application of signs within indefinitely varying contexts of use. The underlying basis of this unlimited possibility of application in the individual language user is her knowledge of the systematic structure of a natural language, and this knowledge must be capable of being learned in a finite amount of time and symbolically represented in a finite amount of space. Here, the (generally implicit or tacit) knowledge of a language is thus related to its actual use as competence is related to performance, and the consideration that such competence must be attainable by beings that are spatially and temporally finite plays an important role in constraining the possible form and structure of theories of meaning.

The structural-recursive picture of meaning characteristically applies to the consideration of natural languages the lessons learned through the study of formalism and formalized languages. One principal conceptual and historical source for it can be located in David Hilbert's conception of formal, axiomatic systems for proof in mathematics. This conception arises in part in response to concerns about the role of the infinite in mathematics, concerns that were given special urgency by Georg Cantor's set-theoretical development of the mathematics of the transfinite. How is it possible for an essentially finite being to have rigorous, demonstrable mathematical knowledge about the existence and nature of actually infinite totalities? In the 1925 article "On the Infinite" (Hilbert 1925), Hilbert emphasized that, while mathematicians should steadfastly refuse to be driven from "the paradise that Cantor created for us" (1925: 376) by skeptical doubts about the accessibility of the actual-infinite or concerns arising from set-theoretical paradoxes, it is still necessary to account for the possibility of knowledge about the infinite by explaining how it is possible on the basis of *finite* processes of reasoning. The key to the conception that Hilbert proposes is the insight that the possibility of performing logical inferences at all depends on there being "something ... already given to our faculty of representation [in der Vorstellung];" in particular, "certain extralogical concrete objects" that are "intuitively present as

immediate experience prior to all thought" and their properties and possibilities of combination must be completely surveyable and "immediately given intuitively."(1925: 376). For the formalist, these extralogical objects are, however, nothing other than the concrete signs themselves with which proof and inference are conducted.

With this conception, mathematics becomes "an inventory of formulas that are formed from mathematical and logical signs and follow each other according to definite rules;" (p. 381) in particular, inference about the infinite is possible insofar as, and only in that, it can be carried out by means of finitely long proofs in a finitely specifiable axiomatic system. Mathematical inference is thus divided into two parts: a "finitary" and "contentful" portion dealing only with finite quantities and relations, and an "ideal" part capable of handling the infinite and transfinite which nevertheless depends wholly on the completely finitary relationships of signs within a particular axiomatic formal system. The "ideal" extension into the infinite is always justified, as long as it can be proven that it does not lead to any possible contradiction (1925: 383), and Hilbert further speculates that it may be possible to find in the formalist project a methodical basis for the confidence that every mathematical problem can, in principle, be solved (p. 384). In this way, Hilbert's formalist conception aims to provide a rigorous basis for a confidence in the methodical and procedural solvability of all mathematical problems on the principle that "the right to operate with the infinite can be secured only by means of the finite;" in particular the intuitive representability of finite signs and rules is held to be the necessary and sufficient basis for the solubility of problems concerning the finite and the infinite alike.1925: 384).

This conception of the methodical basis of mathematical reasoning led Hilbert to propose what came to be called the *decision* problem, the problem of whether there exists an *effective procedure* for answering every well-defined mathematical "yes or no" question. The question was answered, in the negative, independently by Alonzo Church and Alan Turing in 1936 and 1937. Just as significant as the negative answer, however, was the formalization of the idea of an effective procedure which was necessary in order to formulate the problem with sufficient clarity to give it a determinate answer. Church and Turing independently provided alternative formalizations of the notions of effectivity which turned out to be exactly equivalent; but Turing's formulation, in terms of the structure of automatic computing machines (what later came to be called "Turing machines") would prove decisive in that it also provided the first general description of the abstract architecture shared by all programmable digital computers.

In formulating this architecture and the rigorous concept of computability defined in terms of it in his 1936 paper "On Computable Numbers, with an Application to the Entscheidungsproblem," Turing also provides rigorous criteria for formally identifying those (real) numbers, and solutions to problems, which would naturally be regarded as computable by means of a finite procedure in an intuitive sense. Turing's definition of computability in terms of machines thus arguably formalizes the intuitive notion of effective computability by means of a completely specified procedure, and so captures the general form of all procedures that are open to essentially finite reasoners given finite time. (That it does in fact capture this intuitive notion accurately and completely is the content of what is sometimes called the "Church-Turing thesis").[10] In arguing for the specific architecture of the computing machines that

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[10] The claim that it does in fact capture this intuitive notion accurately and completely is what is sometimes called the "Church-Turing thesis".

formalize the notion of computability, Turing in fact appeals at several points to considerations of the essential finitude of humanly achievable reasoning. To begin with, "human memory is necessarily limited" (p. 59); it is thus impossible to suppose that a computational process requires of its agent that the agent be able at any point to hold in memory infinitely many pieces of information at once if it is to be effective in Turing's sense. Similarly, it is necessary to assume, for reasons similar to Hilbert's, that the agent or machine has the ability to survey only finitely many types of signs, and that it itself must be, at any time, in one of only finitely many possible internal states (pp. 75-76). Given these restrictions, it is possible to suppose that what the agent will do at any stage of the calculation is wholly determined by the combination of its determinate internal state and the symbols it is directly observing at the moment, and it is thus indifferent whether this agent is understood as being an actual human (Turing actually uses the term "computer" in its older sense to refer to a human whose job is to calculate) or a wholly mechanical system. Moreover, it is similarly always possible for the computer (whether human or mechanical) to break off the computation at any stage and summarize the current state of the computation in a finite symbolic description so that it can be resumed later.

But the most important restriction on Turing's rigorous notion of effective computability arises from considerations of essential finitude. For example, we cannot suppose, he argues, that an actual process of human reasoning can ever involve the surveying of infinitely many signs, or that there can be infinitely many discrete possible mental states. But the most important restriction on the notion of effective computability is the consideration that a procedure for the determination of the answer to a "yes or no" mathematical question must, if it is to be considered effective, always be able to reach the correct answer in a *finite* number of steps. In particular, if it can be shown, for a specific problem of this form, that there is *no* possible finitely specifiable procedure which will always reach a correct answer in finitely many steps, then the problem is said to be undecidable. The major consequence of Turing's argument in the 1936 paper is that there is in fact *no* effective procedure, in this sense, for deciding whether or not a particular sentence follows as a theorem from the axioms of a well-defined formal system. Applied to the formal systems capable of capturing the basic operations of arithmetic and thus intended to axiomatize mathematical reasoning in Hilbert's sense, this yields a negative answer to the decision problem for arithmetic.

If the informal notion of effective computability that is formalized by Turing's definition of Turing machines thus corresponds to a pre-theoretical conception of the epistemic or procedural capabilities of an agent constrained by the limitations of finite representation and finite time, the rigorous notion of computability formalizes this notion by providing definite criteria for what can and cannot be said to be achievable by means of any regular procedure that can be carried out by an agent so constrained. The idea of the finitude of such an agent, both in the sense of the finitude of its capacity to represent procedural rules and in the sense of the finitude of the time available to it in which to reach an answer, plays, as we have seen, a constitutive role in this formalization of this idea of an effective procedure. But this idea is not to be contrasted with some other idea of regular procedures that are not effective in this sense; rather, in a direct way, the idea of a constitutive finitude, such as Turing appeals to it in his argument, arguably determines the very idea of a (regular) procedure itself. It is, in particular, not obvious what could be meant by the description of a decision procedure as one that can only be defined by more than finitely many symbolic expressions, or one that necessarily would take a greater than

finite amount of time to reach an answer.[11] In this respect, although Turing appeals explicitly to the necessary limitations of an (indifferently human or mechanical) agent, what is at issue in his demonstration of the negative answer to the decision question is really the structure and limits of the very idea of a regular procedure itself. In particular, it is not necessary to suppose that Turing's limitative result turns on any specific or contingent limitation of human beings as finite knowers in relation to an idealized conception of possible procedural knowledge not limited in the ways that we are. Rather, since it arguably formulates and captures the constitutive idea of *any* regular and determinate procedure whatsoever, Turing's notion of computability also captures the necessary structure, and limitations, of anything that we can understand as regularly or methodically attainable knowledge at all.

Be this as it may, the specific structural conception of the rule-governed relationship between finite signs and their application which is suggested by Hilbert's formalism and developed in Turing's formalization of computability soon found wide and decisive application, in the early stages of the "analytic" tradition, to the study of both formal and natural languages. On the conception that became widespread and dominant in these early stages, a language (whether artificial or "natural") is understood as a regular structureThe specific conception of the rule-governed relationship between finite signs and their application suggested by Hilbert, Turing, and others soon found wide and decisive application to the study of both formal and natural languages. On the conception, in particular, a language (whether artificial or "natural") is understood as a regular structure of rules for the intercombination, transformation, and application of signs. Sentences or symbolic expressions capable of truth or falsity are understood as generated from a finite vocabulary of simple or primitive signs, in accordance with the rule-determined logical syntax of the language. This conception provided a basis for the program of the "logical" analysis of language pursued by philosophers such as Russell and the early Wittgenstein, as well as for the programmatic construction of new and logically clarified formal languages for the empirical and formal sciences in the structuralization project of the Vienna Circle and especially Carnap. In connection with specific conceptions of the referential scope of factual, meaningful, or verifiable language, it also made possible the project of a limitative or critical tracing of the boundaries of linguistic sense or meaningfulness. This project was sometimes presented as a kind of continuation by linguistic means of Kant's classical limitative project in the transcendental analytic of the first *Critique* (cf. Wittgenstein's preface to the *Tractatus*, as well as the title and project of P.F. Strawson's linguistically inflected reading of Kant, *The Bounds of Sense*)..[12]

One of the most significant early positive applications of the structural/recursive conception of linguistic sense, though, was made by Alfred Tarski in the 1931 paper "The Concept of Truth in Formalized Languages." In the article, Tarski seeks to find a general method for constructing a definition of truth for particular formal languages. The orientation for his approach is provided by what Tarski takes as the "most natural" structure for a definition of the everyday or colloquial concept of a true sentence, such as it is presupposed in ordinary language. This structure is summarized by Tarski as holding that "a true sentence is one which says that the state of affairs is so and so, and the state of affairs is so and so"; Tarski suggests that this is similar to the famous formulation given by Aristotle in Metaphysics 3, 7, 27). ("To say of what is that it is not, or of what is not that it is, is false, while to say of what is that it is, or of

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[12] E.g., in the preface to Wittgenstein (1921) and in the title and argument of Strawson (1966).

what is not that it is not, is true.) In relation to particular, well-defined formal languages, the application of the general conception (what Tarski calls the "semantical" approach) In relation to particular, well-defined formal languages, the application of what Tarski elsewhere calls the "semantical" approach to truth yields the general schema, today usually described as Tarski's convention T, that systematically connects sentences in the language with statements of their truth conditions. It can be illustrated by its classic "snowbound" example:

"Snow is white" is true *iff* snow is white.

The idea underlying the schema is that a definition of truth will be successful just in case it coordinates each sentence in the language, named by the device of quotation, with its truth conditions. But Tarski immediately notes that the 'semantical' approach, if conceived as formulated within the same language whose structure is to be elucidated, faces at least two problems. The first arises from the well-known paradox of the Liar: in particular, in any language which can formulate its own truth predicate and in which it is possible to form, by means of quotation marks or some other device, a name for each sentence, it will be possible to produce a sentence asserting its own falsehood. Such a sentence, when placed into the T-schema, will lead directly to a contradiction. The second problem concerns the possibility of forming names by means of quotation for arbitrary sentences itself. If the names of expressions formed by quoting them are themselves taken as syntactically simple expressions, then it will be impossible to coordinate them regularly with the internal structure of the quoted sentences in the way the T-schema demands. If, on the other hand, they are treated as syntactically complex expressions, we must provide a rule for the transformation relating what is quoted to the quotation in a suitable way. But as Tarski points out, this device by itself suffices only to construct syntactically simple constant expressions, each one purported to refer to one particular (syntactically complex) expression, but the actual link between the name and what it stands for is then obscure and it is impossible significantly to generalize the T-schema itself. If, for instance, one attempts to generalize it as:

2) For all p, 'p' is a true sentence if and only if p.

Then it is not permissible, on the conception, to substitute anything else for the symbol 'p' in its occurrence within the quotation marks (since, on the conception, the *whole* expression formed by the open and closed quotation marks and the symbol is a syntactically simple one). For a particular substitution, for instance "it is snowing", we then obtain only the senseless expression, " 'p' is a true sentence if and only if it is snowing".

To remedy this difficulty, Tarski suggests treating expressions formed by quotation marks, not as syntactically simple ones, but as complex expressions, some of which actually express functions taking sentences to names. The problem that now looms, however, is that these functions cannot be construed as wholly extensional, if they are to be useful in the formation of a general definition of truth. For instance, if " 'p' " in (2) is to express a function taking a sentence to a name, and for some particular p there is some q which holds iff p, then 'q' must be taken as identical to 'p' if the function is

extensional. Accordingly, the truth-definition in terms of quotation-mark names is not formulable for those who allow only extensional functions or wish always to avoid intensionality.

To avoid both problems (the problem of paradox and that of the intensionality of the quotation used in the T-schema), Tarski suggests a different approach. Instead of directly constructing a truth-definition by means of the T-schema or some version of it, truth for a particular language can be defined by means of what he calls a *structural* definition (1933: 163). The key idea is to define a true sentence as one which possesses certain structural properties related to the structure of the language as a whole, or one which can be obtained from simpler sentences by means of particular structural transformations. The suggestion renders systematic truth-definitions possible for particular formal languages whose structure is definite and unchanging; but, Tarski quickly argues, it is not likely to be useful in application to natural languages, which are by contrast, not "finished, closed, or bounded by clear limits." (p. 164). Moreover, the characteristic *universality* of natural languages – their general ability to express anything that can be expressed in any language – suggests that their truth predicates cannot be regimented without contradiction. For this very universality, when coupled with devices of self-reference that exist in every natural language, leads directly to paradoxes of the Liar type. Accordingly, Tarski maintains that a structural definition of truth for a particular language must be carried out in a second language which incorporates the first, or translations of all of its expressions, as a fragment. It is then no longer possible to formulate the Liar paradox and the related semantic paradoxes, since the language in which expressions are named and described is different from the language of those expressions themselves. And since the whole project is conducted in a meta-language, the problem of coordinating quotations within the object language to what they quote is similarly avoided.

It is now possible systematically to characterize the truth of complex sentences on the basis of a description of the structural properties of simpler sentences. In fact, given a language with the ability to produce infinitely many complex sentences by combining simpler ones, this recursive methodology will actually be necessary. But additionally, since many structurally complex sentences are not built up from simple ones (1933: 189) but are, rather, special cases of sentential functions (i.e. those with no free variables), it also necessary to define truth itself in terms of a more general and structurally basic notion. This more general notion is *satisfaction*; for example, an object x satisfies the one-variable function "x is white" if and only if it is white. Given this and similar basic satisfaction relations characterizing the finitely many primitive predicates, the structure of the truth predicate itself can now be thought of as built up recursively, in accordance with the logical and inferential structure of the language. Such a definition, Tarski suggests, will in fact be in accord with the T-schema; but since it is not formulated in the language to which it applies, it will also avoid the antinomies and the problems of quotation which made trouble for a straightforward (non-structural) definition of truth simply in terms of the schema.

Tarski's project for the recursive definition of truth for formal languages thus turns on considerations of finitude in at least two important ways. First, it is necessary in order to apply the method without contradiction that it be applied to an essentially "closed" language from a metalanguage position outside the object language itself; thus, such a language must be thought as having a surveyable structure and determinate limits capturable from the stronger meta-language position.. As a direct result, it is not possible to envision giving, in strict accordance with Tarski's method, a *general* definition of truth for arbitrary languages. What is possible is only the structural-recursive definition of specific

truth predicates for individual languages whose structure is well-understood and surveyable from an external position. Second, and just as important, though, the applicability of the recursive method itself depends on their being at most finitely many primitive predicates in the language and on their structural relations themselves being finitely characterizable by means of determinate rules. Only by means of such a structure, where a finite axiomatization captures the essential bases and rules for an infinite capacity to produce meaningful (and potentially true) sentences, is the general possibility of a structural truth definition in accordance with the T-schema secured, and the problems of quotational reference and intensionality that accompany a straightforward application of the schema avoided.

Both considerations of the essential finitude of language survive, albeit with important modifications, in Donald Davidson's influential program of the development of systematic theories of meaning for natural languages. In particular, the structural basis of Davidson's approach to the systematic interpretation of a language is the provision of a Tarski-style recursive truth definition for the language in question. In the translation or interpretation of an initially unfamiliar language, the radical interpreter moves from a determination of utterances taken as true by the language's speakers to a systematic correlation of sentences with their truth conditions. In thus applying the Tarskian structure to the interpretation of natural languages rather than the definition of truth for formal languages, Davidson in a certain way inverts Tarski's own procedure. Rather than assuming the translation of the object language into the metalanguage and thereby defining truth, Davidson starts with attitudes toward sentences held true and works toward a systematic interpretation which can provide the basis for a translation to the interpreter's own language. The interpretation, though subject to the significant indeterminacies earlier pointed out by Quine in his discussion of radical translation, nevertheless ultimately yields a theory capable of accounting for how the meanings of sentences (in an intuitive sense of "meaning") systematically depend on the meanings of words.

Such a theory, Davidson suggests, amounts to an explicit description of what is known implicitly or on the level of competence by a speaker of the language. In particular, it yields a systematic, recursive description of the structure of the language which must, Davidson argues, be capable of a finite axiomatization. For, as Davidson argues in the 1970 paper "Semantics for Natural Languages," since the number of meaningful expressions of a language is unlimited, any reasonable theory of their production must be able to explain this productivity on the basis of a finite number of underlying features (1970: 55). It is just such an explanation, Davidson goes on to argue, that a semantic meaning theory, with the structure of a Tarskian truth-theory can provide. In particular, Davidson urges, linguists and philosophers should appreciate the ability of such a theory to yield "a precise, profound, and testable answer to the question how finite resources suffice to explain the infinite semantic capacities of language…" (1970: 55).

While this conception of constitutive finitude thus makes possible, according to Davidson, a systematic theory of the structure of a language, the considerations that support it also provide important limitations on the form that semantical theory can reasonably take. In the early (1965) article "Theories of Meaning and Learnable Languages," Davidson considers several existing theories of semantical phenomena and argues that each is inadequate in that it conflicts with the requirement that a language must be learnable in a finite time and on a basis of at most finitely much information. In particular, as

Davidson argues, a theory that does not do so will fail to account for the fact that language is learnable at all:

> When we can regard the meaning of each sentence as a function of a finite number of features of the sentence, we have an insight not only into what there is to be learned; we also understand how an infinite aptitude can be encompassed by finite accomplishments. For suppose that a language lacks this feature; then no matter how many sentences a would-be speaker learns to produce and understand, there will remain others whose meanings are not given by the rules already mastered. It is natural to say such a language is *unlearnable*. This argument depends, of course, on a number of empirical assumptions: for example, that we do not at some point suddenly acquire an ability to intuit the meanings of sentences on no rule at all; that each new item of vocabulary, or new grammatical rule, takes some finite time to be learned; that man is mortal. (1965: 8-9)

Davidson goes on to consider four examples of theories of aspects of semantic structure that threaten to render language unlearnable in this sense by requiring, within its structure, infinitely many expressions taken as semantically primitive and thus not explicable on a finite regular basis. The first is the theory of the meaning of quotations given by Quine and Church; the problem here is essentially the same one that Tarski had pointed out in considering the formation of infinitely many "quotation-mark names" for expressions. The second, third, and fourth examples all concern theories of intensional meaning or indirect discourse; Scheffler's "inscriptional" theory of indirect discourse, Quine's account of the structure and meaning of belief sentences, and Church's account (following Frege) of possibility of referring to senses in indirect discourse all threaten, in invoking the existence of infinitely many expressions with primitive meaning, to run afoul of the essentially finite structure of actually learnable languages. The provision of a systematic theory of meaning with the Tarskian structure, by contrast, in providing a systematic basis for effectively determining what each sentence means by giving its truth conditions, suffices to account for the "skill or ability of a person who has learned to speak a language." (p. 7-8). Such a theory is thus certainly to be preferred, and is at any rate sufficient, in systematically providing truth conditions, to underwrite a structural account capable of accounting fully for the sentential meaning without conflicting with the requirement of finite learnability.

Davidson's program for the development of meaning theories bears close connections, both motivational and thematic, with Chomsky's linguistic project of describing underlying structural features of the grammar of natural languages. These connections extend as well to the conception of the finitude of the basis of linguistic capacities to which Davidson appeals, and which similarly underlies Chomsky's central distinction between linguistic competence and performance, as it is specified, for instance, in *Topics in the Theory of Generative Grammar* (1966):

> A distinction must be made between what the speaker of a language knows implicitly (what we may call his *competence*) and what he does (his *performance*). A grammar, in the traditional sense, is an account of competence. It describes and attempts to account for the ability of a speaker to understand an arbitrary sentence of his language and to produce an appropriate sentence on a given occasion. If it is a pedagogic grammar, it attempts to provide the student with this ability; if a linguistic grammar, it aims to discover and exhibit the mechanisms that make this achievement possible. The" (1966:10). This competence is, moreover, expressible as a "system of rules that

relate signals to semantic interpretations of these signals. The problem for the grammarian is to discover this system of rules; the problem for linguistic theory is to discover general properties of any system of rules that may serve as the basis for a human language…[13](1966: 10-11).[14]

These considerations are similar to those that motivate Davidson's conception of the structure of a theory of meaning; both, in particular, turn centrally on the distinction between an underlying ability which must be explained in explicitly finite terms and an unlimited or infinite possibility of its application in performance. As for Davidson, both the necessary learnability of a language and its unlimited generativity are here essential features that constrain in a decisive way the form that a systematic theory of the structure of language must take.

Nevertheless, as Davidson in fact points out in "Truth and Meaning," Chomsky's syntactic approach to grammar stops short of accounting for the *semantics* of language, which comes into view, as Davidson argues, only with the specific connection to a (Tarski-style) theory of *truth*. (In "Topics in the Theory of Generative Grammar" for instance, as Davidson notes, though Chomsky suggests that transformational grammars may be preferred to phase-structure ones for their greater ability to deal with semantic structure, he also comments that semantics remains in a "primitive state" and has so far resisted "any deep analysis." (p. 22).) In particular, whereas a transformational grammar of the sort Chomsky suggests suffices to account for the *grammaticality* or *meaningfulness* of sentences, the addition of considerations of truth-conditional semantics motivates the different but "analogous" task of a systematic semantics capable of yielding a recursive truth-theory for a language that accords with Tarski's convention T. In 1972, Davidson and Gilbert Harman, the editors of the massive anthology Semantics for Natural Languages (drawing on talks given at a conference in 1969), put the program in a clearly formulated statement at the beginning of the introduction:

> The success of linguistics in treating natural languages as formal syntactic systems has aroused the interest of a number of linguists in a parallel or related development of semantics. For the most part quite independently, many philosophers and logicians have recently been applying formal semantic methods to structures increasingly like natural languages. While differences in training, method and vocabulary tend to veil the fact, philosophers and linguists are covering, it seems, on a common set of interrelated problems.

The problems to which Davidson and Harman refer are none other than those of a systematic rule-governed account of the meaning of a language, insofar as a human learner and speaker is capable of understanding and applying it, or in other words of the infinite application of meaning as the possible outcome of the constitutive capacities of a human speaker of language, understood as essentially finite in time and space.

As we have seen, the structural-recursive conception of the finite basis of sense, which is common ground for Turing, Tarski and the early Davidson, depends centrally on the concept of a *system of rules* underlying actual linguistic behavior or practice. The rules, although necessarily finitely representable, are seen as both underlying and explaining the infinite generativity of language in allowing for the

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d to produce … novel utterances that are similarly understandable to other native speakers"…"What… is the precise nature of this ability?"

[14] Compare also Miller and Chomsky (1963: 271).

comprehension and production of infinitely many new sentences in varying contexts of use. As Quine himself pointed out in his contribution to the 1972 volume edited by Davidson and Harman, the conception involves a significant ambiguity in that the rules which are to become explicit by working out the basis of semantics are seen as, on one hand, *explicative* of performance but also, on the other, as actually causally *guiding* behavior on an unconscious and generally inexplicit level; it is thus possible to ask, as Quine does, whether there might be several possible systematic reconstructions of the identical verbal behavior, and if so, whether there is any significant basis for identifying just one of these reconstructions as the correct one. More penetratingly, and outside the ambit of the typically behaviorist setting of Quine's appeals to linguistic evidence, it is possible and trenchant to consider the implications for the picture of the radical challenge posed by Wittgenstein, in the *Philosophical Investigations*, to the picture of rules and rule-following at the basis of the formalist picture of a language as, essentially, a rule-determined calculus (cf PI 89).

Because of the centrality of the idea of a finitely stateable rule to this picture, it is trenchant to consider the implications for it of the radical line of questioning posed by Wittgenstein, in the *Philosophical Investigations*, about rules, rule-following, and their role in the practice of language. At the beginning of the skein of passages usually described as the "rule-following considerations," Wittgenstein stages, in an interlocutory voice, the conception of a rule of a series according to which the infinite application of the rule is known in general by knowing or understanding the (finitely expressed) rule itself:

> 147. "…When *I* say I understand the rule of a series, I'm surely not saying so on the basis of the *experience* of having applied the algebraic formula in such-and-such a way! In my own case at any rate, I surely know that I mean such-and-such a series, no matter how far I've actually developed it." –

> So you mean that you know the application of the rule of the series quite apart from remembering actual applications to particular numbers. And you'll perhaps say: "Of course! For the series is infinite, and the bit of it that I could develop finite."

This conception of what is involved in knowing the infinite application of a finite rule invites the question, which Wittgenstein immediately poses, of the nature of this knowledge, and of whether it is something known constantly, or perhaps only when one is in a certain state of consciousness or carrying out a certain mental process. One idea, in particular, to which a defender of the conception may appeal is that of an underlying apparatus or mechanism, perhaps located in the actual hardware of the brain.

As Wittgenstein immediately objects, however, this suggestion equivocates crucially between criteria for the ascription of the specific structure of the apparatus *to* someone on the basis of their performance, and criteria for this structure itself:

> 149. If one says that knowing the ABC is a state of the mind, one is thinking of a state of an apparatus of the mind (perhaps a state of the brain) by means of which we explain the *manifestations* of that knowledge. Such a state is called a disposition. But it is not unobjectionable to speak of a state of the mind here, inasmuch as there would then have to be two different criteria for this: finding out the structure of the apparatus, as distinct from its effects. (Nothing would be more confusing here than to use the words 'conscious' and

'unconscious' for the contrast between a state of consciousness and a disposition. For this pair of terms covers up a grammatical difference.)(§149).

This consideration and related ones lead Wittgenstein to argue that, though the *grammar* of the word "know" is "evidently closely related to the grammar of the words 'can', 'is able to,'…", (§150) coming to know how to go on with the indefinite development of a series (and hence in attaining the "mastery" of a technique) cannot consist simply in coming to know *any* finite item. For *any* such item may, of course, be variously applied or interpreted. At the same time, the conception on which a rule is something like a rail laid to infinity, and thus capable of determining all of its infinite application in such a way that "all the steps are really already taken", is only a "mythological description" of its use (218,219, 221). It is thus incoherent to suppose that any finite, symbolic expression of a rule, or any set thereof, can suffice for the explanation of the unlimited application of the use of a word in practice. For each such expression can be variously interpreted in any new case of application, and if a new rule is needed for each case of application we will be left with an infinite regress. In order to answer to the apparent paradox, according to Wittgenstein, it is necessary to conclude that "there is a way of grasping a rule which is *not* an interpretation, but which, from case to case of application, is exhibited in what we call 'following the rule' and 'going against it.'" (201).(§§ 218,219, 221).

If it is, then, ultimately incoherent to portray the unlimited application of a word in new sentences and situations as simply the pre-determined outcome of a finitely represented rule, how *can* we understand the relationship between the finite learning of words and their infinite possibilities of meaningful use? The sketch of an answer is provided, in the course of a detailed reading of Wittgenstein's "vision of language," by Stanley Cavell in *The Claim of Reason*. As I shall argue, this sketch provides elements of a third, different picture of finitude and the infinite in relation to sense, what I shall call the post-structural picture. In particular, Cavell examines what can be meant by saying both that "a word is learned in certain contexts" and that, so learned, it allows of "appropriate projections into further contexts." (Cavell 1999:180)

> If what can be said in a language is not everywhere determined by rules, nor its understanding anywhere secured through universals, and if there are always new contexts to be met, new needs, new relationships, new objects, new perceptions to be recorded and shared, then perhaps it is as true of a master of a language as of his apprentice that though 'in a sense' we learn the meaning of words and what objects are, the learning is never over, and we keep finding new potencies in words and new ways in which objects are disclosed. (p. 180)

ButAs Cavell emphasizes, to say that the projection of words into new contexts remains always in a way "open," or that it does not proceed wholly in a pre-determined way according to definite rules, is not to deny that the possibilities of projection are at the same time deeply, and essentially, *controlled* by what we can call their grammar. And this structure of controlled variance, or rather the specific way in which control and variance interact, is itself essential, Cavell suggests, to our being able to do what we can do with language, to its irreducible role in what Wittgenstein calls "this complicated form of life:"

> I am trying to bring out, and keep in balance, two fundamental facts about human forms of life, and about the concepts formed in those forms: that any form of life and every concept integral to it has an indefinite number of instances and directions of projection; and that this variation is

not arbitrary. *Both* the "outer" variance and the "inner" constancy are necessary if a concept is to accomplish its tasks – of meaning, understanding, communicating, etc., and in general guiding us through the world, and relating thought and action and feeling to the world… (pp. 185-186)

Thus, if the projection of words into new contexts is characterized by the structure of "outer variance" and "inner constancy" that Cavell describes, what happens at the moment of the new application of a word is not simply the mechanical iteration of a pre-determined and always determinate rule, but is nevertheless essentially constrained by *our* grasp of its sense, as we have learned it in the way that we ordinarily do. This way of learning is as much a matter of coming into a world, Cavell suggests, as it is of learning to master a system. But that our human initiation into a shared world and its manifold dimensions of sense and significance is both structural *and* substantive is part of what Wittgenstein suggests by saying that "*Essence* is expressed by grammar" (*PI* §186) and by meaning this, not as a repudiation of the concept of essence, but rather as a development of it in explicitly linguistic terms.

According to Cavell, we can gain an appreciation for the philosophical uses of this conception of sense and essence, whereby the projection of our understanding of the sense of a word calls for a moment of reflection on what we, in a sense, already know, but nevertheless tolerates novelty in application and innovation in extension, by considering the characteristic method of "ordinary language philosophy," as practiced in particular by Wittgenstein and J.L Austin. It is characteristic of this practice, Cavell suggests, to ask "what we should say" in a variety of contexts. The cases imagined are not supposed to *exhaust* the possible uses of a word or concept; nor do they simply illustrate facts about its range of possible significance that could be established independently by other means. Instead, the consideration of particular cases of "what we should say if…", and the claim to establish results based on this consideration, involves a distinctive kind of appeal, what Cavell calls an appeal to the "projective imagination." The term, Cavell emphasizes, does not stand for some special faculty or tutored skill, but rather for "a family of the most common of human capacities," that of imagining what we would say, were such-and-such to happen. The reflective knowledge gained by the explicit use of this method is neither a prediction of events to come nor a species of empirical or quasi-empirical knowledge of possible linguistic behavior; rather, Cavell emphasizes, it is actually a species of *self*-knowledge. It is in the exercise of this form of imagination, in particular, that the standing and structural possibilities of the language that I speak come into view. But at the same time, through this exercise the possibilities that *I* can project onto the world – the routes of significance that I can inhabit, the senses of meaningfulness that I can share – are also shown in the variation of situations into which *they* can be projected by me.

This conception of sense, finitude, and projection bears similarities both to Kant's conception of the transcendental imagination as the faculty capable of mediating between the singularity of intuition and the generality of the concept and Heidegger's own conception of projective sense. In particular, Cavell's characterization of the capacity to project concepts into new particular cases as a species of the imagination parallels Kant's own claims about the imagination as the mysterious "common root" of intuition and the understanding. And his specification *of* this appeal to the imagination as an invocation of the ability to project routes and dimensions of significance, on the basis of which aspects and entities in the world are disclosed, parallels Heidegger's understanding of sense as the articulable structure of the projective disclosure of beings. Still, Cavell's conception differs from both of these by its specific reference to the structure of *language*, and hence to the "essential" dimension of grammar, and thus to

the obvious but difficult thought that our "human" possibilities of meaning are everywhere regulated and structured, even if not absolutely ruled or always determined, by the complex form of the language we learn and speak. One implication of this, as we have seen by contrast with the structuralist/recursive picture, is that the projection of a word into a new context or its application in a new case is not simply the mechanical iteration of a rule, but rather irreducibly involves the possibility of a *reflective* consideration of the form of my language as it structures my possibilities in relation to the *particular* situation. However, since language is not simply my language, as the world is not simply my world, the reflection, even in operating as a mode of self-knowledge, involves as well an essential appeal to what is not only my own: to that complex structure of dimensions of significance and routes of possibility that I share with others in sharing the possibility of language, or ultimately in being human at all. This suggests that the "capacity" or "ability" to project can no longer be thought of simply, as it still is for Kant and Heidegger alike, as an aspect of the traits or facilities of an individual human being or "case" of Dasein, determined as finite in space and especially (in relation to death) in time. Rather, what is made explicit in the philosopher's appeal to the projective imagination and what is thereby shown to be implicit in every occasion of linguistic use is the complex reflective structure wherein the openness of linguistic sense and the "inner" determinacy of grammar mutually co-constitute *each other* and thereby mutually condition the meaningful possibilities of a life.

This language is in some sense shared, and essentially so. Accordingly, it is no longer possible, in the context of this conception of sense, to consider linguistic projection to be simply the structural outcome of the application of a set of rules unconsciously known or tacitly represented by the individual subject. But this does not mean that considerations about the overall semantic structure of language and its connection to truth no longer play an important role. We can see the kind of role that they may play in the context of the post-structural conception, indeed, by considering some aspects of Davidson's later development of the implications of considering the problem of truth in relation to the underlying structure of interpreted language.

 Some of the consequences of this strengthening are evident in Davidson's last book, the posthumously published *Truth and Predication*. In the book, Davidson considers a number of objections to the project of giving Tarski-style truth definitions or to the claim that Tarski's approach usefully illuminates the concept of truth. One of these is that Tarski, in showing how to define truth structurally only for *particular* formal languages, has not provided any real guidance as to the *general* structure of truth, or what is shared by all of the specific truth-predicates for specific structurally defined languages. Another, related objection is that the Tarskian definition of truth for a language, as finitely axiomatized on the basis of primitive satisfaction relations for defined basic terms, defines truth statically and provides no guidance as to how the concept can be applied to new cases not included in the original axiomatization. In response to both objections, Davidson acknowledges that, though Tarski's definitions do provide a degree of guidance with respect to the general concept of truth, there must be more to say (Davidson 2005: 27-28). In particular, although it is idle and fruitless to expect a general *definition* of truth, the concept of truth can be significantly *illuminated* by considering its actual interrelationship with other basic concepts such as meaning and intention. This illumination is in fact provided, Davidson suggests, by considering the conditions under which a Tarskian truth theory actually *applies* to a given natural language, a question which cannot be answered by Tarski's theory alone (p. 36). As Davidson puts it, "if the question can be raised whether a truth definition really does define truth for a given language, the

language must have a life independent of the definition." 2005: 36). It is to the question of the broader and undefined form of this life that the active practice of interpretation must ultimately be directed, even if it uses the general pattern of Tarskian truth-definitions as a structural clue.

The post-structural picture thus has in view, in addition to the determinate structure of particular languages, something like the general structure of language as such. For this consideration, it is no longer possible to suppose, as in Tarski's original picture, that all of the relevant structure of a language is accessible from the simply external position of a stronger metalanguage; rather, interpretation is essentially, and constitutively, performed from the *internal* position of language itself (and it is no longer, in connection with natural languages, trenchant to suppose that some languages are stronger in a relevant sense than others). It is also no longer possible to consider particular languages, in their specific structures of satisfaction and truth, to be set off against worldly objects as particular objects of representation. Rather, in the post-structural conception, language is as such universal, and already includes within itself, in the very structure that links truth and sentential meaning, the structure of any referential or reference-like relationship "between" words and things. In *Truth and Predication*, Davidson does not hesitate to draw the radical anti-representationalist conclusion this suggests: if the constitutive link between truth and sentential meaning is preserved, it is not possible to maintain that truth consists basically in *any* form of relationship between objects and individual linguistic terms. Accordingly, we must reject correspondence theories of truth, and along with this we must "question the popular assumption that sentences, or their spoken tokens, or sentence-like entities or configurations in our brains, can properly be called "representations," since there is nothing for them to represent." (p. 41). Similarly, as Davidson suggests in connection with a reconsideration of the problem of the nature of the structural unity of the proposition, a problem that has vexed philosophers since Plato, it is no longer possible to suppose that the truth of sentences is to be *defined* in terms of more basic relations of satisfaction. (2005: 41). Rather, in the context of the interpretation of natural languages, Tarski's structure must again be reversed: rather than building up truth definitions systematically from satisfaction relations, the pattern of these basic relations as well as the identity and meaning of "primitive terms" must be determined from the pattern of sentences held true.

This would be circular, Davidson admits, if the intention were to *define* truth, but the intent here is again, not to define truth but rather to *use* the concept of truth, as *we* already understand it, in interpretation (2005: 160). In doing so, we remain decisively constrained by the form of a possible theory of meaning for a speaker which is, as Davidson still says, sufficient, were it to be explicitly known, to allow an interpreter to understand her. But even if such a theory *were* explicitly known, in applying it we would also necessarily make use of a constitutive and general idea of truth with which we must already share, and which thus always already in advance conditions any possibility of understanding as such. This general idea is, in an obvious sense, not specified or specifiable as belonging to a particular language or as having a unique determining basis in any empirical situation or contingent set of facts. Nevertheless, in its specific link with the possibility of sentential meaning, it is what establishes the very possibility of interpretation, or of the intelligibility of language as such.

For the post-structural conception, the everyday use of language thus constantly draws on, because it presupposes as its ultimate and virtual horizon, a constitutive appeal to the *infinitude* of sense. Without this horizon, neither the open projection of language in its everyday use nor the explicit retrieval of its

basis in reflective theorizing would be possible. This constitutive infinitude is visible in the necessary appeal to a general concept of truth not specific to any particular language, in the "openness" of the projective imagination with respect to new situations and contexts, and in the reflective structure of the moment of projection itself, in which my reflective awareness of my own language is summoned to disclose the possibilities of the world as I can come to know it. In each of these aspects, the post-structural picture can be sharply contrasted with the structuralist/recursive picture, wherein sense is infinite only as the unlimited possibility for the mechanical iteration of determinate rules or rule-liked structures, fixed in advance. But this does not mean that the idea of a constitutive infinitude at the basis of sense is simply opposed to the claim that human language is also essentially finite, in the sense of being grasped, learned and spoken by beings whose life is inherently finite in time in space. Rather, on the conception, the constitutive infinitude that is presupposed *in* the constitution of linguistic intelligibility must provide the terms in which this (equally essential) human finitude must ultimately be understood. In particular, as we have seen, the specific infinitude of sense is not conceived here as basically alien or exterior to the structure of a human form of life, as it still is in Kant's opposition between the human and the divine, and perhaps still remains in Heidegger's own picture. Instead, it is shown at the necessary and problematic limit of the attempt to conceive systematically of how this form of life is itself constituted and lived.

With the idea of an infinite reflective dimension as figuring in the constitution of sense, it becomes possible to consider how this idea affects the very idea of a finitely determined process or procedure, as it figures, for instance, in the concept of a formal, effective procedure that is suggested by Hilbert and formulated by Turing. As we have seen, it was Turing's rigorous formalization of the concept of effectivity that provided the basic underlying framework for all existing technologies of digital computation, which in their development as information and communication technologies have shaped and transformed human life around the globe. But it is also a notable and remarkable fact that Turing's formalization of the notion of an effective process, in the 1936 paper, rigorously demonstrates the inherent *limitation* of this notion by showing that there are well-defined mathematical problems that are not decidable in an effective way by *any* such (finitely specifiable) mechanical procedure. The result is closely related to Gödel's incompleteness theorems (in fact it has a form of the first theorem as a consequence) and bears at least a structural resemblance to Russell's paradox and other set-theoretical paradoxes that turn on the phenomena of self-inclusion and reflexivity.

If Turing's result can be generalized to the consideration of the structure of recursive theories of meaning (in the style of the early Davidson), it becomes possible to consider as an inherent consequence that no structural-recursive determination of sense can be completely effective, or in other terms, that sense is in important ways inherently *undecidable* by means of finitely specifiable procedures. This undecidability might naturally be seen, furthermore, as an inherent result of the way in which language reflexively figures itself, in its own necessary devices for internally representing its own sense. In particular, if this line of thought is roughly correct, it would be in connection to the internal phenomena of the presentation of sense, in (for example) quotation, belief sentences, and the representation of intensionality in general, that this inherent undecidability would be most structurally evident and profound. In this way, while the palpable difficulties that Davidsonian structural/recursive theories have confronted in their attempts to handle these phenomena would be shown to have a deeper structural source in the very limits of the idea of an effective procedure itself, it would also be

possible to treat them as nevertheless having a *determinate* positive structure and existence. This, in turn, might be one way that intension and meaning could be accommodated within what is still (in an extended sense) an interpretative theory of language, rather than simply being rejected or excluded as inherently *indeterminate* and thus essentially unreal (as they are, for example, in the context of Quine's extensionalism in *Word and Object*). At the same time, in the less theoretical context of the assumed universality of claims of technological effectiveness and the presumptive procedural determination of all real possibilities of collective action that is characteristic in many ways of contemporary "late capitalist" culture, the demonstration of an actual and rigorous undecidability at the basis of sense could provide important resources for critical positions that aim to challenge these assumptions both in thought and in action.

III

Wittgenstein's critical consideration of rule-following, and the positive vision of language it involves, thus bear against the structural-recursive picture of the production or use of language as based in the rule-governed capacities of an individual, demonstrating that this picture cannot itself ultimately account for the projective phenomena of meaning that it attempts to explain. This appears to be confirmed, as well, by the positive undecidability that follows directly from the structuralist/recursive picture as soon as it is offered as an account of the structural basis of truth. For similar reasons, though, Wittgenstein's critique and the consequences of undecidability also bear against the integrity of the picture of conceptual subsumption sketched by Kant in the first *Critique*, whereby, as we have seen, the subsumption of appearances under concepts depends ultimately on the obscure power of the imagination in providing schemata for the concepts. As such, Wittgenstein's consideration of rule-following problematizes in a basic way the Kantian picture according to which sense itself is produced by means of the unifying activity of an individual psyche or subjectivity whose highest structural form is that of the transcendental unity of apperception formally marked in the privilege of the "I think." As has often been noted, Wittgenstein's critique thus challenges the priority of the individual subject of experience or cognition in providing the ultimate constitutive basis for linguistic meaning or sense. What may be less immediately obvious, though (but what we will show here) is that it also has direct and profound consequences for the original essence of given time.

Kant's idea of the transcendental Schematism is, as we have seen, the idea of a *power* of the representing subject that unites the faculties of the understanding and the intuition and is thus the common root of the spontaneity characteristic of the former and the receptivity characteristic of the latter. The power is that of applying a concept or category (once attained) to the indefinite or infinite number of appearances that can be subsumed under it. What accomplishes this power, in the subject, is explicitly, for Kant, the "representation of a rule" which connects the concept, as representation, to this indefinite number of appearances: in the case of empirical concepts, at least, this is a rule for the indefinite *provision* of images that allow the concept and the appearance to gain a "homogenous" form. The case of the schematism of pure concepts, or categories, is more difficult, since in this case there can be, according to Kant, no adequate image, and so no provision by the imagination of an image that renders the category, in this sense, "homogenous" with the appearance. Nevertheless, in this case as well as in general, the schematism remains the representation of a rule for subsumption through which

it becomes possible to subsume an indefinite number of appearances under the concept. In the case of the schematism of a category such as that of substance – wherein, as we have seen, Heidegger sees Kant's account of the general form of the subjective givenness of time – this representation is that of a pure rule of indefinite persistence which must apparently be presupposed as underlying the unified temporal form of inner as well as outer sense.

In the Philosophical Investigations, Wittgenstein's critical consideration of the basis of linguistic meaning takes the form of the radically posed question of the nature of rules and what it is to follow them. As he argues, there is a paradox involved in assuming that any symbolic expression of a rule, or more generally any finite representation of it, can by itself determine the infinite number of possible applications of it; for every rule, understood in this way, would presuppose a further rule for its interpretation and successful application. There must accordingly be a "way of following a rule" that is not an interpretation in this sense (PI 201). At PI 213, an interlocutory voice considers the possibility that the ability to continue a series indefinitely beyond its initial segment consists in having chosen *one* interpretation of it. In view of the "paradox" of interpretation of PI 201, *this* suggestion is untenable: the explanation in terms of the initial adoption of *one* interpretation capable of eliminating all doubt is here neither necessary (since the possibility of doubt to which it responds in fact *need* not arise) nor sufficient (since the provision of an interpretation in this sense *cannot* "fix" the infinite number of cases uniquely, all by itself). This leads the interlocutory voice to the suggestion that "intuition" is needed to remove the (possible) doubt in each case:

> Only intuition could have removed this doubt? -- If intuition is an inner voice – how do I know *how* I am to follow it? And how do I know that it doesn't mislead me? For if it can guide me right, it can also guide me wrong.
>
> ((Intuition an unnecessary evasion.))
>
> 214. If an intuition is necessary for continuing the series 1 2 3 4 …, then also for continuing the series 2 2 2 2 …

The conception that underlies the thought that the continuation of a series, if it cannot be determined once and for all by a single "interpretation" in advance, requires a new intuition at each instance would also, if tenable, also have to apply to the seemingly most basic kind of rule, the one that involves only the repetition of the same *ad infinitum*. And if intuition *here* were to function as a kind of inner voice, then it would apparently be possible here too that it might mislead. To block this conclusion, the interlocutor now envisages a kind of absolute givenness of identity in the form of the self-identity of the same (gleich) in its indefinite repetition:

> 215. But isn't at least the same *the same*?
>
> For identity we seem to have an infallible paradigm: namely, in the identity of a thing with itself. I feel like saying: "Here at any rate there can't be different interpretations. If someone sees a thing, he sees identity too."

Wittgenstein's critical response comes swiftly:

Then are two things the same when they are what *one* thing is? And how am I to apply what the one thing shows me to the case of two things?

216. "A thing is identical with itself." -- There is no finer example of a useless sentence, which nevertheless is connected with a certain play of the imagination. It is as if in our imagination we put a thing into its own shape and saw that it fitted.

If the idea of a things self-identity is empty in this way, then it cannot be used positively to undergird the conception of the underlying possibility of the repetition of a rule according to which this repetition is itself that of a self-similar item *ad infinitum*. Neither can, for the same reason, the assumption of the iterated intuition of a directive, or indeed, and again for the same reason, of a "decision" made anew in each case.[15] In the Kantian jargon, neither the receptivity of a subject in the pure intuition that it gives to itself in submitting itself to the rule, nor its spontaneity in the "decision" that would consist in each case, in the self-giving, can ultimately account for what it is to be "able" follow the rule "correctly" or to know, grasp, or understand it. For neither the spontaneous self-giving of the rule in finite form at each step, nor one's receptive relation to it (assumed as given) can succeed in overcoming the radical aporia of finitude and infinitude that stands at the center of the very conception of rules as regular structures of the infinite repetition of the same. Failing in the attempt to account for the development of the rule in either of these ways, the conception finally attempts to base itself in the idea of an "infallible" and absolute paradigm for this infinite repetition in self-identity. But this final attempt, too, fails in that the self-identity of the same does not and cannot provide a paradigm for anything; all it can do is serve to indicate a more original question about the basis of identity itself.

If the ability to "go on" in following a finitely specifiable rule in an infinite number of cases is not to be seen as a case of the rule "determining" all of its instances, in the manner of "rails laid to infinity", then how can it be positively understood? As Wittgenstein emphasizes, the positive attainment of the grasp of "how" to go on – which may indeed come "all at once" – has positive criteria in the actual circumstances, for example of teaching and learning, whereby this grasp is attained. These criteria extend to characterize the very possibility of our "access" to the infinite as such (which is, of course, not here in doubt):

208…How do I explain the meaning of "regular", "uniform," "same" to anyone? – I'll explain these words to someone who, say, speaks only French by means of the corresponding French words But if a person has not yet got the *concepts*, I'll teach him to use the words by means of *examples* and *exercises*…Imagine witnessing such teaching. None of the words would be explained by means of itself; there would be no logical circle.

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[15] Cf. PI 186: "What you are saying, then, comes to this: a new insight – intuition – is needed at every step to carry out the order '+n' correctly." -- To carry it out correctly! How is it decided what is the right step to take at any particular point? -- "The right step is the one that is in accordance with the order – as it was *meant*." -- So when you gave the order '+2', you meant that he was to write 1002 after 1000 – and did you then also mean that he should write 1868 after 100036 after 100034, and so on – an infinite number of such sentences? -- "No; what I meant was, that he should write the next but one number after *every* number that he wrote; and from this, stage by stage, all those sentences follow." -- But that is just what is in question: what, at any stage, does follow from that sentence. Or, again, what at any stage we are to call "being in accordance" with it (and with how you then *meant* it—whatever your meaning might have consisted in). It would almost be more correct say, not that an intuition was needed at every point, but that a new decision was needed at every point.

The expressions "and so on", "and so on *ad infinitum*", are also explained in this teaching. A gesture, among other things, might serve this purpose. The gesture that means "go on like this" or "and so on" has a function comparable to that of pointing to an object or a place.

A distinction is to be drawn between the "and so on" which is and the "and so on" which is *not* an abbreviated notation. "And so on *ad inf.*" is *not* an abbreviated notation. The fact that we cannot write down all the digits of **π** is not a human shortcoming, as mathematicians sometimes think.

Teaching which is not meant to apply to anything but the examples given is different from that which "points beyond" them.

The kind of teaching and learning that makes the infinite accessible as such to understanding, though it proceeds by means of examples, is not of the kind that limits itself to the examples given. Rather, it involves essentially the possible provision of a kind of gesture which, in the context, may have the significance of a "pointing beyond" the given examples "to" the infinite continuation as such. To say that any possible givenness of the infinite as such must consist in this kind of gesture is not, any longer, to oppose to our "humanly" limited powers of completing a rule infinite in itself, but only partially completeable *by us*, to the ideal or pure understanding of a cognition (perhaps a divine one) capable of being given the infinite totality of the rule's instances *all at once* and in full, infinite detail. It is to insist upon the fundamental and basic form "of" finitude that characterizes any givenness as such. It is characteristic of this givenness that it occurs in finite time, but also that it may, in the context of learning and teaching, involve the provision of a gesture that, as Wittgenstein says, "points beyond" any given finite set of examples. This pointing is the formal indication by which the finite forms of teaching and learning gesture toward the constitutive idea and underlying structural reality of an "outside" to the finite in general, or "to" the unlimited (*ad infinitum*) as such.

If any account of the actual basis of the "infinite" understanding of how to go on in terms of the provision to consciousness (whether from within or without) of a symbolic expression of a rule or any finite item must fail (on pain of Wittgenstein's paradox at PI 201), then Kant's schematism as the representation of a rule for subsumption must, in general, fail for the same reason. For if it is the finite representation of the rule that is supposed to account for how a concept can be applied in an indefinite number of cases, then there inevitably arises the question, which Wittgenstein pushes, whether this rule itself needs to be interpreted (by a further rule) in order to be applied correctly in each case. Of course, Kant does not raise the question of whether the schematism of a concept can be *mis*applied, or applied in a misleading or incorrect way. But it is the effect of his way of considering the possibility of subsumption to be given to the subject by means of the provision of the "representation of the rule" that the schematism is that this question is unavoidable. Once we pose it, along with Wittgenstein, it is no longer possible simply to assume the guaranteed correspondence of the "I can" of subjective schematization with the order of things as they are (even if this be, explicitly, the order of things as appearances and not things in themselves). The problem is already there in the case of the empirical concept, where the task of the schematism is to provide an "image" for the concept that is sufficiently "homogenous" with the appearance for it to be placed under it. Already here, as Wittgenstein's argument suggests, the supposed visual or pictorial "homogeneity" would also, given the picture, stand in need of further criteria of resemblance, similarity or identity that no image by itself can yield. But the

difficulty is sharpened, and its underlying form is more clearly in view, in the case of what Kant already sees as the general transcendental form of time, the transcendental schema of the pure concept, which can have no image and can "never be met with in any intuition." (A 137-139/B 176-178). For here, the representation of the rule which amounts to the "transcendental determination of time" is both sufficiently "homogenous with the category" as to be universal and determined *a priori*. But it is also just as much "homogenous with appearance" in that it is contained in "every empirical representation of the manifold" as the form of inner sense. This is what leads Kant to propose that the transcendental schematism of the category must be simultaneously both intellectual and sensible, and to propose further that in occupying this paradoxical position it gives an ultimate basis to any and all determination of time. (A 145/B 184).

The adherent to this Kantian view of the possible origin of time has something in common with the interlocutory voice that proposes, at PI 215, the "sameness" of the same as an ultimate basis for the possibility of applying a rule. In particular, both presuppose a kind of automaticity of the rule in its self-identical repetition unto the infinite. On this kind of view, it is the rule *itself* that determines its own infinite application, and the determination of each new case is a kind of repetition of the "same" application of a self-same structure or item. The capacity or power of an agent to "apply" the rule across an (in-principle) infinite number of cases is then understood simply in terms of her representation or conscious grasp of that item, which is able to underlie all of the (infinitely many) cases all by itself. It is this automaticity that figures, on Kant's official view, in the way that the transcendental schema can itself serve as a kind of "pure image" for time, for example in the case of the schematism of substance, which represents an underlying pure image of permanence. In both cases, the medium of the possibility of the indefinite homogenous extension must be assumed to lie in the capacity of a finite subject of representation actually to produce or perceive the finite (because finitely representable) structure that actually underlies, in automatic fashion, the homogenous extension of the rule *ad infinitum*. But if, as Wittgenstein's critique suggests, it is incoherent to suppose that the finite representation of any rule can provide a determining basis for the "application" of concepts in this sense, then the Kantian picture of the representing subject as thus giving itself time, in auto-affective fashion, by both producing and receiving the representation of a rule must also be rejected.

Heidegger's own analysis of Kant, developed under the condition of his own radical questioning of the priority of the representing subject of consciousness, in fact suggests a partially parallel critique of Kant's picture of the underlying basis of time in the self-affecting capacities of such a subject. As we have seen, Heidegger locates essentially two paradoxes at the center of Kant's conception of time as given in the auto-affective power of a transcendental subject through the mediation of the schematism. The first is the paradox of spontaneity and receptivity: as giving itself time through the schematism which mediates as a third, common root between the faculties of the understanding and the sensibility, the pure activity of the subject in the self-giving of time must also be conceived, simultaneously, as a pure passivity with respect to what is thus given. Relatedly, there is a second paradox of constituting and constituted: the subject as such must be both capable of constituting time through this pure self-affection, and also capable of being constituted by it as the unity of transcendental apperception, which has the same form. These paradoxes are not resolved by the proposal of doubling the subject into a "transcendental" one which produces time and an "empirical" one which receives it. For even the "empirical" subject must be capable of thinking the categories, and applying them in judgment in such a

way as to produce empirical knowledge of objects. On Kant's account, to possess this capability just is to have access to the schematism which makes the application of the categories, in general, possible. But this access is the pure image of time with respect to which the subject is irreducibly both active and passive, both constituting and constituted. As Heidegger demonstrates, it is on the basis of this constituted/constituting structure that Kant originally thinks the finite structure of the subject as such, that is as the structure of that whose knowledge stands under the condition of being affected in intuition from a thinkable "outside" in general. But if the suggestion of Heidegger's reading is correct, the real temporal meaning of this structure cannot be found in the subjective and representational form in which Kant lodges it. For the assumption of a grounding of time in the (ambiguously active or passive) representational capacities of a subject set off against the world leads to the inevitability of the two paradoxes.

A merit of Heidegger's reading of Kant is that it shows how this structure of finitude, which is also at the root of Kant's specific conception of the specific distinction between the transcendental and the empirical, can in fact be read in broader terms that do not presuppose either this specific distinction or the distinction between appearances and things in themselves that it licenses in Kant. Thus, as we have seen, Heidegger's reading provides the terms with which it is possible to see the structure of "transcendence" that is indeed characteristic of our kind of being as determined more by the general formal/structural relationship between a limited "inside" and an "outside" in general than by any specific limitation on knowledge, experience, or cognition in general. On the picture Heidegger develops in *Being and Time*, in particular, the structural "transcendence" of Dasein is not to be understood in terms of any specifically "human" limitation or structure, but rather as the structural feature of Dasein whereby it is always already in relationship to such a general outside; this is a basic feature of the general structure of its "being-in." This conception of transcendence has in view much more what Heidegger calls the "transcendence of the world" which, as he argues in *Being and Time*, must precondition any possible givenness of entities (whether as present-to-hand or simply as ready-at-hand in everyday circumspective activity) than it does the transcendence of any particular capacities or limits of the human subject.[16]

In this it is different from Kant's conception, although Heidegger can also suggest that it is at the actually deeper ontological/structural basis of Kant's own picture of the human subject as structurally limited by the forms of its possible knowledge in thus being set off against a realm of unknowable things in themselves. But another result of this suggestion, as we have seen, is that it allows the formal structure of the being of Dasein to be illuminated in a way that is rooted in the constitutive idea of the finite itself, as opposed to any specific determination of it in terms of specifically finite powers, capacities, and the like. Constitutive finitude, in this more "original" sense, is no longer thought by contrast with a supposed infinite intellect which would be capable, as Kant suggests, of an intellectual intuition that could immediately create its object (or indeed, would always already have done so). That is because here the problematic is no longer that of the situation of a kind of being conditioned by certain fixed or static forms of knowledge relative to a being that is not limited in this sense, but rather of the constitutive distinction between the finite and the infinite itself: not, therefore, of an ontic boundary between two regions of beings, but rather of the finite/infinite form of the "relationship" (which is, of

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[16] Cf S&Z, p. 364.

course, no "relationship") between beings and Being. Within the problematic thus specified, the question of the constitutive forms of the *possibility* of access to anything like the infinite as such, including the problematic of the "open" horizon by means of which finitude communicates with the infinite in general, becomes particularly significant. For this reason, the kind of limit that matters for the specific consideration of transcendence is no longer the limit of the finite power or capacities of any particularly constituted being, but rather the limit *between* the finite and the infinite which makes Dasein (as ontico-ontological) both constitutively finite (in one way) and *thereby* "infinite" (in another). It is rather here to be formally/hermeneutically illuminated from within, not in terms of a being that just is limited, but as the specific structure *of* limitation or of the limit *as such* which structurally conditions, in Dasein, both the necessity of being affected "from outside" in general and *also* the possibility of its projecting (infinite) sense.

This illumination extends to the illumination of the original structure of given time. If Heidegger is right in his reading of Kant, it cannot be the case that time is produced through the constitutive capacities of a representational subject. But of course, Heidegger is not *simply* critical of Kant; rather, he sees Kant's conception of time as pure auto-affection as pointing, in a radical fashion unprecedented in the tradition hitherto, at least since Aristotle, to the original connection of Being and time themselves. If this connection is to be illuminated on the basis of a consideration of the finitude and structure of Dasein, it must be possible to develop the implications of this structure of auto-affection, even *outside* the context of the assumption of a rooting of time in the activity of the subject or in its ability to represent a rule. The illumination will thereby shed light on the basic *ontic-ontological* structure whereby there "is" something like time in general. Here, we are accordingly looking for this structure as the formally underlying structural basis for the possibility that anything like time is given at all. The methodological basis for the illumination is *formal indication* within a hermeneutics of facticity.

What, then, remains of Kant's picture of the original givenness of time, if we purge it of the assumptions of its rootedness in the capacities of a representing subject but attempt nevertheless to retain its definitive connection to structural transcendence and to the finite/infinite problematic it involves? If we drop the constitutive assumptions of Kant's idea of the representational subject as conditioning all possible experience and objectivity, we cannot retain the figure, which is anyway paradoxical, of a subjective *activity* of auto-affection whereby the subject both gives itself time from itself and is first constituted by the very form of its being given from outside. Nevertheless, we can *retain* a formally/ontologically basic structure of *reflexivity* at the basic common root of givenness and time as such. This reflexivity is not to be understood as if it were the representation of a self to itself or as if it itself depended on a subject's self-reflection in thought or consciousness. It is, rather the formal/structural *condition of possibility* for any such self-relation.[17] It is also, and for this reason, the

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[17] The language of "conditions of possibility" may admittedly mislead here, since what is at issue isn't a condition that precedes a phenomenon as possibility precedes actuality. It's rather a question of an underlying formal structure that is fully present, and fully actual (though not simply as "effective"), in the actual phenomenon as such. This is the sort of structure that Deleuze calls, in the course of a critique of the "transcendentalist" language of conditions of possibility, the "virtual". Among the merits of the employment of this kind of structure in the present context is, in fact, exactly that this employment does *not* presuppose a picture of possibilities (or anything else) as "transcendent" with respect to what they condition, but rather can be pursued in a purely "immanent" way.

structural condition of any possible "transcendence" in the sense of the relationship of an interiority to an outside in general.

This formal reflexivity is not the outcome of any practice, activity, capacity or ability of Dasein, but is rather the structural basis for its ontic/ontological constitution, whereof its specific structural relationships to the possibility both of truth (as grounded ultimately in "its" world-disclosure) and of time (as the three ecstases). It is decisive in this respect to recall that Dasein is first *defined* reflexively and ontico-ontologically in terms of its constitutive concern for Being and hence for the kind of Being that it itself is. This constitutive concern is articulated, in Division I of *Being and Time*, as the structure of Care, and in Division II this articulation is recapitulated, on the specific basis of the problematic of the wholeness of Dasein, as its deeper "ontological meaning," which is shown to be time. At the basis of all of these analyses is the ontic-ontological structure of Dasein as something which already has, in its being, the positive characteristic of an understanding of something like Being. This reflexive structure formally conditions, on the level of the threefold structure of the question as such, the possibility of an explicit retrieval of the question of the sense of Being. It is in terms of the original formal/ontological structure reflexivity that both Dasein's own ontological structure, and the original constitution of time, are ultimately to be understood. In particular, it is the structural basis for the three ecstases of past, present and future, whereby temporality originally "temporalizes itself."

Understood this way, Dasein is nothing like an an individual agent of abilities or subject of capacities. It is, rather, the structurally necessary fixed point of the structural and reflexive "relationships" of Being and beings, "across" the ontological difference, that first "constitute" both sense and time as forms of givenness in that they constitute givenness itself. Such a structure is already implicitly visible as soon as it is seen that in the presence of any entity, its Being is in some way co-given. To grasp Dasein in this way is not (any longer) to grasp it as a specific position in a determinate given structure, but rather as the topological/structural precondition for there "being" anything like presence as such, at first or at all. Since the ontological difference is no relation between beings, it is not possible to understand this structural fied point as the causal (or any other) result of entities or of any aspect of their contingent constitution or arrangement. Nevertheless, its structure is tractable in the explicit formal/hermeneutic retrieval of the ontological basis of the factical givenness of sense and time.

Formally speaking, there is a basic relationship between reflexivity and the problematic of the finite and infinite. This is not simply because a relationship of self to self may be thought to produce the figure of a minimal circle which may then be thought of as repeating itself indefinitely, but rather, much more, because the assumption of the possibility of reflecting a determinate (hence limited) totality immediately raises the question of the basis of the possibility of the initial delimitation itself. The assumption of a stable outside position from which the totality can be reflected raises the question of the larger totality in which this outside position, too, is included, and the opposite assumption that the totality can be totally reflected from *within* raises the possibility of the internal iteration of this reflection *ad infinitum.* The problem is not simply an outcome of the assumption of something like a distinction between the "immanent" and the "transcendent", but is rather at the formal basis of the problematic of transcendence itself. This is the original problem of delimitation between a (thereby "finite") "inside" and an "outside" in general, and as such always already involves the problematic of the finite and the infinite. It appears whenever the possibility of thought, language, or knowledge is

understood as *given to* a life that is as such finite, but as nevertheless bearing (even if only "potentially") on an "outside" that is infinite in itself. As I have argued in *The Politics of Logic*, this problematic, although implicit in philosophical thinking about totality and being since Parmenides, is put on a new and clarified foundation through Cantor's development of set theory, which in particular provides the rigorous conditions in which the constitutive paradoxes of totality and reflexivity can be formally displayed. In particular, this development shows that any figure of the relationship of thought to the infinite totality of the thinkable, or to the totality of beings as such, induces the paradoxical structure of limit-paradoxes or inclosures, to which the various figures of the relationship of thought to the ontic totality (which I have elsewhere treated as the four orientations of thought) emerge as possible responses.

Each of the four orientations involves a specific conception of the infinite, and the specific conception thereby involved articulates a specific figure of the givenness of the world. Even where, as in Kant's own discussion in the cosmological antinomies, the existence of the world as a coherent object of thought or knowledge is simply denied in favor of the thought of an unlimited potential-infinite synthesis which is, however, never completed, the infinity of the world appears in a specific figure and according to a specific formal idea (here, that of the "potential" infinity whose development is unlimited, but always occurring in time). These relationships of thought, or its located position, to the totality of the thinkable are, just as such, figures of the relationship of finitude to its structurally possible transcendence "toward" a world in general. But as four structural figures of this relationship they are also four figures of the givenness of the thinkable time of the world as such. As such they are also orientations that unfold the determinate configurations of the appearance, in what is here contemplated as the relationship of thought to the world in general, of what is itself without figure, the ontological difference between Being and beings. They compose and decompose the conditions of this figuration itself, according to the underlying constitutive ideas of consistency and completenesss, as the original metalogical problematic of transcendence formally/structurally indicated in the temporal form of a "finite" life.

In particular: the *onto-theological* orientation determines thinkable time as given on the basis of the absolute time of a super-being within which is lodged the power of an original creation, even *ex nihilo*; here, worldly time, whether limited or unlimited, is the time of an *ens creatum* secondary to and derivative of an original absolute, outside or beyond it. In the *constructivist* orientation (as, exactly, in Kant) thinkable time is thought as the outcome of the determinate *activity* of a self-positing agency, capable in itself of unlimited potential continuation, though never given or even possible as a constituted *completed* infinity. In the *generic* orientation, time is thought as the periodization or gap between the concrete events of the transformation of finite conditions of thinkability which laboriously construct the basis of constituted sense in progressive time, and the insistence of the "eternal" truths which draw them forth in accordance with the stringent law of procedural consistency. In the *paradoxico-critical* orientation, the infinite time of the world is originally given as the paradoxical structure of a reflexivity which is, with respect to the original metalogical structure of totality it involves, both a giving and a given, and therein stages the original structure of contradiction in relation to the constitutive structure of limit-paradox. In relation to the underlying problem of a "becoming-unlimited" in which the character of change threatens, in and of itself, to outstrip all limits and manifest the

contradictory in time, this can also be formally clarified, as we shall see in the subsequent chapters, as a basic structure of *becoming* in itself and as such.

As we have seen, Heidegger's reading of Kant in *Kant and the Problem of Metaphysics* drives toward an elucidation and development of the formal structure of finitude as the reflexive common root of time *and* Dasein, such that it can be suggested, at the outcome of the analysis, that in virtue of it Dasein is neither extra-temporal nor intra-temporal but originally *is* "so 'temporal' that it *is* time itself, and ... only becomes possible, according to its ownmost essence, as time itself." If this suggestion is grasped in the context of Heidegger's own understanding of the structure of Dasein in relation to the transcendence of the world and brought to its natural conclusion, it is thus possible to think of the originally (and problematically) reflective structure of world-transcendence as the common, metaformally indicated ontic-ontological structural root of both Dasein and "its" time, and to envision a broader structural basis for both in that both are formally/constitutively linked to truth. It is then through this original ontic-ontological structure, and only on its basis, that time can be given as structured in any determinate way at all, including the way that it is given in the "inauthentic" temporality of the endless series of "nows". The formal structure of any givenness of time – including that which is given as this endless series of the constantly iterated "now" – is thereby referred back to the more basic structure of reflexivity and its relation to the ontological difference.

Further: If, as Heidegger suggests, the "objective" time of the world, such as it is presupposed in the mathematical natural sciences and employed in the "scientific" description of objects and events on a purely ontic level, is itself based in this image of time as the constantly unfolding series of nows, then the illumination of such an underlying formal structure, far from being opposed to a "realist" doctrine of world-time in this sense, is actually the positive ontological-hermeneutic precondition for such a doctrine. In particular, as Heidegger is at pains to point out in his reading of Kant, *this* image of time does not just come from nowhere, but also results from a particular interpretation of the being of the world and a particular schematization of the unfolding of being as time. Given Kant's underlying picture of the origin of time in the representing subject, he cannot but propose the ultimately incoherent idealist doctrine of a world-time that is itself created or produced, as if from "outside" time or the temporal, by the spontaneous-receptive and constituting-constituted activity of this subject.

If Heidegger's intention were only to replace this constituting/constituted subject with a structurally similar constituting/constituted Dasein as the ultimately substantial basis for the real constitution of world-time (albeit one now located "in" rather than (seemingly) "outside" time as with Kant) he would by no means have resolved the many temporal paradoxes involved in such an idealism. There would still be, for example, the question of how to conceive of the actuality of temporal events occurring before the empirical (intra-temporal) existence of a particular Dasein, or indeed before the existence of any Dasein at all.[18] And it would be similarly mysterious how the individual Dasein could i*tself,* by means of its production of its "own" time, succeed nevertheless in producing or even relating to a world-time that is binding and equivalent for *all* individuals as such. If, however, as Heidegger at least suggests, world-time has an original basis in a purely reflective ontic-ontological structure that is *also* at the formal basis of the very structural *possibility* of (any) Dasein, then there is no longer any obstacle to considering the

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[18] Quentin Meillassoux has recently resurrected this old problem as the problem of the "arche-fossil" and used it to raise a very broad critique of what he sees as a "correlationism" characteristic of much recent philosophy.

"objective" world time that is based on the schematism of the constantly unfolding series of nows to be fully "real" as *one* possible manifestation of the character of the world itself. This would then be a time that could be seen as fully characteristic of objects, events and processes as they are discussed in the natural sciences, as "objective" and real occurrences and furthermore, as such, as inherently capable of mathematical measurement and treatment because of their own formal constitution. The point here would not be that this is the *only* possible schematization of world-time, or that it should, *contra* Heidegger, somehow be seen as the "actually" basic or ultimate one. But it would nevertheless be the case that its formal/structural connection to the possibility of counting and measuring itself would point to a certain relative priority, that in which the countable time "of the world" and the counting time of thought in relation to it are themselves formally/ontologically linked by a *common* formally indicated structural condition of possibility.

It is not clear that Heidegger sees this with full clarity, at least not the full scope of its implications, in *Being and Time* itself. There, as we have seen, the "world-time" of the abstract and unlimited succession of now-moments is understood as the outcome of what is essentially a *privation* of the more "original" ecstases, whose primary site is the individual Dasein in its structure of projection on possibilities, the final and highest of which is the individuating possibility of death. On Heidegger's official account, the possibility of this privation, and the specific kind of *infinitude* that it apparently produces as the endless form of the repetition of the "now", results from the modification of Dasein's original structural finitude, articulated by death, into the *publically available* world-time that then becomes known as the time wherein innerworldly entities are encountered. Through the modification, time gains a "public character" (or rather, as Heidegger says, has "already been given" one) through which "several people" can say "now" together; thereby it becomes, according to Heidegger, "the time with which "they" reckon." (411). In this sense, the regular world-time of the series of nows is ontologically understood on the basis of the specific structure of the public or of the "they" – Das Man – which is for Heidegger the mode of Dasein in its falling. Nevetheless, in the modification, the possibility of counting or measuring time by means of regular processes also has a basic significance: it is at first the observed regularity of the movements of the heavens (for "primitive Dasein") and later the availability of the clock that basically allows this general possibility of measurement (415). The use of the clock to "measure" time, as when we look to it to find out what time it is, as well as the possibility of measurement in general, is a constituted possibility that itself arises on the basis of original, ecstatic temporality, according to Heidegger, when "a standard which has presence is made present in a stretch which has presence." (417). Such a standard is one that must, in order to be useable, unchanging and permanently available as "present-at-hand" for everyone at any time. Through this constitution of the possibility of measurement, Heidegger suggests, the temporality that is originally "Dasein's" gains instead the character of a kind of time that is accessible, in principle and in general, to everyone, as a "*present-at-hand multiplicity of "nows*"."

The possibility of world-time as a constantly available stream of subsequent "nows" "available" for measuring and dating in general and to everyone is thus understood, on the analysis, as a determinate and privative modification of the original time that "is" Dasein's own. The specific modification is understood as conditioned in a twofold way, both by the publicity of the "they" and by the factical existence of regular standards, such as the clock or (earlier) the fixed rotation of celestial bodies, which make the *measurability* of time as such possible. It is on the basis of this analysis that he can suggest

that the "infinite" time of the indefinite succession of "now" moments, like any structure of the specifically infinite, must be produced out of the specific conditions of the individual Dasein's self-temporalization. But it can be objected that Heidegger does not clarify either the relationship between these two conditions or the ontological/temporal status of the *entities* (e.g. clocks, sundials, or originally the heavenly bodies) that also provide a basis for the "public" possibility of the measurement of time itself, on the account. In particular: the dating of things according to the motion of the heavenly bodies is such as to make possible a "publicly available" measure, in such a way that "everyone can 'reckon' on [it] simultaneously." (413) This is, in the first instance, a dating by means of the motions of objects in the heavens; as such it can be done "with one another" and for 'Everyman' "at any time" and "in the same way", insofar as we are with another 'under the same sky.'" Through this, "*along with the temporality of Dasein as thrown, abandoned to the 'world', and giving itself time, something like a 'clock' is also discovered – that is, something ready-to-hand which in its regular recurrence has become accessible*." Dasein's temporality is here both the "condition for the possibility that a clock is factically necessary" but *also* the condition of possibility for "its", i.e. the clock's, "discoverability." (413). Furthermore, the "natural" clock of the heavens further conditions the possibility of the measuring by means of "artificial" clocks which are a feature of more technologically advanced Dasein. In the regularity of this "natural" clock is to be found the basic regularity that conditions both the existence of the "artificial" clock and Dasein's ability to measure by means of it.

But then it must be asked how *this* accessible regularity of the original, "natural" clock is first constituted. On Heidegger's official account, it is itself constituted *by* Dasein (or Dasein's original temporality) and indeed *through and by means* of Dasein's actual activities of 'reckoning' with it. But it is then mysterious how the time of reckoning is here related to the time reckoned. If we consider this question in the light of the distinction between constituting and constituted time that Heidegger draws as the distinction between authentic and "vulgar" time, it appears to yield the paradox that the regularity of the movement of the heavens, must be ontologically subsequent to Dasein's "own" time, but is nevertheless as such available to "anyone" at "any time". The regularity of the original, "natural" clock" would then seem already to be able to serve as a standard in advance of any particular Dasein or Dasein in general, whereas (on Heidegger's account) this possibility of its serving as a standard is itself a constituted possibility of Dasein's "own" temporality itself. This raises not only the aporia of the pre-existence of countable, measured time in relation to objects and events taking place before the advent of any empirical Dasein, but (more deeply), how the "for everyone" and at "every time" of measured time is *itself* first given. Here, it is not sufficient simply to claim that it arises from a modification or development of the *individual* Dasein whereby it lives in the mode of falling which Heidegger elsewhere identifies with the "they-self". For if it were only this, it would remain mysterious *how* the regularity of natural time first becomes *available* to Dasein *in general* (or to "everyone") at all.

Neither aporia can be resolved, as long as the original basis of temporality is located in the structure of an *individual* Dasein as such. In fact, as consequences of the assumption that the original constitution of time is located "within" the finite individual as such, they simply replicate the paradoxes of constituting and constituted temporality that Heidegger finds in Kant's own account of the basis of time in the schematism. As long as world-time is seen as rooted, in its original givenness, in the *capability* of an individual, itself located within time and set over against others similarly so located, to measure or count it, a structurally similar paradox of the counting and the counted will result. What remains, however, is

the possibility of developing a more original and ontologically grounded conception of the original givenness of world-time that has, in itself, nothing to do with the capacities or powers of empirical individuals. Such a conception would develop the formal/structural conditions for the very possibility of *counting* time, both on the side of the being "able" to count and on the side of the original possibility of the *counted* as it is rooted in the original ideas of *number* (such as limit, finitude, and infinitude) themselves. Far from being completely opposed to Heidegger's thought about time, such a more structurally basic account is indeed suggested, as we have already seen, by the way that Heidegger himself radicalizes the Kantian idea of finitude in *Kant and the Problem of Metaphysics*. The hints that he gives there can moreover, as I have suggested, point formally to the problematic of the *original formal basis of number* that emerges here.

It is not disputed, in the present analysis, that the objectivity of clock-time can itself be related back to its more general "formal" condition of reflexive givenness. What is in question is simply the sense in which this more original condition can be said to *belong* to Dasein, or to be rooted *in* the individual Dasein as such. It is also not necessary to deny, as we have seen, the actual structure of the ecstases in which time "temporalizes itself," since these have, themselves, the formal structure of reflexivity which is, on this analysis, the deeper unified root of both a Dasein's "individual" time (if such there be) and the unified structure of world-time. In that sense as such is rooted in the (primarily futural) projection of possibilities that itself suggests the basic structure of the ecstases, the preservation of this underlying structure even seems to be a necessary positive condition of possibility for a realist account of sense. What is apparently to be denied, or at least questioned, is just the particular claim that such possibilities as can stand at the basis of any possible givenness of time, such as the one that is officially produced as world-time under the privative condition of the "publicity" of the constitution of the fixed and present-at-hand series of nows, must originally be "mine".

What, then, of death, which familiarly is, for Heidegger in Being and Time, the "highest ownmost" possibility of the individual Dasein, and which officially defines the original structure of finitude in which all of "Dasein's temporality" must be rooted? Without disputing that there is a specific conception of finitude that comes to light here and which is indeed indispensable in any ontological inquiry into time (indeed, the very conception that is developed in much more detail and with greater clarity in the Kant book) it is nevertheless possible to raise questions about this priority of death in its relation to *any* possible constitution of time, as it is described in *Being and Time*. As we have seen, Heidegger's critique of Kant in *Kant and the Problem of Metaphysics* ultimately provides grounds for disputing any conception of the givenness of time as rooted in the capacities of a subject capable of producing its specific unity in the scope of a subjective "I can"; these grounds are in fact brought out even more fully by considering the bases of Wittgenstein's critique of rule-following. On this basis, and applying the terms of this critique, now, to Heidegger's position in *Being and Time* itself, it is possible to ask whether the original givenness of time can really be grounded in anything like a capacity that is distinctively "mine" at all, even if it be the "highest ownmost" capacity of death. There is in fact an obvious and deep structural aporia that is involved in this characterization itself, whereby death is *simultaneously* "my" highest and most individuating possibility and also, as the condition of possibility of impossibility, the one possibility "I" cannot attain.[19] The paradoxical dynamics of this aporia do not simply prove that

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[19] Cf. Derrida: "Awaiting (dying) –at the limits"; also Thomson: "Can I die?"

death is not the ultimate possibility "for me" that Heidegger says it is, but they do suffice to permit the posing in a more original way of the question of the relationship of sense to the "finitude" of the original Dasein. If sense is to be accessible to me, it must be accessible in a way that is conditioned by this finitude. But this conditioning does not and cannot simply mean that it is limited by death; on the contrary, communication in general and writing in particular inherently involve, as Derrida has suggested, the structural iterability whereby a (written) communication is as such legible, even under the condition of the death of the author or her non-presence in general.[20] What is at issue here is really the distinction between possibilities "for me" and possibilities as such; and what is to be, at any rate, further clarified is the way that such inherent structural possibilities as the infinite iterability which appears to be a fundamental feature of anything like language as such articulate (already and as such) "possibilities" which are also evidently rooted in what must be seen as the more "basic" structures of (experienced or experiencable, but also "representable" or "measurable") time.

What is the form of such an investigation into the ultimate formal/structural conditions for the givenness of time in its essential nature, and by what means can it proceed? At PI 89, just after invoking Augustine's famous puzzle about the essence of time (that he seems to know what it is when nobody asks, but when he is asked, he does not know), Wittgenstein specifies this method as the "calling to mind" [besinnung] of what we in some sense already have lying before us, "open in plain view:"

> Something that one knows when nobody asks one, but no longer knows when one is asked to explain it, is something that has to be *called to mind*. (And it is obviously something which, for some reason, it is difficult to call to mind.)

> 90. We feel as if we had to *see right into* phenomena: yet our investigation is directed not towards *phenomena*, but rather, as one might say, towards the 'possibilities' of phenomena. What that means is that we call to mind the *kinds of statement* that we make about phenomena. So too, Augustine calls to mind the different statements that are made about the duration of events, about their being past, present, or future. (These are, of course, not *philosophical* statements about time, the past, the present and the future.)

> Our inquiry is therefore a grammatical one.

What is at issue in the context is the particular "depth" that appears to characterize logic as something "sublime", something that must be fixed in advance of any empirical investigation and must thereby be seen as capable of determining the possibilities of phenomena always already in advance. This character of "depth" has long been seen, in temporal terms or ones analogous to them, as that of the "a priori." The problem of the way in which it has been given to us, or the way it can be explicitly retrieved, is thus nothing other than the temporal problem of the *a proricity* of the *a priori* as such. The problem of the "knowledge" of the essence of time which is given to us as finite beings who themselves live and define the distinctive "possibilities" of their life in terms of the way time is given to them has itself long been thought (and is thought, also, by Augustine) as the problem of the "accessibility" of this a priori *within* this empirical time of factical life and knowledge. Given the general form of this problem, Wittgenstein's choice of Augustine's question *about* the nature of time as an example that illustrates it

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[20] Signature, Event, Context

is thus (though others might perhaps have been chosen) by no means adventitious. As the sort of question that one feels one can answer when nobody asks, but is unable to explain when it is asked, the form of Augustine's question is itself indicative of the problematic of the nature of given time which is its theme. This is the problematic of the recovery of the original structure of possibility from within the temporal life of a finite being conditioned by it.

In response to this linked problem of logic and time, Wittgenstein here suggests that clarity can result from the recollection or "calling to mind" [*Besinnung*] of what we (in some sense) already know – the kinds of *statements* we make – statements, for example, "about the duration of events and about their being in the past, present, or future." The suggestion invokes Augustine's own procedure, but in the context it may also be seen as evoking or resembling one of the original temporal figures of the specific character of rational knowledge in the Western tradition, namely Plato's invocation of *anamnesis* as the recollection, under the conditions of an embodied life, of what one already knows but has in some way, due to this embodiment, necessarily forgotten. The point of connection is not in any assumption that Wittgenstein shares with Plato of the necessary opposition of the sensible and embodied over against the supersensible and atemporal in itself, but in what it suggests about the temporal structure of an inquiry into the prior givenness of sense that has long figured, in the tradition, as the inquiry into the *a priori* order of possibilities fixed always already in advance.

The distinctive possibility and utility – for investigations of *this* sort (Wittgenstein says that what Augustine says about time could not be said about the answer to a question of natural science) – of this "calling to mind" what one (in some sense) already knows marks the form of an investigation arising not from an interest (as Wittgenstein says) in facts of nature or in the empirical itself, but "from an urge to understand the foundations, or essence, of everything empirical." Through such an investigation, Wittgenstein says, we cannot learn anything "new"; but we may nevertheless illuminate the original "grammatical" forms of the formal possibilities of sense that *can* be possibilities for us. These possibilities are not just "mine" or "ours"; they are, rather, as Wittgenstein says, the "possibilities" of the phenomena in themselves. Their "grammar" is not just the structure of this or that particular language, but it is the order of structural precedence that is first shown in our calling them to mind in the terms and forms in which they are (always already) open to language as such. This, among others, is the way in which "essence is expressed by grammar." Such an inquiry, bringing into view what is "in some sense" already known and reflectively giving me the form of "my" life, may thus indeed illuminate, Wittgenstein suggests, the specific question of time that puzzles Augustine; but as such, and in the same way, it also articulates *one* reflexive form (among others) of a factual/hermeneutic "inquiry" into the original essence of time itself.

IV

In its extended consideration of the implications of a recursive conception of the basis of the knowledge of language in the human mind, the analytic tradition, as we have seen, finally runs up against the phenomenon of a specific undecidability of sense; the structural implications of this undecdiability are such as to verify that the actual basis for the "use" of language in its application to the world can no longer be thought simply as the outcome of a corpus of internally represented rules opposed to the behavior of the individual thinking subject as "competence" is opposed to "performance." Although this may encourage the impression that the basis of productive sense must, if it cannot thus be located in

the rule-governed competence of the individual, instead be located in the "publicity" or intersubjective repeatability of social practices, communities, or institutions, in fact the structurally underlying undecidability of sense that is thereby demonstrated (at the limit of any thinking of the subject in terms of capacities) points to a deeper and more original problem, one that can by no means (as we shall see in the next chapter) be handled in terms of the existence and assumed nature of the "social", "intersubjective" or "communal" either. The problem here, in fact, is not basically one of how meaningful language is produced, constituted or instituted in the intersubjective practices of a community, but rather one of how sense is originally given, such that anything like a language or a community of language-speakers *can* arise at all.   As we have already seen in connection with the analysis of the implications of Davidson's and Tarski's conceptions of the relationship of sense and truth (chapter 3, above), this problem bears a distinctive relationship to the question of the structure of a predicative sentence wherein it is linked to the possibility of truth or falsehood. Just as deeply and centrally, however, it includes the question of how *objects* are first given (whether to "cognition", "knowledge", abstract thinking, or already in "simple" perception) as meaningful at all, such that they *can* figure as the subjects of successful (true or false) predication.

This involves the problem of the givenness of sense in a basic relationship with that of the underlying structure of judgment; and as we have seen, this is already enough to show how the problem of the givenness of sense is also a temporal one in that the predicative subsumption of objects under concepts already bears, as Heidegger's analysis persuasively demonstrates, an original and concealed relationship to time. Given this relationship, it is evidently no longer possible to think of the realm of sense itself, as Frege officially does, as a static or atemporal realm simply *outside* time and the temporal; rather when it is brought to light it becomes possible to ask how and on what kind of ontological basis temporality itself is structured in such a way as to make the "predicative" relationship between concepts and objects first possible. This relationship is moreover, in light of the inherent undecidability that is a necessary consequence of the ultimate development of the structural-recursive conception of sense, not to be thought as a simple matter of the application of rules to individuals already formed and pre-given in themselves, but must also be involved in a basic way in any identification of an individual as such. In this way, the problematic of an analysis originally dedicated, in its Fregean inception, to the description and ultimate clarification of the logical form of conceptual meaning as such is forced ultimately and unavoidably to confront the temporal problem of that givenness which makes any "conceptualization" of the world first possible. This is the problematic of the being of beings as it unfolds as time.

Some of the consequences of this confrontation, both positive and negative, are displayed by the argument and conclusions of Sebastian Rödl's recent, trenchant and far-reaching analysis of the relationship of judgment and time in his *Categories of the Temporal: An Inquiry into the Forms of the Finite Intellect*. Rödl's analysis, as a whole, aims to "identify" and "reveal [the] necessity" of the "logical forms of temporal thought;" with this, he suggests, it is possible to illuminate the concept which is the "most fundamental" of philosophy but also one of the "most obscure," namely that of logical form itself. (p. 1). The forms that structure thought as inherently temporal are themselves inherent forms of the human intellect, according to Rödl, in that they necessarily characterize an intellect that "depends on the independent existence of the object of its thought and is in this sense *finite*." (p. 8) This is because, Rödl follows Kant in suggesting, by contrast with the "divine intellect" which is such as to be able to think what it thinks without its being given and thus "thinks the eternal," the necessity of the human

intellect to relate to an externally given object means that it is necessarily temporal in the twofold sense that it both "thinks in time" and "thinks the temporal" as such. (p. 8).

According to Rödl, the analytic tradition has long been gripped with a dogma according to which all logic is, as such, the "general" or "formal" logic of deductive relations among already constituted thoughts. By contrast with this, the study of the structure of the finite intellect as characterized by its dependence on the externally given is the proper aim of a "transcendental logic" that does not attend primarily to the inferential relations of thoughts already constituted, but rather investigates the "forms thoughts exhibit *insofar as they relate to intuition*." (p. 8). This investigation is an investigation of the "power of thought, or, as Kant says, the understanding, or, as Frege says, the mind." (p. 21). More specifically, it is an investigation of the intellect as the "power" of what Rödl follows Evans in characterizing as *situational* thought," that is, thought that has bearing on its object by distinctively relating to sensory intuition (p. 64) and is thereby "essentially in time". In general, a situational thought is one that is thought in a way that depends on the time at which it is thought; although Evans developed the idea of situational thought primarily in relation to specifically *demonstrative* thought, Rödl argues that this time-dependence can be generalized to characterize *all* human thought on the basis of the Kantian claim that "thoughts without intuitions are empty." (p. 57) Because thought, in order to be contentful at all, is in this way dependent upon intuition, and intuition itself occurs in time, human thought is as such, according to Rödl, irreducibly situational and thus also irreducibly temporal, according to its very form.

Within the ambit of a "transcendental logic" that develops the general forms of predication, It is thus possible to describe the general temporal forms through which human thought, as thought relating necessarily to intuition, is possible at all. On Rödl's argument, there are the "most general forms of the finite intellect" insofar as the thought of such an intellect is temporal in two senses: both in that it thinks (of) temporal objects and in that it thinks of them *as* temporal and temporally extended (p. 10). These forms, as forms of predication but also as "forms of consciousness," fall under three headings: that of tense, that of aspect, and that of the "time-general" or "generic." Each of these forms characterizes the particular "way in which…subject and predicate" are joined in the structure of a thought exhibiting it. (p. 10). Through a variety of examples and critiques, Rödl argues convincingly that these transcendental/logical, or "grammatical" forms cannot, Rödl argues, be reduced to the sorts of relations of thoughts that can be displayed in the symbolism of a deductive calculus (for instance by the addition of indices to statements to indicate tense, or by the numerical indexing of moments). This is because, Rödl argues, the inherent temporal nature of thought does not appear perspicuously in the deductive relationships of thoughts to one another, but rather in the internal structure of each predicative thought by means of which it is constitutively dependent upon the (temporal) intuition of an object in such a way as to characterize the very form of predication that occurs in it. This implies that, if the actual logical form of predication is to be displayed, it must be necessary to supplement the purely deductive logic dominant since Frege with a transcendental logic of temporal forms.

In fact, Rödl argues convincingly that the calculi of deductive logic characteristic of much analytic philosophy are not only incapable of adequately characterizing this formal temporal relationship of thought to its object, but must actually positively presuppose for their own intelligibility something like a transcendental logic in this sense. This is because, as Rödl argues, the positive identification of a *totality*

of thoughts, such as is involved in the specific application of any deductive calculus, itself presupposes a prior understanding of how the objects of these thoughts are given and of how the boundaries of the relevant totality are thereby determined. In particular, Rödl argues that logic as Frege conceives it must presuppose this prior specification for at least two reasons. First, Frege requires that the quantifiers of a *Begriffsschrift* inherently express generality; as a matter of its actual logical form, the universal quantifier is in itself not marked as applying (only) to any particular range or type of objects. Rather, for Frege, the universal "All so-and-so" is in fact, in its logical structure, the universal quantifier combined with a particular predicate: "All x, if they are so-and-so…". This means, as Rödl says, that the fact that we can apply the logical calculus to any particular domains of objects at all cannot consist in or follow simply from the logical/deductive structure of the calculus itself; rather it is necessary, in considering the calculus to apply to *anything*, first to specify a domain if we are to "bring thoughts" about these objects "under its laws." To specify a domain in this sense is to specify a range of objects as given; and such a specification must be possible if the general calculus is to be capable of expressing any particular thoughts at all. But given Frege's commitments to the context principle, according to which objects are given *only* by means of predicative thought, and to the further assumption that *all* predicative thought is as such deductive, the basis of this specification must be mysterious. For if it cannot take place within the deductive calculus, it cannot, on these assumptions, take place as thought at all.

Secondly, and relatedly, as Rödl argues, the generality of a Fregean *Begriffsschrift* in its application to any domain implies (on certain Fregean assumptions about substitutability and the determinacy of truth) that any particular domain of objects in fact be treatable as always already part of a maximally *general* domain, the domain (so to speak) *of* (Fregean) objects as such. But this is the very idea that, Rödl argues, is responsible for the failure of the *Grundgesetze*, in the wake of Russell's paradox, to ground the givenness of numbers on that of the extensions of concepts. Frege's Basic Law V, in particular, implies that two concepts have the same value-range (extension) if they always assign the same truth value to every argument. But since, on Frege's assumptions, extensions are thus determined by the pattern of truth values that their correlative concepts assign to each object, and since (however) extensions are *themselves* objects, the "procedure" thereby specified for determining extensions must therefore be (viciously) circular. As a consequence, Rödl argues, Frege's argument does not succeed in showing how extensions are given; once again, this suggests that the order of predication, if understood only in terms of the deductive calculus, cannot fully account for the givenness of objects that it must in fact presuppose in each case of actual application.

In both cases, Rödl suggests, the answer is to break the link that Frege assumes between the deductive calculus and the form of predication as such. In particular, we can make the availability of domains of objects, which is necessarily presupposed in both cases, intelligible as an aspect of *predicative thought* if we relax the assumption that predicative thought is itself exhausted by its deductive structure. We can do this, Rödl argues, if we allow that the predicative structure of thought is *also* characterized by the way it is necessarily also related to intuition, and thereby to the possible givenness of objects; and we can, further, make visible the form of this necessary relation by clarifying the inherently *temporal* forms of the thought of an inherently *finite* intellect.

Basing his analysis in substantial part on a detailed reading of Kant's First and Second Analogies of experience, Rödl argues that the temporal forms must be such as to make it possible for us, already in

perception, to perceive events as temporally ordered and related to one another. On this basis, Rödl is able to criticize interpreters, such as Longuenesse and Guyer, who read Kant instead as proposing, with the First Analogy, a doctrine of how temporal relations that are not just given (on their reading) in passively received perceptions can subsequently be supplied by adding to these (supposedly) received perceptions a rule of succession, perhaps one stemming from a "transcendental synthesis" of the imagination. By contrast with these readings, Rödl argues that Kant holds that our very ability to perceive that things are simultaneous or successive with one another results from the way our perception of things as such already necessarily involves temporal forms of predication. In particular, according to the argument of the First Analogy as Rödl reads it, all appearances *as such* structurally include the contrast of enduring substance and its changeable determinations, for this contrast characterizes the predicative form of all empirical thought (pp. 117-118). Since, in perception, it is impossible to perceive time itself, the perception of temporal relations such as simultaneity and succession must involve the perception of these relations as involving changes of the state of an underlying substance (p. 119). In this way, substance itself is, for Kant as Rödl reads him, appears among the objects of perception. The necessity of its so appearing is a necessary outcome of its characterizing the underlying *logical form* characteristic of anything at all, insofar as it is "capable of figuring in temporal relations." (p. 124). This is one of the characteristic temporal forms, according to Rödl, of all human thought insofar as it bears on objects at all.

Rödl's arguments for the necessity of supplementing the familiar deductive calculi with something like a "transcendental logic" capable of addressing how objects are given in such a way as to be able to figure in discursive thought generally are, from the current perspective, well taken. As we have seen, indeed (in chapter 3, above), the unified hermeneutic position of an interpretation of the linguistic and worldly conditions of truth itself requires that the familiar logical/structural analyses of the Fregean or Tarskian/Davidsonian kind be supplemented with just such a "logical" (in an extended sense) account of the form of the givenness of things. The formal calculus of truth that Tarski bases on Frege's logical calculus indeed exhibits, as we saw there, characteristic limitations just where Rödl says Frege's system does: with respect to the apparent necessity of a pre-specification of domains in able to make the calculus applicable at all, and with respect to the paradoxes inherently arising from any characterization of the calculus as bearing, in and of itself, on the *total* domain of all objects. These limitations themselves suggest the possibility and trenchancy, as we also saw there, of an account of (what I there called) "transcendental" truth, over and above the Tarskian deductive/calculative truth-theories for particular languages, and addressing the question of how the objects of primitive terms are, most basically, supplied. Rödl is also right to treat this supplementation as a necessary component of any comprehensive characterization of the conditions for the possibility of linguistic predication, and so to characterize "transcendental" logic (in his sense) as capable of contributing, just as much as do the familiar deductive calculi, to the characterization of the "logical form" of *possible* predication itself. Conceived in this way, the supplementation of the formal/deductively characterized languages with an account of the availability of objects to them is a necessary component of anything that could rightly be called a comprehensive account of the nature of *sense* at all. And because the problematic of sense is, since Frege, the problematic of modes of presentation – or of the conditions under which anything can be presented in general, in such a way as to figure as an object of judgments capable of being true or false – it is not only cogent but also necessary, as we have seen, to intimate or suspect a necessary

relationship of this supplementary logic with the problematic of time, insofar as (and because) *this* problem is that of the ontological/temporal basis of presence and presentation in general.

In each of these ways, an "ontological" development of the interlinked problematics of truth and time can sympathize with Rödl's call for a "transcendental" logic of temporal forms to supplement the usual "deductive" logics, which, since Frege, have often declared or assumed their own proper topic and direct basis to be simply timeless or extra-temporal. But an ontologically decisive question is nevertheless posed if we ask what these temporal forms are, in fact, forms *of*. Rödl himself characterizes them in various ways: often as "forms of predication," but also as "forms of temporal consciousness" or of "thought" (full stop) or again (as in the subtitle of the book) as "forms of the finite intellect." Officially and most generally, they are the forms that must necessarily characterize any thought that is "dependent" on receptive intuition in order to have content (or not to be, in Kant's metaphor, "empty"), or any intellect that "depends on its being given an object through the senses." (p. 57). On Rödl's telling, our intellect is one such because of its essential finitude, which is evident in the way human thought, in order to have content, must be given an object through intuition. Here, the decisive difference is (as we have seen) the one between human thought that is conditioned in this way and the divide intellect, which is capable of a purely generative intuition. Since it is not capable of such an intuition, the human (or finite) intellect "depends on its being given an object through the senses."[21] What Evans calls "demonstrative" thoughts – thoughts whose having involves the presence of some object before one (e.g. the thought "This pepper is red") and are without content if the demonstrated object is *not* present – serve Rödl as a *general* model for what he calls "situational" thought overall. And on his argument, it is because our predicative thought *in general* is situational in this sense that it is essentially temporal. The temporal forms of predication, which Rödl claims to discover, spell out this essentially temporal form of thought insofar as it is involved in the forms of predicative judgment in general.

As a preliminary to raising deeper questions here, it is worth noticing that there could not in fact be, for Kant, "categories of the temporal," in Rödl's sense. For while, on the one hand, what *Kant* calls the "categories" are officially derived from the (predicative) forms of possible judgments, Kant himself treats the way in which experience and thought are temporally shape most directly through his discussion of what are not (for him) *categories* of thought or predicative form, but (precisely) *analogies* of experience. An analogy in this sense is a "rule according to which a unity of experience may arise from perception" (A 180/B 222); its basic "principle" is to provide for the possibility of experience by accounting for the representation of a "necessary connection of perceptions" in the experience of temporal relations. Rödl is right to emphasize that the time relations thereby introduced among appearances already characterize perception, as a basic condition of their possibility; but they do not do so, as he maintains, as *predicative* forms of judgment but rather as rules preconditioning the possible unity of experience as such. According to Kant, such a rule is also not *constitutive* of appearances, but only *regulative* with respect to their unification into a single time-order (A 180/B 122). The kind of unity that an analogy of experience introduces as the temporal order of appearances (ordering them in relations of duration, succession, and coexistence) is further dependent, according to Kant, on the transcendental unity of apperception and its own relation to the temporal form of inner sense, whereby

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[21] P. 57.

perception is unified at *every* moment of time. (A 177/B 220). Furthermore, since they function as regulative rules with respect to appearances in this sense (rather than constitutive rules of appearances *or* rules applying to things in themselves in any sense), the application of the analogies to appearances does not amount to their being subsumed under categories, but rather only under their schemata. This is why these principles are themselves ultimately not categories, but rather analogies, for by them:

> …we are justified in combining appearances only according to what is no more than an analogy with the logical and universal unity of concepts. In the principle itself we do indeed make use of the category, but in applying it to appearances we substitute for it its schema as the key to its employment, or rather set it alongside the category, as its restricting condition, and as being what may be called its formula. (A 181/B 224).

For this reason, the analogies of experience themselves involve, in their unifying application to experience to produce a unified time-order, all of the essential questions about time, unity, and synthesis that Heidegger raises in his own interrogation of the schematism as the outcome of the mysterious power of transcendental imagination and its twofold connection to the transcendental unity of apperception and the temporal form of inner and outer sense. As Kant indicates here, these problems are not those of the logical unity of concepts or of predicative judgments; they are at best analogous to them, and the analogy proceeds necessarily through the difficult topic of the temporal status of the schematism itself in its connection with the underlying (and problematic, as we have seen) temporal unity of the "I think" of transcendental apperception.

Now, it is striking that Rödl, despite the far range of his discussion and his general dependence on Kant, nowhere discusses the schematism or the temporal questions it raises. For this reason, he does not consider the problematic form of the third power or faculty of transcendental imagination, which as the obscure "common root" of the receptivity of intuition and the spontaneity of understanding must apparently, as Heidegger argues, yield the most basic form of time (as pure auto-affection). Instead, Rödl considers the basis of the necessary temporal form of thought (or perhaps of consciousness) to be exhausted by the consideration that discursive thought, in order to have empirical content at all, must be supplied by the intuition with an object on which it bears. It is this consideration that, further, allows Rödl to portray the intellect that is thus conditioned as irreducibly a power of "situational" thought, in that its thought is always (on this reading) dependent on its being affected by an object *at a time* and is thus itself essentially temporal. It is on this basis that Rödl what are for him the possible forms of "temporal" predication. But even for Kant himself, it is not the case that *every* possible thought essentially involves one's being affected by an intratemporal object at a particular time. There are, for example, pure geometric and other mathematical thoughts, which although they certainly involve intuition, depend on what Kant calls a "formal intuition," which, as the intuition of a form of sense (time or space) is not the intuition of something existing *in* time. Synthetic a priori knowledge in *general*, as knowledge arising from the pure categories, also does not depend on the givenness of a particular intratemporal object in this way either. And there are also, of course, *analytic* thoughts determined only by the principle of noncontradiction, which in its thinkable extension beyond appearances must not depend on intuitive givenness at all.[22] Kant's remark that "thought without intuition is empty" must not

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[22] It is telling in relation to this that in a brief discussion of the principle of noncontradiction (pp. 98-99), Rodl affirms, quoting Kant's earlier position in the inaugural dissertation but ignoring his reversal of this position in the

extend so far as to exclude these kinds of thoughts or the possibility that they have (thinkable, or even in some cases knowable) content. And if these kinds of thoughts can and must indeed be taken seriously as having content in that they are capable of truth or falsehood, it follows that what Rödl calls "situational" thought cannot characterize the general structure of the finite intellect, insofar as it is capable of thinking judgments that are true or false at all. Rather, the feature of situational, temporal dependence that Rödl generalizes from Evans' account of specifically demonstrative thoughts must be a feature of, at most, *some* of its thoughts. But if the temporal structure of situational thought does not characterize the structure of the thought of the finite intellect as such, then it is also a mistake to suppose that a clarification of this temporal structure can provide the basis for clarifying the temporal nature of thought in general.

This points to a deeper and more general limitation of Rödl's account with respect to the underlying ontological/temporal issues at stake here. For Rödl, the claim that finite thought is irreducibly temporal turns (in the first and "fundamental" instance) on the thought that it is irreducibly situational: this means that it takes place *in* time in such a way as to be able to "use" the time it takes place in to specify its content, in a way analogous to that in which a demonstrative thought "uses" the presence of its object. Rödl attempts to derive from this, as we have seen, what he treats as the general forms of temporal predication that, for him, characterize the form of all possible finite thought. But in so doing, he must evidently and in an obvious sense *presuppose* the "external" existence of an ordered time *within* which, as he says, situational thought first "takes place." It is only by presupposing this, in particular, that it is cogent to hold that an empirical thought can gain (an aspect of) its content by means of its being affected *at a time* by a particular object, or that the structure in virtue of which it gains its content in this way can be characterized as a general formal one. But if the structure of such an exterior time is thus presupposed by Rödl's account of temporal forms, it is not explained by it, on pain of (vicious) circularity. Even if we grant Rödl the premise that *all* thought of an intellect so situated is "situational" in his sense, therefore, it must be said that his analysis has not explained or clarified the constitution of time itself, but only the possibility that the *thoughts* of a certain kind of thinking, situated being are related to time in a particular way.[23] This is not necessarily an objection, since it is not clear that Rödl intends to account for any more than this; in particular, it is not clear that his inquiry, which avowedly and officially has the topic of the temporal "forms of the finite *intellect*" has the ambition of explaining or clarifying how something like "objective" time first arises at all. On the other hand, if it is indeed possible simply to *assume* a unitary time of objects at the advance of the explanation, as Rödl apparently must, then most of the explanatory apparatus which he deploys in his analysis of temporal forms, along the lines suggested by Kant, is idle. For instance, if it can be presupposed that temporal relations are already objective features of the world, prior to any consideration of the activity of a thinking intellect or a subject as such, and can thus be directly given in perception, then there is no need

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Critique of Pure Reason itself, that the law of noncontradiction involves that "the same thing cannot be true and not true of the same thing *at the same time*" and thus that it can only be applied to two thoughts "only after we have made sure that the thoughts in question do not differ with regard to time." (p. 99)

[23] Analogously, Evans' account of demonstrative thoughts attempts only to explain how certain thoughts that can be formulated by thinkers situated in space and time gain content by virtue of the presence of the objects to which they refer; it does not explain or attempt to explain the basis of the possibility that these objects and thinkers are situated in space or time to begin with.

to explain how these relations are necessarily induced by the satisfaction of conditions on the possible unity of *experience* in general.

It is no answer to this to hold, as Kant himself might, that whereas the kind of situatedness in time that is relevant to the analysis of the temporal forms of judgment is empirical, the kind which is at issue in the explanation of the perception of succession is transcendental. For if the two kinds of situatedness are distinguished in this way, then the explanation which bases itself on the first simply does not carry over to the second. It can be, in particular, no part of an answer to the question of how temporal relations (of simultaneity, precedence, and succession) are first constituted to refer to the fact that *as* empirical objects (i.e. appearances) we ourselves stand in these relations with other intratemporal things. This is presumably why Kant, by contrast with Rödl, does not base his analysis of temporal forms ultimately on the fact or form or "situatedness", but rather on the *transcendental* powers of unification exercised by an intellect whose own characteristic form of unity is neither intra-temporal nor predicative, but rather the transcendental unity of apperception that both presupposes and synthesizes the endurance of time in the schematism of the pure category of substance. Of a subject endowed with such a power, it can indeed be rightly said that it constitutes (in a certain sense of "constitution") not only the experience or thought of time, but indeed "objective" time itself. But (besides apparently resting on a conception of the transcendental as the simply extra-temporal which has little evident motivation) the price of this solution is, as Heidegger shows, the essential paradox of the "transcendental" activity of an auto-affecting subjectivity which, in giving itself time in a way that is both pure activity and pure passivity, can no longer be said to be simply "in" time *or* "outside" it.

More generally, as we have seen, the paradoxical situation that here arises can be seen as pointing to the ultimate limits of any conception of the basis of time or the possibility of temporal thought as resting in the synthetic *capacities* or *powers* of what is specifiable as a "finite" subject at all. For if, as Heidegger shows with respect to Kant, the "power" at the basis of the constitution of time must be that of a self-affection with respect to which the subject is, as such, just as much receptive with respect to the given as it is spontaneous with respect to the giving, then the structure of this self-giving can no longer be thought simply as the "I can" of a power of unification, binding or synthesis of previously given elements. For the concept of any such power is that of its possible application in the production of a unity of what is in itself not unified, and this concept itself implies a temporal order of precedence between the (prior) givenness of the elements in themselves and the (subsequent) production of their unity. Since *this* temporal order must be presupposed in the very idea of the capacity to synthesize, it cannot be explained by means of it. This is why, as Heidegger suggests, Kant's conception of an obscure transcendental power of the imagination at the root of all possible synthesis in general or of the recognitional form that is its general form ultimately runs up against the constitutive paradox of passive/active auto-affection; it is also why, as we have seen, Heidegger suggests that that this paradoxical reflexive form points to a structural radicalization of the idea of "transcendence" itself that no longer sees the constitution of time as resulting from the synthetic activity of an intellect or subject in general. More generally, if this structure of temporal precedence is indeed involved in the very idea of the productive or constitutive capacity of a "finite" subject as such, any account that attempts to solve the problem of the givenness of time by reference to such a capacity will fail.

Rödl's account of the "power" of situational thought is evidently one such account, and it in fact mobilizes a broader idea of the basis of givenness in the constitutive capacities of a thinking subject – what might indeed be called the idea of a *transcendental* subjectivism -- that has a wider provenance in contemporary discussions.[24] But even if such an account in terms of the capacities of the subject could somehow escape the aporias of receptive/spontaneous self-affection that we have discussed, it would still be inadequate to account for the givenness of time (or, for that matter, to account for senses as the modes of givenness of objects) in realist terms. For the talk of a ground of givenness in the capacities of a subject presupposes, in an obvious way, the existence of the subject itself, as well as the possibility that the subject indeed exists, but (for whatever reason) does not exercise her capacities in this regard. It cannot, therefore, explain the possibility of a givenness of time or sense that precedes (in empirical time) the existence of any subject; and for the same reason, neither does it account for the possibility that the time that is given to *one* (individual) subject is also ("simultaneously," as it were) given as "world-time" to *all* others as well. More generally, if the category of "the subject" of capacities and activities is to have any application at all to the problem of the givenness of time, it must for this reason function as a kind of inherently paradoxical *singulare tantum* which, as necessarily existent and active, corresponds neither to any individual subject or plurality thereof nor to any existence that is simply and without further complications *in* objective time. As we have seen, it is the singular merit of Heidegger's radicalizing interpretation of Kant's subjectivist conception of the basis of time that, despite some residual admixtures of the old concept of the finite subject that are not (yet) fully overcome in Heidegger's *Being and Time* conception of the temporal structure of Dasein, suggests terms and structures by means of which it becomes coherent to think world-time as realist in this sense while nevertheless not denying the obvious intratemporality of the being that thinks it.

If the origin of the temporal bearing of thought on its objects cannot, for all of these reasons, be attributed to the predicative form of the subjective binding of "subject and predicate" wherein Rödl (partially following Kant) situates it, it nevertheless remains possible that the form of time is constitutively linked to predicative, linguistic truth in a broader and structurally different way. In particular, it is relevant to consider here the quite different mode of "combination" into the unity of a predicative sentence that Frege theorizes as the unity of function and object in producing what he terms a "thought" which is (definitively) true or false. By contrast with the Kantian synthetic conception, this is explicitly and essentially a kind of unity that does not depend on the synthetic activity of a subject or on any "process" of combination at all; indeed, it is in reality no *combination* at all but rather simply the regular relationship of objects and concepts to truth-values by means of (what Frege considers to be) a rule. The specific unity of the thought is again here not to be understood simply as the aggregation or combination of separately given elements, but as (in accordance with the context principle) the distinctive compositional unity that connects the thought to its truth value by determining it as its reference. This constitutive connection with truth-values is what verifies, for Frege, that the thought can have a content that is quite independent of any subjective (or any other temporal) activity, and thus licenses his criticism of psychologistic theories of content on which it depends, by contrast, on actual

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[24] For instance, it is a *leitmotif* of John McDowell's attempt, in *Mind and World*, to account for our perceptual openness to a world that is also thinkable as such that the receptive "capacities" we "draw on" in perception are the same as (or "not even notionally distinct from") the spontaneous ones we "draw on" in thought. I believe McDowell's picture here could thus be criticized along substantially the lines sketched in this paragraph, though I do not attempt to develop this specific criticism here.

acts of thinking. And the "constitution" of the thought, or the sense of a sentence, from the senses of the individual object and concept terms figuring in that sentence refers, in an obvious way, to a quite different kind of structural order than any that is involved in the constitutive activity of any subject or agent.

It is true that, in thus invoking the idea of senses as determining references in accordance with the idea of thoughts as determining truth values, Frege does not explain how *they* (senses or thoughts) are first constituted or given. Indeed, in the context of a broader ontological/temporal inquiry into the basis of sense and its temporal meaning, Frege's own occasional metaphors of "timelessness" and a simply extra-temporal "third realm" must be resolutely resisted in favor of a more concretely motivated inquiry into the formally indicated structural phenomenon of givenness as such, one which interrogates (as Heidegger does) the very meaning of the "a priori" as it is invoked in these metaphors. But the key insight of Frege's that is more substantively at the actual basis of his logical conception of the constitutive connection of sense and truth is not that sense is simply extra- or pre-temporal, but rather just that it is not temporal in the way that objects are: that is, it is not temporal by being *effective*, by standing in causal relations with objects, or by being able simply to be "accessed" in the way that objects are by a mind that itself stands in such relations with them. This insight does not in itself simply preclude the possibility of an account of the givenness of senses as the modes of presentation of objects, but rather motivates a deeper inquiry (which, admittedly, Frege himself does not pursue, beyond a few suggestive hints) into the more basic ontological constitution of presence and presentation themselves.

This is why, as I argued in chapter 3, it is appropriate to pursue an "ontological" inquiry into the basis of sentential sense and truth in general in the hermeneutic conditions for the possible givenness of intelligible objects alongside, and in addition to, the "formal" inquiry into the structure of truth begun by Frege and continued by Tarski and Davidson. As I suggested there, neither part of this twofold inquiry involves any essential reference to the acts, activities, or capacities of an individual subject or agent, and it is no part of this inquiry either to violate Frege's strictures against psychologism (on the one hand) or to invoke a timeless, simply exterior third realm (on the other). In this chapter, we have begun to see how the structure of sense thereby suggested in accordance with the idea of the content of thoughts that Frege develops may itself serve as the structural basis for an ontologically clarified picture of the original relationship of sense and time. We will clarify this picture and fill it out further in the remaining section of this chapter and in the next one, where the structure of sense is specifically interrogated in relation to the historical being of languages as they arise and change over historical time.

It is true that to develop this essentially Fregean picture in the way that I have suggested here is to assume, along with Frege, that the order of deductive relations is, in a certain sense, complete. That is, in accordance with the unlimited application of the context principle, the specification of the deductive relations among thoughts gives a *complete* characterization of their content. This contrasts with Rödl's picture, on which the predicative forms of the binding of "subject and predicate" must include not only relations explicable by means of a general calculus of the deductive order, but also the forms of the givenness of objects, to be explained by means of a "transcendental" as opposed to a (merely) deductive logic. It is not that, on the current picture, there is no room for the development of the topic of givenness by means of an ontological/hermeneutic inquiry that takes on some of the tasks

traditionally accomplished by what is called "transcendental" logic; as we have seen (chapter 3) this kind of account of givenness indeed has, as Rödl in fact suggests, an indispensable role in clarifying how it is possible for a deductive calculus to "bear on" objects at all. It is just that the "givenness" of objects in this sense is not to be conceived as a logical *component* of the content of the individual "predicative" thought or judgment, and thereby placed alongside its inferential content, in the way that Rödl supposes it must. The manner of conditioning here is, rather, broader and more holistic, as is indeed appropriate to the general questions of systematic applicability and bearing that motivate it.

In fact, Rödl is correct to point to the constitutive underlying paradoxes that necessarily result from the assumption of the generality of the Fregean deductive logic in accounting for all aspects of content. Such an assumption induces, first, the problem of the specification of domains that seems to precede any possibility of applying it to any objects at all, and second, the paradox of totality in relation to the determination of extensions in the maximally general domain of objects as such that leads to Russell's paradox. These problems are real, but they cannot in fact be solved by an invocation of "transcendental" logic of temporality of the kind that Rödl suggests. We can see this by considering, for example, the way that Rödl proposes to solve the first problem: if the deductive calculus does not by itself determine the specific domains of objects to which it applies, these domains must instead be first "given" along with the objects within them by means of the "transcendental" bearing of thought on its object in (temporal) intuition. If a domain of objects can be "given" to predicative thought, independently of the deductive relations of sentences involving them, in this way, it is indeed possible to solve the problem of the specification of domains that is apparently involved in any application of deductive logic in general.

But if this solution were correct, it would be necessary, in order for us ever to apply the deductive calculus to any domain at all, that we first have not only a general conception but also determinate intuitive *knowledge* of the whole set of objects that it takes in. This knowledge would furthermore, as temporal, have to be something we come to at some time *prior* to the application of the deductive calculus to those objects. There may be cases where we indeed come to have detailed and specific knowledge of a limited or small finite set of objects before venturing to consider the deductive relations among sentences characterizing them; but it is surely wrong to think this is the general case. It must be possible to *consider* the application of the deductive calculus to a domain, in other words, without "first" supplying determinate conditions of application by means of an actual intuition of its several objects. This possibility is not, and cannot be, established by an actual activity of "providing sense" which is simply temporally prior to the actual application of the deductive calculus itself. For any such activity, in order to be carried out, would itself presuppose that the relevant deductive relations have already been given. This is why, again, whenever we consider the question of the "provision" of sense as the strictly intratemporal one of the "process" by which it can be provided, we will run into vicious circles of the type Dummett and Rödl point out. It is, of course, the same problematic situation that underlies the second problem as well, that of the provision of extensions by means of (what must apparently be) impredicative judgments about the totality of (already existing) objects. If the current suggestion is correct, neither problem is to be solved by reference to the activity of a subject in providing intuitions to an object, or indeed to any already temporal process at all. It is, rather, in the paradoxical form of these very problems themselves, as it necessarily adheres to the logical/structural application of the deductive/inferential idea of sense to the totality of the world as such, that the very formal/metalogical

basis for the development of any possible account of the basis of presentation and presence in general, and hence of the original structure of time, is positively to be found.

V

Following Heidegger, I have argued that Kant's conception of the basis of time in the schematism structurally contains, within itself, the formal indications that are necessary for a more radical posing of the ontological question of the basis of the structure of time as it is given to experience and thought. On the other hand, although Heidegger's interpretation of Kant also points to the deeper problematic underlying the structural aporias of Kant's account, it is not clear (at least insofar as he retains the conception of original time as arising from the possibilities "of" an individual Dasein) that he sufficiently illuminates the actual formal configuration of this underlying problematic itself. I have further suggested that this problematic is, in a way that is not directly confronted by Heidegger, the problem of the *original genesis* of number such that it can subsequently serve for the "measurement" of time and its marking in thought and experience with respect to the "before", "now," and "after." We shall take up the problematic in more detail in chapters 8 and 9, where it is argued that the deeper ontological basis of Aristotle's original definition of time as the "number of motion with respect to the earlier and later" is itself to be found in this more original problem of the ideal genesis of number from the constitutive ideas of the limited, unlimited, the one, and the many. This points, as I shall argue in more detail there, to a specification of the ontological problematic of the "relationship" of being and time which is not ever developed by Heidegger, but which may be seen as integral to it nevertheless and indeed essential, under contemporary circumstances, to its further development.

Like other aspects of the "ontological" problem, this one is not seen with complete clarity by Kant; moreover, as with the question of the basis of time generally, its development in Kant is characterized by what is, in the context of his assumption of representing subjectivity, the irresolvable aporia of the constituting and the constituted that we have discussed. This aspect of the problem is also, as I have suggested, not seen with any clarity by Heidegger, who rather prefers to avoid the ontological problems insofar as they involve the problems of mathematics and number in themselves. However, like the aspects of the problematic that Heidegger *does* see, it is indicated in Kant's text, in particular at those moments at which, beyond the "transcendental" distinction of appearances and things-in-themselves, the very structural form of being, such as it (officially) characterizes *both* the being of apperances *and* that of things-in-themselves, is at stake.

A passage from the Schematism, which Heidegger (despite the exhaustiveness of his reading of it) does not discuss in detail, may serve as exemplary in this respect:

> The pure image of all magnitudes (quantorum) … for all objects of the senses in general, it is time. The pure schema of magnitude (qvavtitatii), however, as a concept of the understanding, is number, which is a representation that summarizes the successive addition of one (homogeneous) unit to another. Thus number is nothing other than the unity of the synthesis of the manifold of a homogeneous intuition in general, because I generate time itself in the apprehension of the intuition.

Reality is in the pure concept of the understanding that to which a sensation in general corresponds, that, therefore, the concept of which in itself indicates a being (in time). Negation is that the concept of which represents a non-being (in time). The opposition of the two thus takes place in the distinction of one and the same time as either a filled or an empty time. Since time is only the form of intuition, thus of objects as appearances, that which corresponds to the sensation in these is the transcendental matter of all objects, as things in themselves (thing-hood/ reality). (A 143/B 182-183)

In the passage, the ideas of *magnitude*, the *rule*, the *image*, *number*, *time*, *negation*, *sensation* and *being* all are assembled according to the question of the possibility of the schematization of the category of *reality*, in order to present how it accomplishes the *a priori* possibility of the representation of appearances under it. This schematization involves, as Kant says, the constitutive possibility of constituting a number of units in such a way that a "homogenous" intuition is itself brought to unity. Here, time and number are distinguished as image is distinguished from schema. Time, as the pure image, is the sensory form under which "all" magnitudes that can appear to the senses do so appear. But number is the schema that underlies this sensory image, and the possible appearance of magnitude it allows; it does so by "summarizing" the successive addition of units to one another. Number is thus the regular or schematized structure that underlies the application of the category of "reality" to appearances, or beings presented in time, in determining the magnitude of sensation present in them in a unified intuition.

This possible unity of such an intuition, and thus the possibility of its schematization in numerical terms, is itself conditioned by the "homogeneity" of the intuition in itself, and also by its "apprehension" as unified. In the apprehension of the intuition thus unified, "I generate time itself…" As we have seen, this "I generate time itself" characterizes the paradoxical structure of auto-affectivity whereby given time is both receptive and spontaneous, and both constituted and constituting, with respect to a transcendental subjectivity formally characterized by the transcendental unity of apperception. Here, it implies that the "generation" of time both presupposes and is presupposed by the procedure of a counting, whereby the "units" of a homogenous intuition are also constituted *as* homogenous units by being counted together as constituting a one. Elsewhere, Kant makes it clear that he sees any possibility of counting as, as such, conditioned by the temporal form of sense, and by the formal intuition of time that it makes possible. However, the counting here that allows the schematism of number to give reality in the appearances is itself the basis for the constitution of time as "pure image". If it cannot thus be said that the counting of the intuition (or of its "units") takes place in time, it cannot be said to be outside time either, for it itself presupposes both a "synthesis" and an "apprehension" of it. It is also capable of being "summarized" in the rule that presents it, *as* "number" to the understanding. This points to what must be, in Kant, an original paradox of the constitution of number in itself, one which is not distinct from the problem of the constitution of the transcendental schematism in general Heidegger points out and that we have discussed. As the question, here, of the ultimate basis for the determination of magnitude in appearances, the paradox of priority that here arises points, in the context of this determination as greater or smaller in the intensity of sensation, to that element or aspect of them which must escape and precede the temporal form of their representation. This is that, in them, which corresponds to their "transcendental matter," their being as things in themselves.

Within the Kantian conception that links the being of number decisively to the temporal process of counting, it will not be possible to resolve this basic aporia of the temporal relationship of the counting to the counted. If this assumption of the actual basis of number in the temporal process or activity of a synthesizing subject is relaxed, however, the possibility arises of a more ontologically penetrating investigation into the being of number in itself. Such an investigation, though it does not and cannot simply take numbers as "timeless" objects, constituted in advance and in themselves, attempts to illuminate the actual formal structure that, as the genetic structure of number as such, mutually conditions both counting and the counted, both the being and the thinking of countable time as such. This structure of genesis is itself marked, as I shall argue in the following chapters, in the underlying metalogical dynamics of the constitutive ideas of the finite and the infinite, the one and the many. The problematic structures of combination and dissolution, or of identification and differentiation, that unfold this dynamics can no longer be reduced to distinctions such as those of activity and passivity, or of possibility and actuality, or of the intratemporal and the a priori as such. Rather, as I shall argue, they mark the original logical structure that was once grasped as the pure problem of the being of becoming, as it is grasped in the thought to which number and order are themselves accessible as determining forms.

The History of Being and the Undecidability of Sense

(Chapter 7 of Draft MS: *The Logic of Being: Heidegger, Truth, and Time*)

Heidegger's project during and after the "turn" or *Kehre* of the mid-1930s is characterized by the transition from the "guiding" question of the being of beings to the "grounding" question of the truth of Being itself. At the same time, Heidegger undertakes an intensified inquiry into the structure, origin, and being of language. Both developments play important roles in the later Heidegger's analysis of the "history of being": the historical determination of the different epochal interpretations of the being of beings and of the epoch of metaphysics itself. In this chapter, developing what Reiner Schürmann has called "hegemonic phantasms," I consider the constitution of the sense of beings in particular being-historical epochs. I argue that we must understand this determination as having an underlying logical structure of *undecidability*. In particular, the fixation of the sense of beings in a particular historical epoch involves constituting reference to an organizing structure that is itself undecidable in terms of the ontological difference between beings and being. This implies that sense cannot completely be stabilized by any epochal interpretation, and provides the conditions under which these interpretations can radically transform themselves. As I argue, this undecidability is structurally analogous or homologous to the undecidability that Derrida has located at the necessary boundaries of determined textual regimes. Furthermore, it bears important structural similarities to the necessary undecidability of formal systems and procedures demonstrated by Gödel and Turing.

In "On the Very Idea of a Conceptual Scheme", Donald Davidson argues on the basis of linguistic considerations against relativism with respect to what have been called "conceptual schemes." Because of the holistic character of language and the necessity of employing "principles of charity" in any linguistic interpretation, it is not coherent to see different historical languages as embodying distinct "conceptual schemes" or total ways of organizing contents or "the world." The argument can seem to threaten pictures of the history of science, such as Thomas Kuhn's, according to which this history has been shaped or determined by a series of particular configurations of intelligibility or understanding of things. It can seem that such pictures demand that successive regimes of intelligibility, or partisans of successive paradigms, are mutually *incommensurable* in a sense that is incompatible with Davidson's anti-relativist argument. I shall argue that Heidegger's conception of the epochs of the history of being, as determined by an original differentiation of being with itself, provides grounds for resolving this apparent tension. This points, in turn, to the irreducibly *temporal* dynamics of undecidable sense that characterizes historical languages as such. As I shall argue, these dynamics involve a phenomenon of "strong" incommensurability which is an inherent characteristic feature of any historical language that structurally introduces principles or paradigms that govern the total intelligibility of entities as a whole. This "strong" incommensurability is not the incommensurability of "no common measure" between two separately constituted languages, cultures, practices, or schemes. Rather, it stems from the ultimate failure of each language consistently and decidably to measure itself. This points to a temporal determination of the changing interpretations of beings that is not in competition with Davidson's anti-relativist conclusions, and introduces considerations bearing against humanist, anthropological and

culturalist conceptions of the foundations of sense. Additionally, it provides new terms and concepts for a formally motivated critique of the technological present.

I

In the *Beiträge zur Philosophie: vom Ereignis*, Martin Heidegger specifies the transition from the previous "guiding question" [Leitfrage] of philosophy, that of the nature of beings, to the "grounding" question [Grundfrage] of the "truth of beyng":

> Die Seinsfrage ist die Frage nach der Wahrheit des Seyns.[1] Geschichtlich vollzogen und begriffen wird sie gegenüber der bisherigen Frage der Philosophie nach dem Seienden (der Leitfrage) zur *Grundfrage*.[2]

According to Heidegger, philosophy previously has interpreted beings in terms of a general essence or characteristic type of entity, thus characterizing the underlying nature of beings by reference to some kind of "highest" entity. Being, in this sense, has hitherto been interpreted as "beingness" [Seiendheit] – the most general essence or characteristic common to beings as such and as a whole.[3] The various historical periods or epochs have themselves conceived this general character in terms of one or another specific entity. By contrast, the question of the truth of beyng asks historically about the conditions for the possibility of *this* interpretation as it unfolds in each of the determinate conceptions of the nature of beings that comprise the history of metaphysical thought.[4] This is a history of the progressive "abandonment" [verlassenheit] or "forgotteness" [vergessenheit] of being wherein being is understood, more and more, in terms of what is most general and common to entities.[5] With the transition to the historical "grounding question," however, it is no longer possible to understand being overall in terms of, or by reference to, beings. There is no longer any possibility for thought to decide on the being of what is, except from out of the truth of Beyng. Thus, "Dieses [Seyn] kann daher nicht mehr vom Seienden her gedacht, es muβ aus ihm selbst erdacht warden."[6] What is here thought is how beyng "essentially occurs" [wie das Seyn west] - both its character in and of itself, and how it conditions the specific epochs of history in which beings as a whole are successively revealed in the light of some determinate standard, measure, or conception.

The sequence of historical epochs that characterizes the history of the interpretation of being hitherto is specified, with minor variations, in the *Beiträge* and several other texts. In the 1943 lecture "Nietzsche's Word: God is Dead," the ontic principles that have governed collective understanding and action through the history of metaphysics as the history of the basic constitution of beings as a whole [das

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[1] In the *Beiträge*, Heidegger writes "Seyn" to designate being as it is thought outside its metaphysical determination as beingness.
[2] *Beiträge* (GA 65), s. 6.
[3] *Beiträge* (GA 65), s. 75.
[4] *Beiträge* (GA 65), s. 75-77, s. 116-117.
[5] *Beiträge* (GA 65), s. 116.
[6] *Beiträge* (GA 65), s. 7.

Grundgefüge des Seienden im Ganzen] are given as "die übersinnliche Welt, die Ideen, Gott, das Sittengesetz, die Vernunftautorität, der Fortschritt, das Glück der Meisten, die Kultur, die Zivilisation…".[7] In the 1957 lecture "The Onto-Theo-Logical Constitution of Metaphysics," Heidegger specifies the "historical stampings" [geschicklichen Prägungen] of Being, somewhat differently, as "*phusis, logos, hen, idea, energeia*, Substanzialität, Objektivität, Subjektivität, Wille, Wille zur Macht, Wille zum Willen." [8] Here, the historical succession begins with the Greek conceptions of the character of the world and thought and proceeds through Descartes' interpretation of thinking and being in terms of subject and object, eventually culminating in the configuration of contemporary technology, which Heidegger identifies as prepared by Nietzsche's metaphysics of will. The Nietzschean principle of the will to power is here ultimately understood as a redoubled "will to will" in which entities are constantly handled, circulated and calculated without any overarching purpose or goal except instrumentality itself. As Iain Thomson has argued in connection with Heidegger's thesis in "The Onto-Theological Constitution of Metaphysics", the constitution of the metaphysical thought of being in each epoch must in fact be understood as double, both "ontological" and "theological."[9] It is, in particular, a construction both "from below" in terms of the most basic underlying character of beings as such, and "from above" in terms of an ultimate referent, a superior being that encompasses and governs beings as a whole.[10] The determination of beings in terms of beingness thus always involves such a twofold grounding, both in terms of the ultimate character of beings and in terms of the privileged being that is elevated above all others as a supreme and organizing principle of "cause and ground."[11]

As Heidegger suggests in the *Beiträge*, each configuration can also be thought as a particular specification of the relationship between thought and being that Parmenides first specified as a unity:

> Thinking and being are the same (or: For the same thing is there to be thought of and to be).[12]

It is in accordance with this guiding conception that Parmenides also specifies the necessity to "say and think that being is".[13] The statement exhibits not only a basic determination of thinking (*noein*) but also a certain priority of the *logos*, which (understood both as "logic" and as language) will act as an organizing structure for all determinate configurations of the being of beings subsequently.[14] In the

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[7] *Holzwege* (GA 5), s. 204/221; also quoted in Schürmann (1987), p. 230.

[8] Stambaugh, *Identity and Difference,* p. 134.

[9] Thomson (2005), pp. 14-16.

[10] Thomson (2005, p. 16) gives a paired list of some 17 ontological and theological determinants of entities "as such" and "as a whole", including as key moments Plato's determination of the idea as universal and as paradigm, the Cartesian determination of subjectivity as the ultimate determination of knowledge and the subject as the principle, and, finally, the culminating configuration of "will to power" and "eternal return of the same" that is exemplified in Nietzsche's metaphysics and characterizes the contemporary configuration of technology and calculative trafficking with entities.

[11] Thomson (2005), p. 15.

[12] Parmenides Fr. 3 (Kirk, Raven, and Schofield, p. 246): *to gar auto noein estin te kai einai*. The provenance and correct translation of the fragment are controversial.

[13] Fr. 6 (KRS, p. 247): *chre to legein te noein t' eon emmenai*. Cf. Heidegger, *Was Heisst Denken*?, Part II, lectures 6-11.

[14] Cf. *Beiträge*, s. 457: "Nun wird durch eine bestimmte Auslegung des Seins (als *idea*) das *noein* des Parmenides zum *noein* des *dialegesthai* bei Plato. Der *logos* des Heraklit wird zum *logos* als Aussage, wird Leitfaden der

Beiträge, Heidegger suggests that the whole history of metaphysics can be understood as standing under the "mastery" [*Herrschaft*] of a Platonism that determines a certain "manner of dealing with the guiding question" [*Art der Leitfragenbehandlung*], a manner that "can be indicated by the title: being and thinking" [kann angezeigt warden durch den Titel: *Sein und Denken*].[15] In particular, within the history of the development of this formula in Western thought, "being" refers to beingness, or to what is thought as the most general character of beings, and "thinking" is meant in the sense of "representing something in general" [des Vor-stellens von etwas im Allgemeinen].[16] Heidegger suggests that the succession of configurations determined by this pairing of a general conception of being as beingness and thought as representation culminates in a contemporary configuration that sets "machination" [Machenschaft] – a universal calculability and technological handling of beings – against "lived experience" [Erlebnis], or the standard of neutral experienceability by anyone in general. According to Heidegger, the "hidden" unity of these two determinations – of beings as calculable and capable of technical manipulation and of lived-experience as the ultimate standard for their reality – characterizes "more originally" the metaphysical unity of thinking and being itself:

> Machenschaft und Erlebnis ist formelhaft die ursprünglichere Fassung der Formel für die Leitfrage des abendländischen Denkens: Seiendheit (Sein) und Denken (als vor-stellendes Be-greifen).[17]

In particular, Heidegger suggests, if machination and lived experience are grasped together in their belonging to each other, "dann ist zugleich der Grundzug der Geschichte des ersten Anfangs (die Geschichte der abendländischen Metaphysik) bereits aus dem Wisssen des anderen Anfangs her begriffen."[18] In this way, the consideration of the determination of the contemporary configuration of the technical understanding and manipulation of beings – what is here understood as machination and elsewhere discussed as Gestell -- can itself provide a kind of insight or hint into the character of beyng in itself, a "first hint" to the event of being, *Ereignis*.[19]

Along with the first explicit consideration of the epochal history of being, Heidegger's turn toward the "grounding question" of beyng itself in the 1930s is also marked by a renewed attention to the ontological and historical character of *language*. While on the one hand Heidegger now understands the epochal configurations of metaphysics as intimately related to the "historical languages" that successively articulate them, on the other he now poses the question of the "being of language" itself as one closely related to the radicalized "grounding" question of the truth of beyng itself.[20] During this period, Heidegger considers the investigations of Herder into the origins and expressive structure of

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"Kategorien" (Plato: "Sophistes"). Die Verkoppelung beider zur *ratio* und d.h. die entsprechende Fassung von *nous* und *logos* bereitet sich bei Aristoteles vor."

[15] Beiträge, s. 196.
[16] Beiträge, s. 196.
[17] Beiträge, s. 128.
[18] Beiträge, s. 128.
[19] "Die Machenschaft als Wesung der Seiendheit gibt einen ersten Wink in die Wahrheit des Seyns selbst." (Beiträge, s. 127).
[20] Cf. Beiträge, sections 36-38 and 281.

languages. [21] These considerations can be related to a more general mystery or paradox of the origin of language in its referential, descriptive, or nominative relation to the world. In particular, *prima facie* there is a paradox that arises whenever language is thought to be originally connected to the world through some initial act of institution or primary naming: the paradox is that, for the requisite connections between words and things to be set up, it must apparently be presupposed that things are already understood in determinate ways. But this understanding plausibly only comes *through* language, and so *cannot* be thus presupposed. The institution of meaning thus appears to presuppose that meaning already exists, and so the possible origin of language itself remains obscure on any such picture.[22]

For Heidegger, this paradoxical situation that arises in considering the origin of language is actually positively indicative of an ontologically characteristic feature of language in relation to its being: its tendency to withdraw or refuse itself to positive overall description. In 1957, in the course of reading of a poem of Stefan George, Heidegger specifies this *positive* characteristic of the "being of language" that appears in its withdrawal:

> Manches spricht daflir, daB das Wesen der Sprache es gerade verweigert, zur Sprache zu kommen, namlich zu der Sprache, in der wir über die Sprache Aussagen machen. Wenn die Sprache überall ihr Wesen in diesem Sinne verweigert, dann gehört diese Verweigerung zum Wesen der Sprache. Somit halt die Sprache nicht nur dot an sich, wo wir sie gewohnterweise sprechen, sondem dieses ihr An-sich-halten wird von daher bestimmt, daB die Sprache mit ihrer Herkunft an sich halt und so ihr Wesen dem uns gelaufigen Vorstellen versagt. Für diesen Fall dürfen wir aber dann auch nicht mehr sagen, das Wesen der Sprache sei die Sprache des Wesens, es sei denn, das Wort »Sprache« besage in der zweiten Wendung etwas anderes und sagar solches, worin die Verweigerung des Sprachwesens - spricht.[23]

The paradox of the institution of meaning is thus, according to Heidegger, actually positively indicative of a claim in which something "speaks". This "something" is nothing other than the "withholding" [Verweigerung] of the being of language, the resistance of language to any positive description of its own basic structure, and in particular of the ultimate basis of the relationship it sets up between words and things.

Seen in the context of the history of being, what is indicated in the paradox of origin and in the withdrawal and refusal of language to its own positive description can also be grasped as pointing toward that deeper character of language that is thought, through the Western tradition, as the character of the "logos". This, in particular, in connection with the relation that is thought since early in western history as that of "language to an entity as such":

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[21] *Vom Wesen der Sprache* (GA 85); cf. also *Logik als die Frage nach dem Wesen der Sprache* (GA 38), esp. sections 6 and 29, and *Sein und Wahrheit* (GA 36/37)
[22] Cf. Livingston (2012), chapter 1.
[23] *Unterwegs zur Sprache* (GA 12), s. 186/175.

> Sobald wir bedenken, hier werde das Verhältnis von Ding und Wort genannt, somit das Verhältnis der Sprache zu einem jeweils Seienden als solchem, haben wir das Dichterische in das Nachbarliche eines Denkens heriiber gerufen. Dieses jedoch, das Denken, vemimmt dabei nichts Fremdes. Denn mit das Früheste, was durch das abendlandische Denken ins Wort gelangt, ist das Verhaltnis von Ding und Wort, und zwar in der Gestalt des Verhaltnisses von Sein und Sagen. Dieses Verhältnis uberfällt das Denken so bestürzend, daB es sich in einem einzigen Wort ansagt. Es lautet: *logos*. Dieses Wort spricht in einem zumal als der Name fur das Sein und fur das Sagen.[24]

Throughout the succession of historical determinations of the beingness of beings, *logos* names simultaneously Being and Saying, and thus points to the assumed basis or actual ground for the possible linguistic expressibility of things as such. Within the ambit of this overarching determination, the various specific ontological and theological determinants of beingness capture beings insofar as they are thinkable and expressible at all. Throughout the history of metaphysics, this determination occurs through the particular historical languages that privilege such specific determinants of the nature of beings as such and as a whole.

How should we understand the basis of this determination, whereby historical languages themselves become structured by the privileged standards or measures of beingness that in turn determine how beings "as a whole and as such" appear and can appear? In *Heidegger on Being and Acting* and *Broken Hegemonies*, Reiner Schürmann interprets Heidegger as pointing to a series of "principial economies" that have successively unfolded over the historical time. Each is stabilized by a particular "epochal principle" which functions to stabilize and orient practice by elevating a *particular* entity to the rank of an absolute measure or standard for the interpretation of *all* beings.[25] According to Schürmann, the role of the principles in ordering beings within a particular epoch must be understood historically in both a proactive and a retroactive sense. That is, their authority must be understood both from the perspective of their institution and that of their destitution, both as origin and in the "reversal" in which, in falling into ruin, they first become visible and accessible as such to retrospective critical consideration.[26] It is in these historical reversals, in particular, according to Schürmann, that the history of being itself becomes visible as a "phenomenology of the reversals of history" marking the conditions for the intelligibility and sense of beings as a whole as they appear in each epoch of metaphysics. This history is, at the same time, more broadly grounded by the "difference between presence and presencing" that underlies the "phenomenological" "genealogy of the formations of economies of presence."[27] In *Broken Hegemonies*, along similar lines, Schürmann understands the history of metaphysical norms and principles as structured by a series of "hegemonic fantasms" that successively "justify … all that may become a phenomenon during the linguistic epoch that bears its hallmark" (p. 7). These successive principles are thus "hegemonic" in their scope with respect to the determination of beings as a whole, but they are not themselves ultimately justified in any final or definitive way. Their

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[24] *Unterwegs zur Sprache* (GA 12), s. 185/174.
[25] Schürmann (1987), p. 17.
[26] Schürmann (1987), p. 30.
[27] Schürmann (1987), p. 31.

institution results from the raising of some particular being to the status of an "ultimate" referent, whereby they constitute a regulated total set of relationships among beings, allowing "all that we are able to say, do, and know" to be arranged under them, while themselves not appearing among the beings thus arranged and regulated (p. 8).

This structure of the stabilization of organizing referents replicates, at each moment of transition from one epoch to the next, the original paradox of the institution of language itself. In particular, since each epochal economy achieves, by means of the elevation of an epochal standard, the ability to refer to and express beings as a whole, each one instantiates the general structural paradox of the authority of a particular element over the totality of which it is a part. If each hegemonic phantasm "measures measures", setting up in its institution a total system of legitimacy in which beings become intelligible as such and regulating what can appear at all, then each also constitutively implies the paradox that the measure itself cannot be measured in its own terms.[28] The ultimate standard both is and is not an entity; it is the source of all measurement and regulation that, for this very reason, cannot itself be measured.[29] This is the condition under which it can be simultaneously elevated from within, and held above, the realm of beings as such. This paradox also provides the structural condition under which, according to Schürmann, a prinicipial economy, once instituted in terms of such an ultimate referent, must ultimately wither. In particular, such a decline occurs, as it must, "when the fantasm promoted to the normative rank for an epoch suddenly appears as one commonplace representation among others."[30] Here, the "singularization" involved in the institution of any economy of presence, whereby one being is separated from all others to serve as a standard for their regulation, itself succumbs to an underlying "differend" (Wiederstreit) that both supports and undermines the separation, pointing to their deeper underlying condition in the differentiation between presencing and presence itself.[31]

According to Schürmann, Heidegger with his description of the history of the interpretation of being as the history of the institution and diremption of epochs, will thus have pointed out an ultimate origin of all phenomenalization in a differentiating difference that precedes and conditions all instituted economies of principles. This suggests as well the possibility of a condition beyond the kind of presencing that has been determined by principles throughout the history of metaphysics. Such a configuration would be literally an-archic; it would be, as Schürmann argues, one in which the force of the *arche* to organize and bind would no longer be in effect. Schürman suggests that we can learn from Heidegger's discussion of the structure of *Ereignis* as appropriation and expropriation something of this more basic condition of heteronomy:

> At least one *law of the other* can, in any event, be learned from Heidegger, one that is severed from the whole problem of determinate negation – a revival of a heteronomy which, however,

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[28] Schürmann (2003), pp. 96-97.
[29] Cf. Ludwig Wittgenstein, *Philosophical Investigations*, section 50: "Aber man mochte sagen: Man kann dem Element nicht Sein beilegen, denn *wäre* es nicht, so konnte man es auch nicht einmal nennen und also gar nichts von ihm aussagen. – Betrachten wir doch einen analogen Fall! Man kann von *einem* Ding nicht aussagen, es sei 1 m lang, noch, es sei nicht 1 m lang, und das ist das Urmeter in Paris." (p. 29)
[30] Schürmann (2003), p. 614.
[31] Schürmann (2003), pp. 34-36; p. 527.

is not posited and which therefore is incapable of opposing autonomy. Thus, the law of the other is the link by which we are ever bound to being *qua* event. But this event has literally nothing in common. ... The event, Heidegger will be shown to say, works on phenomena in a twofold manner. It appropriates them in a world and expropriates them by means of their mortifying singularization that is always immanent. All references posited as uniformly obligatory are fractured upon this conflictual (and therefore not simple) *singularum tantum*. (p. 47).

According to Schürmann, it is thus the original character of *Ereignis* itself which appears as the paradox of institution that is repeated at each moment of the institution of a new epoch and the destitution of an old one. The paradoxical situation that ultimately brings about the destitution of each instituted epoch itself is an expression of the more general paradox of the original institution of language, which is obscured or stabilized through the assumption of the stable correspondence of word and thing in the *logos*, but is not thereby removed. Structurally, this paradox itself points to the underlying character of Being itself, beyond the epochal determinations of it, in its "granting" or determination of each of the particular epochs and in the history of the metaphysical determination of being as presence in its totality.

But if epochal measures, in their determinative reference to beings as a whole, cannot measure themselves, then this structure of paradox points to a basic type of *strong incommensurability* that characterizes each historical language in relation to itself. This "strong" incommensurability is the direct result of the way in which each epoch determines the structure of its possible reference and expression by elevating a particular referent to the status of a regulative standard for beings as a whole. But no such measure can ultimately measure itself; each instituted economy is thus structurally characterized by a basic incommensurability or failure of measure, whereby the language itself fails to ground and measure the standards by which it measures all beings. This incommensurability is not the familiar incommensurability of "no common measure" between two separately constituted languages, but rather a more basic structural failure of measure of each total language with respect to itself under the condition that it achieves and attempts to stabilize reference to the totality of beings by elevating a particular being or type of beings.[32] As I shall argue, it is because they are strongly incommensurable in this sense that each language has, with respect to its ultimate referents, the *temporal* character of institution and destitution. It is, in particular, this strong incommensurability that makes it possible and even necessary that an epochal economy, once instituted, eventually withers away and dies. For if measures are normally held in force by inertia, authority or habit, nevertheless they *can*, under certain circumstances, be questioned, and the questioning may lead to the condition under which the hegemonic referent which has functioned as ultimate appears once more as a simple object of representation among others.

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[32] In Livingston (2012), pp. 285-87, I contrasted this "strong" incommensurability, or incommensurability of the immeasurable, with the claim of "weak" incommensurability that characterizes the spontaneous conviction of contemporary belief in its emphasis on cultural difference and the pluralism of communities and cultural practices.

If the principles that determine the character of being for an epoch thus yield to the paradox of strong incommensurability, then the guidance they provide for decisions on the sense of things must itself yield to a deeper structural undecidability. This is particularly clear when the sense of words and linguistic expressions is seen, as it is for Heidegger, as inevitably pre-determined by a previous understanding of the being of beings that first makes them available as intelligible objects of reference and description. For Heidegger in *Being and Time*, *sense* is understood as the specific kind of temporal *projection* upon possibilities by means of which Da-sein renders entities intelligible. The concept of sense fixes the formal framework [das formale Gerüst], in particular, "worin sich Verständlichkeit von etwas hält" as the "upon-which" [Woraufhin] of the "durch Vorhabe, Vorsicht und Vorgriff strukturierte Woraufhin des Entwurfs…"[33] It is thus grounded in the hermeneutic structure that makes possible all interpretation, itself defined by these "fore-structures", as well as constitutively related to the structure of truth as unconcealment or disclosure.[34] This projection always has a totalizing character in that it first "opens" the domain of entities as a whole by providing an overarching conceptual fixation of their overall way of being; both in particular domains and with respect to beings as a whole, sense is thus determined by the interpretive projection that first renders the relevant beings intelligible in their being. In the *Beiträge* and Heidegger's later thought generally, this conception of sense as the projective opening of a domain of entities is retained, while the ground on which it takes place is radicalized.[35] In particular, the basis of sense is here no longer seen as a specific activity of Dasein but rather as involving the prior phenomenon of what Heidegger calls the *clearing*: the underlying structure of concealment and unconcealment within which Da-sein itself is, alone, in fact possible and achievable. But even after this radicalization of the specific structure of truth, sense remains connected to it at a basic level, as that which is opened in the temporal projection by means of which a domain of entities, including entities as a whole, are first opened for intelligibility and thus for the subsequent possibility of explicit linguistic discussion and referent.

In the history of being project, the projection of sense thus has a basic relationship to the constitution of the historical languages of metaphysics. This temporal projection, in making entities accessible, prepares the possibility of determinate reference that subsequently characterizes the structure of a language overall. It thereby yields the determinate standards and principles of logic, grammar, and practice by which its speakers measure beings in their being. Once instituted, these principles and standards provide a basis for linguistic decision on sense within the constituted domain. But they cannot ultimately decide on themselves; in particular, they cannot provide a univocal basis for deciding on their *own* scope of application. There is thus a structurally necessary undecidability of linguistic sense that can be shown to be a necessary feature of each historical language and can even be positively demonstrated in the course of a formal analysis of the conditions of semantical structure for such languages.

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[33] S&Z, s. 151.

[34] For the "fore-"structures, see S&Z, p. 150.

[35] Cf. *Beiträge*, s. 10: "Die Frage nach dem "Sinn", d. h. nach der Erläuterung in "Sein und Zeit" die Frage nach der Gründung des Entwurfsbereichs, kurz nach der *Wahrheit des Seyns* ist und bleibt *meine* Frage und ist meine *einzige*, denn sie gilt ja dem *Einzigsten*."

This structural undecidability arises within instituted languages, as I shall argue, at the inherent point at which these languages reflexively figure or envision their own constitutive relation to being in the sense of truth. For whereas each such language includes within itself, as an inherent structural moment, the capacity to describe and consider the sense and meaning of its own sentences in general, each one also involves a going conception of these sentences as capable of truth or falsehood which relates their behavior, at least implicitly and in general, to being as such. On the internal conception each historical language has of itself, sense is thus constitutively linked to truth; but the fixation of sense by determinate standards and rules allows what can only be, from the perspective of this constitutive link, limited and relative procedures of decision. As I shall argue on semantic and formal grounds, in relation to new phenomena and unanticipated cases, it is thus, on one hand, never possible fully to specify unitary procedures which will always completely and exceptionlessly determine the sense of linguistic terms. But this undecidability is, on the other hand, not merely limitative, since it also points to an original ontological structure linking historically instituted languages to the structure of truth, and thereby to being itself. In particular, the gap between the reflexive self-conception of a language that opens it to truth and the determinate procedures that decide sense within it means that each such language, even in totalizing beings according to determinate standards, is necessarily, and structurally, open to the possibility of its own transformation. This ultimate undecidability of historically instituted languages, based in the paradoxical behavior with respect to self-reference and totality thus points, as I shall argue, to the underlying *temporal* structure of the historical as such.

II

In "On the Very Idea of a Conceptual Scheme," Donald Davidson gives a well-known and far-ranging argument against the "heady and exotic" doctrine of conceptual relativism.[36] In particular, Davidson argues that it is incoherent to suppose that different systems of categories, conceptual perspectives or conceptual organizations of experience are embodied in "conceptual schemes" that are both identical with or contained within particular languages and significantly distinct from one another. The basis of Davidson's argument is his inquiry into the structure linguistic interpretation; this inquiry also forms the methodological core of his influential program for the provision of theories of meaning for natural languages. On Davidson's program, a theory of meaning for a language is a recursive structure which allows the systemtic derivation, from a finite number of semantic primitives, of the truth-conditions of the totality of the language's sentences.[37] These sentences have the form suggested by Tarski in his own theory of the structure of truth-definitions for particular languages, systematically coordinating sentences with their truth-conditions; for each sentence of the interpreted language, the Davidsonian theory of meaning thus yields a sentence in the language of the interpreter stating the conditions under which it is true. Davidson further requires that the theory of meaning must itself be worked out under the condition of "radical interpretation." Here, the interpreter has no initial knowledge of the language

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[36] Davidson (1973), p. 183.
[37] See Davidson (1965), Davidson (1967), Davidson (1970), and Davidson (1973).

to be interpreted and must reconstruct its meaning on the basis only of the intersubjectively available evidence, including speakers' assent or dissent to particular sentences under particular conditions.

Under this constraint, as Davidson argues "Belief and the Basis of Meaning", it will be impossible actually to interpret the language of a speaker unless a significant amount of agreement between the interpreter and the interpreted is actually assumed at the outset. In particular, since it is not possible to interpret another speaker's beliefs by means of her utterances unless it can be largely assumed that they express truths, there is always a necessary trade-off of belief and meaning in interpretation. It is thus obligatory to apply what have been called "principles of charity" in interpretation: it must be assumed that the beliefs of the speakers under interpretation are largely identical with one's own in order for the interpretation even to be possible in general.[38] For this reason, the very possibility of interpretation involves a "vast amount of agreement on plain matters" and the possibility of disagreement is generally only intelligible against an assumed background of "widespread" agreement.[39] Because of the way charity thus figures in the necessary conditions of any possible interpretation, Davidson argues in "On the Very Idea," it is in fact impossible to judge the concepts or beliefs of the speakers of another language to be "radically" different from our own, given that interpretation is possible at all.[40]

As Davidson notes, a defender of the idea of multiple conceptual schemes might take refuge in the idea of mutually untranslatable languages, so that two languages embodying wholly distinct conceptual schemes might be thought of as simply incapable of being translated into one another. But here Davidson challenges the basis of the underlying metaphor that makes sense of the idea that a pattern of behavior embodies a linguistic "conceptual scheme" at all. On the most common accounts, such a scheme is successful insofar as it succeeds in "organizing" or "fitting" the world, objects, or the "given" of experience.[41] These metaphors of organization and fit themselves have various versions, but Davidson argues that none of them are ultimately coherent. For, to begin with, the idea of a relationship of "organizing" between language and reality (or experience) presupposes the prior existence and determinate ontology of the entities that are supposed to be organized. Once this is assumed, however, there is no longer any room for a radical difference in the ontologies of different conceptual schemes. Variant conceptual schemes will then just be different ways of expressing the same ontology rather than the embodiment of radically different ones.[42] The idea of an accurate scheme or theory as correct in that it accurately or appropriately "fits" the totality of experience or the world is similarly idle, Davidson suggests, in that we understand the appropriateness of the "fit" only as a matter of the scheme or theory being largely *true*.[43] But we understand truth only through the kind of translation or interpretation of sentences that is modeled explicitly by the corpus of Tarskian T-sentences. Once a Tarskian truth-theory for a language is given, the metaphor of "fit" adds nothing

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[38] Davidson (1967), p. 27; Davidson (1974), p. 153.
[39] Davidson (1974a), p. 153.
[40] Davidson (1974b), p. 197.
[41] Davidson (1974b), p. 191.
[42] Davidson (1974b), p. 192.
[43] Davidson (1974b), pp. 193-194.

substantive. In particular, it again cannot serve as a basis for comparing what are thought of as distinct "conceptual schemes" set over against the world or the totality of experience.

Davidson suggests that the idea of a dualism of "scheme and content" embodied in the metaphors of fitting or organizing is a dogma, a "third" dogma of empiricism to be added to what Quine treated as the dogmas of reductionism and the analytic/synthetic distinction.[44] According to Davidson, the dualism of scheme and content underlies the idea that two languages or "theories" may be *incommensurable* in the sense that there is no neutral or empirical way to settle substantive differences or disagreements between them. This appears, in particular, in the example Davidson gives, to be the position of Kuhn in his interpretation of the history of science as structured by a series of successive theories or "paradigms" which replace one another discontinuously in the events that Kuhn calls "scientific revolutions." Specifically, Kuhn holds that:

> In the transition from one theory to the next words change their meanings or conditions of applicability in subtle ways. Though most of the same signs are used before and after a revolution – e.g. force, mass, element, compound, cell – the way in which some of them attach to nature has somehow changed. Successive theories are thus, we say, incommensurable.[45]

Davidson suggests that Kuhn means "incommensurable, " here, in the sense of "not mutually translatable": the supposed difference between two theories in their "way" of "attaching to nature" is thus taken to imply that the similar-sounding locutions used by the two theories are not in fact capable of being translated into one another without loss. At any rate, it is clear that, as Davidson now suggests, the very possibility of making sense of alternative or older theories as determinate theories at all undermines this claim of untranslatability. The proponents of older theories or paradigms might be seen as ignorant of phenomena of which we now know, or confused in grouping together some entities now distinguished or drawing distinctions where no real ones exist. But if we can understand their theory at all there is no general ground for the claim of untranslatability, and Kuhn's metaphorical picture of different theories as embodying distinct "ways of attaching to nature," which again turns on the dualism of scheme and content, is itself incoherent.

At first glance, it can seem that Davidson's argument in "On the Very Idea of a Conceptual Scheme" poses a direct challenge to Heidegger's conception of the history of being. Like Kuhn's successive "paradigms," Heidegger's successive "epochs" explicitly involve basically different global ways of understanding the nature of things and the larger contours of reality. Indeed, for Heidegger these differences are both farther-ranging and deeper rooted than they are for Kuhn, since they do not only characterize particular scientific theories or scientific practices, narrowly defined, but extend to the whole unity of possible thought and practice at any given historical time. Moreover, as we have seen, the distinct orientations or positions that are involved in each of the historical epochs as described by Heidegger are indeed conceived as both individually *total* in their determinative relationship to beings as a whole and deeply different from one another. In particular, on Heidegger's account, the successive epochs or "principial economies," each yield a standard or measure that, for a time, determines and

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[44] Davidson (1974b), p. 189.
[45] Davidson (1974b), p. 190, quoting Kuhn (1970), pp. 266-267.

regulates the appearance and relations of all beings. Like Kuhn's "paradigms," the epochal principles serve as examples and as measures for thought as well as practice; by figuring and determining the basic conditions under which entities are intelligible, they also determine in a basic way what can be considered to exist at all. Since each of the different epochal principles "measures" the being of beings by onto-theologically grounding beings as a whole, and the measures are distinct, there is also a clear sense in which the economies of presence involved in distinct epochs are themselves "incommensurable", having no common, higher ontic "standard" that itself could be used to measure their differences.

For all of these reasons, Davidson's argument against the kind of conceptual and ontological relativity embodied in the widespread idea of distinct "conceptual schemes" may seem to pose a direct challenge to the intelligibility of Heidegger's account of the history of being, as it does, explicitly, as well, to Kuhn's account of the history of science. The impression of conflict can begin to lessen in both cases, however, as soon as we consider that both Heidegger and Kuhn have in view a primarily *temporal* problematic of difference and change. In particular, neither the Heideggerian history of being nor Kuhn's picture of scientific revolutions centrally involves the question of the comparability of distinct schemes, patterns or languages set against one another *synchronously*. Rather, both involve most centrally an idea of discontinuous, diachronic change, whereby one large-scale pattern of organization comes to replace another, preserving the significance of many terms while also replacing some and transforming others.

On Heidegger's account, in particular, this kind of change may take place within languages but is often more characteristically indicated by shifts between them; thus, for example, the early but distinct conceptions of *idea* and *hypokeimenon* correspond to the "Greek" configurations represented by Plato and Aristotle, each of which is obviously distinct from, but also continuous with, the "Latin" conception of a creator God as the highest being and the figure of transcendence. In an obvious sense, the organizing conception of a later epoch, or at least a sense of its "point" or "purpose," may not be directly accessible, at least not without significant indoctrination or education, to the partisans of an earlier one. In some cases, Heidegger suggests, the organizing referent of an age may even be largely invented or constructed by means of semantic shifts or new interpretations performed by philosophers, as (for example) when Plato creates a new sense of *idea* by shifting from the established sense of the "outward look" of a thing to a new sense involving the supersensible and unchanging, or when Descartes gives a fundamentally new significance to the *cogito* as thinking substance.[46]

Because of the way the principial economies thus succeed each other temporally within the unitary configuration of the metaphysics of presence, there is in fact no reason to suppose that this involves any actual *untranslatability* between them. The idea of incommensurability, in the sense of non-translatability, which Davidson attributes (whether correctly or incorrectly) to Kuhn, thus does not figure in the motivation or implications of Heidegger's picture. Nor is there, on Heidegger's picture, any dualism of scheme and content, either with respect to particular languages or to language in general. Rather, as we have seen, a language is integrated into the world as a single, holistic system of meaning, grounded and exhibited in the specific possibility of interpretation, that simultaneously gives meaning to

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[46] See, e.g., *Vom Wesen der Wahrheit. Zu Platons Höhlengleichnis und Theätet* (GA 34), esp. section 9 ff.

words *and* to the things they describe. This holistic picture of the integration of language and world, far from coming under the scope of Davidson's anti-relativist argument, is in fact familiar from Davidson's own picture of linguistic behavior as intrinsically integrated with practice and with worldly objects and phenomena. For this inherently world-involving structure as Heidegger describes it, "syntactic" components cannot simply be separated from "semantic" ones and the structure of a language as such, is as we have seen, constituted by means of the projective understanding that renders entities intelligible according to a particular interpretation of their being. Each of the successive understandings of the being of beings is different from the one that came before; but they are all nevertheless situated within a larger *unitary* configuration that itself clarifies the structure of their discontinuous temporal succession. This is the unitary configuration of the history of metaphysics, determined as the history of successive interpretations of being or beingness as presence, but ultimately (as we have seen) from the truth of beyng itself. Given this unitary configuration, the impression of relativism that at first may seem to be a consequence of Heidegger's picture of conceptual change can dissipate. Here, it is in fact decisive for Heidegger's own picture that every actually spoken "historical" language must be considered to co-imply, as such, the world as a totality of beings. For this reason, it must be intertranslatable (in a broad sense) with every other such language. At the same time there are, nevertheless, different ways of making and stabilizing this constitutive reference to the totality which can shift over time while translatability is maintained.

What, then, of the discontinuous succession between different epochs of presence? Here, it is again important to note that what is at is at issue In Heidegger's picture is not simply the meeting of languages or schemes considered different from each other and juxtaposed, but the *internal* development of an essential *continuous* trajectory. The unfolding of this trajectory, as we have seen, involves radical and discontinuous shifts in principial referents; but it also involves a basically continuous with the interpretation of entities in terms of beingness and presence. In the course of this development, older epochal principles and the economies they organize are not simply rendered inaccessible or the conceptions they have organize incomprehensible from the perspective of newer ones. Rather, they become specifically visible, in their destitution, as the ontic referents they always in fact were, victims of the singularizing undertow that leads ultimately to the eventual unfolding of all ontologies of presence. At the moments of transition from one principial economy to the next, this makes for a specific dynamics of transformation which, as we have seen, becomes fully visible only retrospectively, from the position of the new understanding looking backward. But the structure of such transitions is itself, on Heidegger's account, recurrently determined by the underlying structure of Being in its granting and withholding of presence. This granting and withholding determines, in each case, the total measure of beings that a particular epochal principle allows and maintains. The specific dynamics of transition at these moments of crisis thus reflect the more general structure of the *strong incommensurability* that, as I have argued, characterizes every such totalizing system of reference and which implies that each such instituted system ultimately fails to measure itself.

By noting these structural features of stabilizing referents and the theoretical structures they produce, it is possible to see a formally grounded alternative to standard accounts of the dynamics of theory change. These accounts often refer it to political or sociological factors themselves conceived as simply

external to rational and empirical scientific inquiry. In *The Structure of Scientific Revolutions*, for example, Kuhn suggests that at a moment of crisis, the shift from one paradigm to the next is largely or fully determined by such factors as the surrounding political climate, the availability of a cohort of younger researchers not already convinced by the existing paradigm, or the overall organization of the "community life" of scientists. [47]   By contrast with this, the dynamics of large-scale change that we have considered in connection to Heidegger can be characterized both formally and "ontologically": since, as I have argued, it is structurally related to the very underlying structure of sense itself, the general dynamics involved are plausibly involved in any historically constituted linguistic situation, and not just those in which certain contingent sociological or political features are present. But the specification of the general dynamics of this structure as formal and ontological in this sense does not, at the same time, exclude its constitutive involvement with the actual phenomena or process discovered in the course of empirical inquiry; the picture is, rather, that such inquiry reflects, as an ongoing process, the complex conditions of truth as disclosure, up to and including the kind of transformative disclosure in which the overall character of entities changes in a basic sense. On the picture that Heidegger suggests, positive inquiry into any "domain" is impossible and basically unintelligible if this domain is not first opened to the possibility of inquiry by this manifold projection of sense. Nevertheless, this projection is not simply "prior" to empirical inquiry and discovery, but rather is an inherent structural moment of the larger holistic phenomenon of interpretive disclosure, of which ordinary empirical inquiry is *also* an integral part. In this way, as I have argued, it is thus actually possible to see revolutionary changes in paradigms and theories as determined *structurally* from the implicit dynamics of instituted sense, insofar as it is formally and ontologically related to truth.

In fact, far from being directly opposed to it, the suggestion of a temporal and paradoxical dynamics of sense insofar as it is related to truth can receive direct motivation from another structural part of Davidson's own Tarskian account of truth and meaning. As we have seen, Davidson follows Tarski in holding truth and meaning to be systematically interconnected in the structure of a language. In particular, for Davidson, under the condition of radical interpretation a theory that gives a Tarskian T-sentence for each sentence of the language will clarify the structure of meaning for the language as a whole. The application of such a structure to any natural language will also involve, however, that some of the sentences whose meaning is thus characterized themselves involve reference to language, and in particular to truth. And as is well known, the inclusion of the possibility of discussing truth within a language leads directly, when combined with the general apparatus of the T-sentences themselves, to structural paradoxes.

The most basic of these paradoxes is the famous paradox of the Liar, the sentence which says of itself that it is not true. As Tarski himself pointed out in his original presentation of a method for systematically defining truth for formal languages, paradoxes of the liar type arise inevitably for every language that both contains its own truth-predicate and has the capacity of supplying distinct names (by

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[47] See, e.g., Kuhn (1962), pp. 92-96.

means of quotation or some similar device) for each of its sentences.[48] Tarski's solution, in the context of his own demonstration of the method for defining truth-predicates for artificial, formal languages, was to preclude each such languages from containing its own truth-predicate; truth could be defined for a particular language L only by using a *stronger* metalanguage L', containing L or a systematic translation of it as a proper fragment, to express and frame the definition.[49] The solution works to ensure the definability of truth predicates without contradiction for particular formal languages whose structural and grammatical rules are themselves stipulated in advance and can be discussed in a stronger formal or natural language, but it is not clearly applicable to the case of natural languages such as English, wherein there is not, generally, a "stronger" metalanguage available. Tarski himself concluded that the behavior of truth with respect to natural languages such as English, characterized as they are by their "total" or "universal" expressive power, could not be clarified by means of his method; such languages are, he suggested, very plausibly inconsistent anyway.[50]

In this way, Tarski could avoid contradiction in the case of the definition of truth-predicates for well-defined artificial languages, provided there is always a metalanguage position from which to discuss them. The difficulty persists, and is even sharpened, however, in the context of a program such as Davidson's, which attempts not to define truth for artificial languages but to interpret the already-existing "natural" languages in terms of it.[51] The Tarskian truth-definition that is seen as embodying the total structure of meaning for a particular natural language can, it is true, be carried out in another natural language; for instance a theory of meaning for German might be stated in English. But since each of these languages, like all natural languages, contains its own truth-predicate, the question naturally arises of how the meaning of those sentences that involve the use of this predicate directly or indirectly is to be specified and understood. And here it is plausible that any systematic account of the meaning of these sentences will portray them as involving a constitutive structure of paradox with respect to the language as a whole. In particular, in those parts of the language in which it deploys the resources to consider its *own* overall structure and constitution of sense, the underlying structural paradox will mirror the original one by which the constitution of meaning both presupposes and figures itself.

In fact, it is possible to show that *any* language that includes its own truth-predicate and the general ability to make reference to its own sentences must be structurally undecidable in the technical sense that there is no possible *decision procedure* for determining the truth of arbitrary sentences from any finite number of axioms. Here, the argument is closely related to Tarski's own. The inclusion within any language of the possibility of referring to the truth of its own sentences in general introduces contradiction; it is thus not possible, on pain of inconsistency, for any such language to include a truth-predicate defined, as Tarski's are, syntactically on the basis of a finite set of axioms and capable of

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[48] See Tarski (1931), section 1.
[49] Tarski (1931), pp. 167-169.
[50] Tarski (1931), pp. 164-165.
[51] Following Davidson, I here use "natural language" to refer to those languages that Heidegger calls "historical languages".

univocally separating truths from falsehoods.[52] As has often been noted, Tarski's argument in "The Concept of Truth in Formalized Languages" is closely related to the incompleteness and undecidability results achieved by Gödel and Turing about axiomatic systems for mathematics.[53] These results show that any axiomatic arithmetic language of a certain degree of complexity and which is capable of self-reference must, if consistent, be undecidable in two senses. First, there will be sentences formulable in the language which cannot either be proven or refuted by means of the axioms themselves but may nevertheless be seen to be true from a meta-systematic perspective. Second, it will be impossible in general to specify a rigorous decision procedure that will always be capable of deciding, in a finite number of steps, whether an arbitrary well-formed sentence indeed follows from the axioms. Any criterion or procedural definition of provability that is specifiable using only the vocabulary of the system will thus fail to capture the actual extension of truth. Furthermore, the predicate of provability that *is* available within the system will both fail to capture all of the (arithmetic) truths and itself be undecidable by any effective procedure within the system itself, assuming the system is consistent to begin with.

On the usual model-theoretic interpretation of Tarski's construction of theories of truth for formal languages, such a theory is grounded by first specifying relations of "satisfaction" for primitive terms and predicates. Within the Tarskian construction, the satisfaction relations function as axioms for the recursive definition of the truth-predicate by specifying formally in detail what is intuitively the "reference" of simple nominative terms and the extensions of primitive predicates. It is crucial to the construction that there be only finitely many such axioms, considered as giving the extensional definitions of simple or "primitive" terms of the language's (finite) vocabulary; otherwise there will be no tractable explanation for the infinite capacity of the language to produce new sentences capable of truth or falsity. The axiomatic specification of these satisfaction relations might be thought to be analogous to the moment of the institution of a language in its specific relation to the world; through the specification, the language is specifically defined in its "semantic" bearing on reality. But the structural paradox introduced by the inclusion within a language of its own truth-predicate means that no language thus instituted can determine the extension of "truth" for itself univocally and without contradiction. If, in particular, sense is constitutively linked to truth in the way that Tarski's own structure of truth-definitions suggests, this implies that instituted or axiomatic sense will always be

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[52] Relatedly, Priest (2006), pp. 135-36 shows by applying an extended version of the Liar paradox that even a theory of meaning that treats the contradictory sentences introduced by the inclusion of the truth-predicate as meaningless, and thus as neither true nor false, attempting thereby to characterize the truth conditions of the remaining sentences recursively cannot succeed, for it cannot even be (so much as) recursively enumerable or axiomatizable. The argument is this: We suppose for reductio that there is a recursively enumerable theory that provides a (true) T-sentence for each sentence of the language that is meaningful, excluding those that are contradictory and thus treated as meaningless. Then, since it is possible effectively to tell of each T-sentence what sentence it is the T-sentence for, the set of meaningful sentences must be r.e. too. But then it is possible to generate a sentence that says of itself that it is either not true or not meaningful. If this sentence is true, it is not; therefore it is not true. Thus it is either not true or not meaningful; thus it is true after all. This is a contradiction, so it follows that there cannot be any such (recursively enumerable) theory. The argument demonstrates, as Priest says (p. 136) that even the device of rejecting as meaningless those instances of the T-schema that lead to contradiction cannot suffice to insulate the truth theory from the consequences of paradox.

[53] Gödel (1931) and Turing (1936).

constitutively undecidable, incapable of being univocally settled by the explicit or implicit criteria, procedures, or standards of the language itself. Such criteria, procedures and standards always appear, in the context of any particular language, as essentially incomplete with respect to a broader phenomenon of truth that provides their ultimate basis but cannot be fully captured by them, if they are consistent at all.

If we may generalize these results to the consideration of the structure of non-formal languages, it appears to follow that the sense of the terms and sentences of such a language, even if conceived as a direct outcome of the organizing principles and epistemic procedures constitutive of the language as such, must ultimately be undecidable in terms of these very principles and procedures. The constitution of particular languages in terms of ultimate principles that function axiomatically cannot, then, ultimately stabilize meaning; the further question of the ground of the principles that govern sense points to a deeper phenomenon of truth that cannot be completely captured by any consistent set of intra-linguistic principles, standards, or procedures. In connection with such principles and procedures, there is thus always a residual undecidability which becomes explicit in the question of *their* grounding and points to the always-open possibility of their radical transformation. In this way, the specific axiomatic or principial constitution of languages, which makes them capable of objective reference to a totality of entities and stabilizes the ontological sense of this reference by providing a ground for decisions on meaning, always evinces the structural undecidability of sense that points to the deeper conditioning of all standards and (ontic) grounds in the more original structural context of (ontic-ontological) truth.

This ultimate failure of axiomatic and principial standards to provide for the noncontradictory decidability of sense might seem to suggest that the picture of languages as structurally based in such standards at all should simply be rejected. In particular, if a language cannot be decidably founded in a consistent way by axioms and principles, perhaps (it might seem) it is not in any meaningful sense "governed" or "structured" by such grounds at all; we might (on this line of thought) do better simply to abandon the search for any such principles in the underlying structure of existing languages and, by so doing, resolve or foreclose the problem of ultimate grounding this search invokes. However, it is clear that each actually spoken language involves, as a constitutive and essential aspect of its own structure of sense, a going conception of *itself* as a determinately structured unity arising under historical and temporal conditions but allowing it the general capability of reference to the world as a whole. This conception is, moreover, not simply that of a syntactical structure of rules governing the formation or transformation of expressions on wholly internal grounds. Rather, it includes a constitutive sense of the range of the language as a whole including a going concern with the constitution and boundaries of what the language *can* allow to appear in the horizon of its (inexplicit) reference to the world as a whole. This image is generally not, as long as a particular principial economy is in place, explicit; it becomes more so retrospectively, once a new economy is in place. Nevertheless this, at least implicit, inclusion in each language of a more or less determinate self-conception appears most directly in those regions of the language where it makes explicit reference to its own expressions and sentences. As we have seen, it is these regions, as well, that the paradoxical behavior of sense and the grounds for its ultimate undecidability most basically show up. The ultimate relevance of a conception of language as

principially or axiomatically structured, then, is not to be located in the false hope of founding language, once and for all, in a univocal and consistent basis of principles able finally to stabilize sense by ensuring its ultimate consistency and decidability. It is rather to be found in the way that the structural paradoxes of each language's foundational image of itself point to the deeper structural phenomenon of undecidability and to the possibility of radical transformation that is implied by it.

Furthermore, there are good reasons, internal to Davidson's account, to suspect that the paradoxical dynamic of reflexive sense has not only a structural but also a fundamentally *temporal* significance. In Davidson's last book, *Truth and Predication*, he considers various objections that have been formulated against Tarski's method of defining truth by supplying a machinery capable of producing T-sentences for each sentence of the language. One of these is that any particular Tarskian definition – the structural definition of truth-in-L for a particular language, L – does not show us anything about how to define truth for *another,* distinct language M. Another, related objection is that the Tarskian truth-definition for a particular language at a particular time tells us nothing about how to apply the concept of truth to *new* cases.[54] New objects first encountered at a later time and new terms or sentences framed to describe them will themselves obviously be characterizable in terms of truth and falsity, but a Tarskian truth-definition provides no guidance to this possible extension. For both reasons, Davidson concludes that Tarskian truth-definitions, even if considered as a general "pattern" of possible structures definitive of truth in particular cases, do not and cannot capture "all there is" to the nature of truth; Tarski has told us "much of what we want to know about the concept of truth," but there must be more to say.[55] In particular, Davidson suggests, the general concept of truth to which the various specific Tarskian definitions point, without defining or exhausting it, also plausibly guides inquiry and interpretation in each of the specific languages.[56]

Both the dynamics of the transformation of language in view of new phenomena or structural realities and the paradoxical status of sentences discussing truth are clearly relevant to the structure of this more general (and non-language-specific) concept of truth. In particular, though Tarski himself forecloses both problems by allowing truth to be defined only for artificial languages that are in themselves statically defined by their corpus of constitutive rules and readily describable from a metalanguage position, the dynamics of temporal change that characterize every actually existing natural or "historical" language are plausibly deeply linked to the inherent capacity of these languages to consider, implicitly or explicitly, their own totality and the total structure underlying their own truth-claims. Here, the temporal transformation of language in relation to what appear as new and shifting realities does not simply mean that new expedients or constructions to deal with hitherto unfamiliar phenomena. For the underlying relation of sense to truth also creates, as I have suggested, the possibility of relatively sudden and discontinuous total change. As I have argued, the structural basis for such change can be seen as resting in the structural undecidability of sense which is characteristic of each language bearing total expressive power and becomes visible in the specific structure of the paradoxes which manifest a language's own relation to its own total structure of sense.

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[54] Davidson (2005), p. 17.
[55] Davidson (2005), p. 27.
[56] Davidson (2005), p. 55.

III

As I have argued, the kind of difference that characterizes the transitions between the successive epochs of metaphysics for Heidegger is not the "conceptual relativity" that Davidson opposes in "On the Very Idea." Once we grasp the kind of diachronic unity that is at the structural basis for Heidegger's account of the conditioning of epochal truth by the deeper underlying phenomenon of the truth of being itself, it is clear that his conception avoids relativism by basing itself on the inherently paradoxical dynamics of possible change that emerge forcefully from the way that every metaphysical language grounds beings as such and *as a whole*. It is the specific sense of unity that is involved in this constitutive reference to beings as a whole that itself, then, grounds the possibility of radical structural change; and this consideration is, as I have argued, by no means opposed to Davidson's claim of the intertranslatability of languages. In fact, Davidson's picture as a whole can be seen as based on two powerful considerations of unity that might at first seem opposed to each other. First, each language must, bearing total expressive power, be intertranslatable with all other such languages; thus, all languages are as such unified with respect to what then appears as a world as a totality of beings. It is, of course, possible that a particular language will lack a specifically referential word or term for one type of phenomenon or another; but every language nevertheless more broadly contains, in principle, the structural possibility of making reference to anything that any other language refers to, since there is never any actually insurmountable or complete failure of translatability. In this way, each language implicitly or explicitly contains the structural capacity of determinate reference to the totality of the world, and stabilizes this reference under one or another conception of the total character of beings as such. Nevertheless, as Davidson also cogently argues, it is also incoherent to suppose any language to be set off against this totality of the world, since then the question arises of their relationship, and we can only answer this question in terms of some version of the (untenable) scheme/content dualism. The unity of languages as such can thus be characterized in terms of the total expressive power that they share with respect to the totality of beings, or the world. But this unity of languages as such cannot be specified as their unity with respect to this totality as a common referent, on pain of invoking the untenable dualism of scheme and world.

As I have argued, Heidegger's picture provides a basis for reconciling these considerations in that it deals with a *unitary* hermeneutic dynamics in which each language structurally and constitutively involves, as such, a consideration of beings as a whole that is grounded in the more basic phenomenon of projection that endows both words and objects with sense. In this story, both the sense of language and the sense of entities is always at stake; and the conjoint total fixation of both is not simply a function of one or the other but a "setting up of world" that also, simultaneously, sets up every possibility of languages and linguistic articulation. This is, moreover, not a kind of unity that is given once and for all, but is actually repeatedly temporally consititued at specific moments of the institution of epochal referents, and bears within itself the structural conditions for change in the form of their destitution.

In this way, the Heideggerian account provides the elements for an account of the *temporality* of linguistic change that is essentially absent from Davidson's account. It is not that Davidson actually denies that languages originate at a particular time and are transformed in various ways over the course

of their careers; he just does not address the issue. As we have seen, this limitation in Davidson's picture can be related to the inherent limitations of Tarski's own structure for the characterization of the temporal dimension of linguistic use and transformation. Because Tarskian truth-theories can be considered to capture the structure of a language only through a recursive description of their constitutive rules *at a particular time*, including the "satisfaction" conditions for primitive terms taken as given, the Tarskian structure itself does not speak to the possibility of transformations in these rules and conditions. This corresponds, in Tarski's own project, to the idea of a conventional or stipulative definition of the structure of language itself: the thought is that languages can be instituted simply by laying down or designating referential and predicative meanings for all of their signs. This idea is appropriately applied to formal languages of the type Tarski in fact considered; but as we have seen, it fails to capture their very different kind of temporal structure and existence characteristic of the natural languages Davidson considers.

What form, then, can an account of linguistic transformation take, if it acknowledges the paradoxical and ontological dynamics of totality that I have considered here? In the 1928 treatise "On the Essence of Ground," Heidegger considers the way in which the availability of entities for positive reference, consideration and description is grounded, in each case, in the phenomenon of projection whereby Dasein opens a particular domain through a projective understanding of the being of the beings thereby defined.[57] The ultimate condition for this opening is to be found in the structural "transcendence" of Dasein, whereby it is always already "outside itself" in its original structural relation to truth as unconcealment and thereby *grounds* in its own structure the ontological difference between beings and being.[58] In this sense, according to Heidegger, the availability of any domain of entities is always conditioned by a prior interpretation which makes accessible a particular domain on the basis of an interpretation which is itself grounded in Dasein's (initially inexplicit) understanding of Being itself. In this interpretation, new entities may "enter" the world through sudden shifts that allow something of the character of a domain of beings, hitherto obscure, to appear. The phenomenon of "world-entry" is thus to be characterized on ontological grounds as a basic possibility of Dasein insofar as Dasein itself is "world-forming" [*Weltbildend*], structured by a basic transcendence that relates it to the ontological difference.[59]

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[57] *Wegmarken* (GA 9), s. 131-33.

[58] *Wegmarken* (GA 9), s. 133-34.

[59] *Wegmarken* (GA 9), s. 158-59: "Die Welt wird als die jeweilige Ganzheit des Umwillen eines Daseins durch dieses selbst vor es selbst gebracht … Der Entwurf von Welt aber ist, imgleichen wie er das Entworfene nicht eigens erfaβt, so auch immer *Überwurf* der entworfenen Welt über das Seiende. Der vorgänigige Überwurf ermöglicht erst, daβ Seiendes als solches sich offenbart. Dieses Geschehen des entwerfenden Überwurfs, worin sich das Sein des Daseins zeitigt, ist das In-der-Welt-sein. "Das Dasein transzendiert" heiβt: es ist im Wesen seines Seins *weltbildend*, und zwar "bildend" in dem mehrfachen Sinne, daβ es Welt geschehen läβt, mit der Welt sich einen ursprünglichen Anblick (Bild) gibt, der nicht eigens erfaβt, gleichwohl gerade als Vor-bild für alles offenbare Seiende fungiert, darunter das jeweilige Dasein selbst gehört.
Seiendes, etwa die Natur im weitesten Sinne, könnte in keiner Weise offenbar warden, wenn es nicht *Gelegenheit* fände, in eine Welt einzugehen. Wir sprechen daher vom moglichen und gelegentlichen *Welteingang* des Seienden. Welteingang ist kein Vorgang am eingehenden Seienden, sondern etwas, das "mit" dem Seienden "geschieht".

This conception of world-entry as grounded in interpretation and in interpretive shifts in the total understanding of domains of beings again invites comparison with Kuhn's account of scientific revolutions in *The Structure*. In particular, as Kuhn also suggests, it is through such interpretive shifts in the sense of whole domains of entities – Kuhn's notorious "paradigm shifts" – that genuinely "new" entities and phenomena can be thought to enter the world. Along these lines, there is moreover even a sense in which, as Kuhn says, partisans of different paradigms live in different "worlds" marked by very different ontological determinations, although (as we have seen) any such formulation must also preserve the important dimension of continuity between older and newer theories.[60] As I have suggested, it is generally not possible to clarify the underlying hermeneutic dynamics of these shifts, in any case, without considering the specific phenomena of constitutive reference to the world *as a whole* and how these phenomena themselves condition the possibility of large-scale shifts in the intelligibility of entities and phenomena.[61] This significance of totality, as I have argued, must be considered integral to the possible phenomena of world-entry, projection, and paradigm shift; in this way, the dynamic and temporal structure of languages in relation to entities is shown to have a positive formal basis in the paradoxical dynamics of total self-reference itself.

For Heidegger, the "world-forming" structure of projection thus provides an ontological basis for the phenomenon of world-entry, whereby new entities as well as whole new ways of understanding the totality of beings are grounded in the specific structure of truth as disclosure. But what is it to form a world? In the 1930s, as we have seen, Heidegger replaces the earlier conception of truth as grounded in Dasein's "transcendence" with the more explicitly historical conception of a plurality of historical epochs, themselves grounded as a whole in the unitary configuration of the interpretation of Being as presence and the progressive withdrawal of Being itself. In 1935, in "The Origin of the Work of Art," Heidegger develops on the basis of a consideration of the temporal and ontological nature of artworks a penetrating new conception of the ontological and temporal conditions under which it is possible for "a world" to be "set up" or "opened up" through the "setting-to-work" of a work of art. On this conception, the process of "setting up" by which worlds are formed or set up is a "worlding" of the world whereby a whole domain of objects, practices, and possible perceptions is first made available:

> Werksein heiβt: eine Welt aufstellen. Aber was ist das, eine welt?... Welt ist nicht die bloβe Ansammlung der vorhandenen abzählbaren oder unabzählbaren, bekannten und unbekannten Dinge. Welt is aber auch nicht ein nur eingebilter, zur Summe des Vorhandenen hinzu

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[60] Cf. Kuhn (1962), p. 111: "Examining the record of past research from the vantage of contemporary historiography, the historian of science may be tempted to exclaim that when paradigms change, the world itself changes with them…It is rather as if the professional community had been suddenly transported to another planet where familiar objects are seen in a different light and joined by unfamiliar ones as well… In so far as their only recourse to [the world of their research engagement] is through what they see and do, we may want to say that after a revolution scientists are responding to a different world."

[61] Here, for instance, the structure of negative existential statements has an obvious significance; in the shift from one paradigm to the next, a large part of the transition consists in the determination that certain entities previously referred to routinely do not in fact exist, as such ("there is no such thing as phlogiston"). But negative existentials are themselves logically related to the determination of the whole, for they are logically equivalent to universals (For all x, x is not phlogiston) whose domain of quantification must be considered to be the totality of the world or universe.

vorgestellter Rahmen. *Welt weltet* und ist seiender als das Greifbare und Vernehmbare, worin wir uns heimisch glauben. Welt ist nie ein Gegenstand, der vor uns steht und angeschaut warden kann. Welt ist das immer Ungegenständliche, dem wir unterstehen, solange die Bahnen von Geburt und Tod, Segen und Fluch uns in das Sein entrückt halten.[62]

This possibility of "opening up" a world is itself understood in close relation to the essential "opposition" [*Gegeneinander*] that Heidegger describes as the "strife" [*Streit*] of earth and world.[63] In particular, whereas world is the "sich offende Offenheit der weiten Bahnen der einfachen und wesentlichen Entscheidungen im Geschick eines geschichtlichen Volkes", earth is that which is "ständig Sichverschließenden und dergestalt Bergenden" although nevertheless in a certain way also brought forth in the world-opening work.[64] The specific phenomenon of the strife of world and earth is, on Heidegger's description, the tension or rift [*Risse*] that makes it possible for a work to not only to "set up a world" but to "set forth the earth"; it is in this way that "historical man" [*geschichltliche Mensch*] grounds life in the world.[65] The grounding is, specifically, an "instigating of the" strife and thereby a "setting to work of truth". [66] Truth is, here, understood as the "essence" of the true," and in particular as *aletheia* and unconcealment. But that there is truth as unconcealment means that there is "already manifest something to which we can conform ourselves."[67] The more original condition for this manifestness is what Heidegger calls the clearing [*Lichtung*]:

> Und dennoch: über das Seiende hinaus, aber nicht von ihm weg, sondern vor ihm her, geschieht noch ein Anderes. Inmitten des Seienden im Ganzen west eine offene Stelle. Eine Lichtung ist. Sie ist, vom Seienden her gedacht, seiender als das Seiende. Diese offene Mitte ist daher nicht vom Seienden umschlossen, sondern die lichtende Mitte selbst umkreist wie das Nichts, das wir kaum kennen, alles Seiende.[68]

The "setting up" of a world that a work can accomplish is thus related back to the specific phenomenon of the strife between earth and world and thereby also to the deeper condition of the clearing, which itself "opens" all that can be discussed or considered as existing. This opening is itself the constitution of world from and in the dynamics of opening and setting-up that the work exemplifies in its "setting to work" of truth.

As commentators have noted, the late Heidegger's grand picture of Western history as constituted and exhausted by the series of epochal transformations ultimately "sent" or "granted" from or by Being itself stands in some tension with a culturalist or humanist picture on which essentially contingent human cultural practice or institutions set up the conditions under which entities are understood and experienced in particular and differing ways over historical time.[69] On the other hand, Heidegger

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[62] *Holzwege* (GA 5), s. 33/30-31.
[63] *Holzwege* (GA 5), s. 37/35.
[64] *Holzwege* (GA 5), s. 37/35.
[65] *Holzwege* (GA 5), s. 35/32.
[66] *Holzwege* (GA 5), s. 38/36.
[67] *Holzwege* (GA 5), s. 41/39.
[68] *Holzwege* (GA 5), s. 41/39-40.
[69] See, e.g., Rorty (1991).

himself may seem at times to suggest such a culturalist picture of the origin and structure of worlds. For example, his development of the example of the Greek temple in "The Origin of the Work of Art" and in his own description (for instance) of the specific phenomenon of world as constitutively related, in each case, to a "historical people" may seem to suggest that he understands "worlds", in the plural, in each case as an instituted correlate of localized practices or of the languages that surround them. On this kind of picture, the availability and intelligibility of beings themselves is constituted by such a configuration of practice and language, and the "setting up" of a world which first "discloses" such a totality is to be understood as primarily a matter of conventionally or culturally instituted practice, in principle comprehensible in sociological or pragmatic terms.

It is not that commentators who hold this kind of picture simply deny that the later Heidegger also characterizes the conditions for the institution of world that relate it ultimately to the "destining"[*Schicken*] of Being itself and to ontic-ontological structures that, on Heidegger's own account, cannot ultimately be rooted exclusively in the phenomena of "culture" or "practices."[70] But it has nevertheless been tempting, given the apparent obscurity of the notion of "Being itself' and its "destining" of history, to correct Heidegger by supplementing or replacing his conception of world-formation with this culturalist or pragmatist picture. Here, what is seen as most obscure is exactly *how* something like "Being itself" could itself be responsible for those large-scale shifts in which the entire character of the world appears discontinuously to change, or for the evident differences between such large-scale understandings that appear to occur over historical time.

By contrast with this, however, I have argued that the institution as well as the destitution of languages and practices themselves can and must be seen, in an ontological context, as subject to an inherent structural necessity that also has its ontological and temporal ground in the structure of disclosive truth. Here, far from being obfuscatory or mystifying, a consideration of the determining ontological dynamic of truth as unconcealment is in fact essential. This dynamic does not have to be explained in mystifying, mystical, or nostalgic metaphors in order to be clarified in its underlying structure. To the contrary, it can, as I have argued, be put on a firm metalogical basis by considering the specific implications and dynamical paradoxes of the institution of languages by means of the fixation of epochal referents. This points to an underlying determination of the phenomenal constellations in which beings appear that is not simply culturalist or pragmatic, since it points to the ontological and hermeneutic basis of disclosive

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[70] Cf., e.g., *Beiträge,* s. 98-99, in the course of a discussion of the "decision" regarding "history" as the "playing out of the strife between earth and world": "Bringt die Entscheidung noch einmal die Griindung der Augenblicksstätte fiir die Gründung der Wahrheit des Seyns, oder rollt alles nur noch ab als »Kampf« um die nackten Bedingungen des Fort- und Auslebens in den riesigen AusmaBen, so daB »Weltanschauung« und »Kultur« auch nur noch Stiitzen und Kampfmittel dieses »Kampfes« sind? Was bereitet sich dann vor? Der *Übergang zum technisierten Tier*, das die bereits schwächer und gröber werdenden Instinkte durch das Riesenhafte der Technik zu ersetzen beginnt.
Bei dieser Entscheidungsrichtung ist nicht kennzeichnend die Technisierung der »Kultur« und »Weltanschauungs« durchsetzung, sondern daB »Kultur« und »Weltanschauung« zu Mitteln der Kampftechnik werden fiir einen Willen, der kein Ziel mehr will; denn Erhaltung des Volkes ist nie ein mögliches Ziel, sondern nur Bedingung einer Zielsetzung. Wird die Bedingung aber zum Unbedingten, dann kommt das Nichtwollen des Ziels, das Abschneiden jeder ausgreifenden Besinnung zur Macht. Vollends schwindet dann die Möglichkeit der Erkenntnis, daB »Kultur« und »Weltanschauung« bereits Ableger einer Weltordnung sind, die angeblich iiberwunden werden soll.

truth that is plausibly the ground for any possible formation of cultures and practices themselves. And although it does not depend in any essential way on the transcendence of a "mystical" beyond, this structure of truth in itself also owes nothing to any prior cultural or humanist reference.

IV

I have argued that Heidegger's conception of the history of being can be defended from the charge of conceptual relativity, and understood on the level of its real structural problematic, only if we see it as unfolding a specifically temporal structure of undecidable sense. This structure is also separately motivated by a metalogical reflection on the structure of axiomatic principles in relation to the totality of a language that they institute and maintain. Seeing it in this way involves acknowledging that the shifting configurations of epochal economies of presence, each constituted by a particular determination of the being of beings, themselves have a larger determinative unity in the itinerary of what Heidegger calls the epoch of "metaphysics" itself. Heidegger's understanding of the history of these determinations, as a whole, is itself directional. It is oriented by the growing gap between an original or inceptual determination of being *as* presence and the ever-greater obscurity, forgetting or withdrawal of being itself in the sway of the successive epochal principles. For Heidegger, this history, moreover, has a culmination and an end. Specifically, it ends in the contemporary configuration of the metaphysics of technology and the unchallenged sway of a universal *calculability* and *ordering* of beings in which being itself no longer appears at all. I have argued that in order to understand the specific kind of temporality that is constitutive of, and constituted by, metaphysics as the history of presence, we need also to see the unifying basis of the entire regime or epoch of metaphysics in the self-differentiation of Being as it both grants the possibility of presence, and holds itself back, in the epochal constitution of each specific economy of beings. This involves, as well, comprehending in the contemporary condition of universal technology and "enframing" the *closure* and specific boundary of the metaphysics of presence itself. In this final section, I shall consider how the specific phenomenon of the undecidability of sense itself points to and articulates this closure, and also in a certain way intimates or indicates its "beyond".

If Heidegger sees in the contemporary configuration of advanced technology a culmination or end of the metaphysical interpretation of being in terms of presence that also begins to indicate a specific "beyond" to metaphysics, then the structure of this indication itself can be clarified by reference to the differential structure, between presence and presencing, that lies at the basis of any constituted discursive realm of sense. As Schürmann points out near the end of his own analysis of the contemporary closure of metaphysics, this "middle term" of difference is not itself any human or sociological construction, but rather the underlying differential structure of "originary" time:

> Heidegger does not examine the contemporary site and its genesis in order to gain further information about man. If he asks: How did we arrive there? it is not as a historian of culture. It is rather to elucidate the complex structure of the being question itself. That question is complex, for an economy of presence – for example, technology – is not an immediate given. It

is the *Anwesenheit* of what is *anwesend,* the modality of presence of what is present. Radicalized transcendental phenomenology consists in stepping back from this modality of presence toward *Anwesen* as such, toward the event of presencing. A second rule for thinking results from this *differential self-regulation* by which the present, through the modality of its presence, both hides and reveals the event of presencing.

If it is admitted that the starting point of the deconstruction is one particular economy, it becomes clearer why the ontological difference unites the three terms I have just sketched and not two (e.g. *ta onta*, "entities" and *to einai*, "the to-be"). The middle term is that order which, following Heidegger, other authors have located in discourse and called *episteme* or discursive regularity. In Heidegger, the three-tiered difference is generally described as between 'entities', their 'beingness' and 'being' (as a verb, as 'to-be'). This way of formulating it, however, passes in silence over the decisive factor, time. In his last writings, he therefore characterizes beingness and being with some subtlety as two moments of 'letting', as "letting-*be-present*" and as "*letting-be*-present." Originary time has 'letting' as its essence, which is to say that it remains unintelligible within any metaphysical quest for ultimate causes, grounds, or principles.[71]

As I have argued, the undecidability of sense which appears necessarily to characterize the logical structure of any instituted language or discursive regime itself structured according to the differentiation of entities and their being. This undecidability is thus itself nothing other than a structural manifestation of the inherently differential "self-regulation" of the event of presencing of which Schürmann speaks. In this differential self-relation, the event both grants the specific conditions under which entities can be phenomenalized in particular configurations of intelligibility, and also withdraws in itself, hiding the ultimate evental and differential bases of presencing beneath the assumption of a stable ontic referent. Heidegger himself thinks this originary self-differentiation of presence and the ground of presence in increasingly radical terms. At first, he conceives it as the ontological difference between beings and their being; later it is the self-differentiation of being in itself through which it grounds its truth as event, outside and prior to any reference to beings. In the context of any particular principial economy constituted by reference to assumed standards and principles, as I have argued, this original temporal differentiation or differend introduces both the possibility of a determinate configuration of sense and also the essential undecidability that also characterizes each such configuration. But as Schürmann points out, grasping this temporal difference as the ultimate basis for instituted sense can also point to the specific closure of the metaphysics of presence itself.

In "Différance," Jacques Derrida considers how Heidegger's thought of ontological difference communicates with or opens onto the thought of a more originary differentiation, thought as *différance*, that is originally both temporization (or deferral) and spacing.[72] *différance* as the more basic condition for the differentiation of being and beings cannot itself be understood in positive terms as any entity or positively described phenomenon; it is visible, rather, in its trace, or in the erasure of its own

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[71] Schürmann (1987), p. 285.
[72] Derrida (1968), p. 22.

"withdrawal" from the text of metaphysics.[73] Here, the consideration of the ontic/ontological structure of the historical languages of metaphysics, and in particular the way they manifest specific interpretations of presence, has a basic significance; this structure is itself, Derrrida suggests, a phenomenon of *différance* in its self-differentiation or its constitutive "play".[74] Elsewhere, Derrida connects this play of *différance* to the specific phenomenon that he describes as the "undecidable" of specific texts or textual regimes; in particular, as I have argued elsewhere, Derrida's conception of this "undecidable" involves the structural undecidability of syntactically constituted sense in relation to an exterior referent.[75] Undecidability in this sense is, however, as I have argued, analogous or actually structurally homologous to the undecidability demonstrated by Gödel , and verified in a different way by Turing, at the structural basis of each syntactically defined axiomatic system in its reference to an "external" reality.

The thought of this original differentiation and the structure of paradox and undecidibility in which it is manifest can become the basis for a renewed critique of ideology that draws on the methods and forms of post-Kantian critique but radicalizes them on formal grounds. In particular, for the contemporary critique of technological society, the interlinked positive phenomena of structural paradox, undecidability, and ultimate ineffectivity thus have a determinate and rigorous formally indicative significance. They can be structurally interpreted as pointing to the broader conditions for systematization as such, and to the inescapable double bind of systematic regulation that characterizes the underlying structure of any specifically constituted system of meaning, communication, or social regularity or practice.

In an essay on "Tautology and Paradox in the Self-Descriptions of Modern Society," Niklas Luhmann suggests from the perspective of a "second-order cybernetics" and reflexive theory of systems the way in which the inherently paradoxical structure of societal self-description can suggest terms for this positive critique. As Luhmann notes and as we have seen here, the unrestricted self-reference that is apparently involved in any language in its specific capacity to capture truth leads inevitably to tautologies and paradoxes.[76] According to Luhmann, the characteristic response of a social system to this situation is to "'unfold' self-reference" by interpreting it in a hierarchical or ordered configuration that allows its "deparadoxicalization," or its self-description without apparent paradox. This operation of unfolding is specifically related to the constitution of a temporality in which the society is either conserved or seen as an object of possible progressive transformation. In either of these ways, the unfolding of paradox that is needed to avoid contradiction gains the significance of the constitution of an ordered temporality of conservation or transformative action. But this operation of temporal unfolding only takes place at the cost of obscuring the basis of this operation itself, as well as the underlying structural problematic to which it ultimately responds.[77] Undecidable sense is thus, according to Luhmann, rendered decidable by the unfolding of paradox along a temporal dimension that

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[73] Derrida (1968), pp. 23-24.
[74] Derrida (1968), pp. 26-27. This constitutive activity of *difference* in differentiating invites comparison with what Gilles Deleuze calls "difference in itself" in Deleuze (1968) (especially chapter 1).
[75] Livingston (2010).
[76] Luhmann (1990), p. 137.
[77] Luhmann (1990), p. 127.

rationalizes the activity of society to itself. But the basis of this operation is the obscuration of the structural ground of paradox in the very constitutive structure of social self-reference. This process of deparadoxization is in fact identical, according to Luhmann, with the transformation of descriptions of society into "ideologies" which then come to play a privileged role in "directing and justifying social action" while at the same time insulating themselves from global critique by appearing to be contestable only by means of the competing "holistic systems" of their specific ideological opposites.[78] It is thus that, according to Luhmann, the concept of ideology itself comes to display a "particular reflexivity that appears immune to empirical evidence and criticism" which results in the outcome that "descriptions of societal self-descriptions face the antagonism of ideologies instead of reflecting on the more fundamental problems of tautology and paradox."[79]

If Luhmann is correct in seeing an actual basis for the whole structure of positive ideologies, including their holistic systems and mutual antagonisms, in the socially constitutive function of de-paradoxicalization, then the only rigorous ground for their critique must rest in pointing out on logical, systematic, and metalogical grounds this underlying necessary structure of paradox itself. In this way, the elaboration on metalogical grounds of the underlying paradoxical structure of sense and the structural necessity of paradoxical foundations that it evinces can thus provide a specific and concrete metalogical basis for a renewal and reinvigoration of the traditional critique of ideology. For any ontologically grounded critique of the present, the interlinked positive phenomena of structural paradox, undecidability, and ultimate ineffectivity thus have a determinate and rigorous formally indicative significance. They can be structurally interpreted as pointing to the broader conditions for systematization as such, and to the inescapable double bind of systematic regulation that characterizes the underlying structure of any specifically constituted system of meaning, communication, or social regularity or practice. As such, and as I have tried to elaborate here, pointing out their specific structure and their relationship to the ontological conditions of presence and presencing can thus provide rigorous grounds for a critique of the technological present. At the same time, this indication points to the underlying *ontological* situation of the positive grounding of constituted regimes and languages in the arche-original structure of a self-differentiating difference at the root of all possible presencing.

As Derrida suggests, seeing how Heidegger's thought of originary "Being itself" thus involves an underlying self-differentiation that is at the very basis of the possibility of any economy of presence can point to the specific significance of the purported contemporary "closure" of the whole epoch of presence, or the history of metaphysics, itself. The significance of this indication is as much temporal, or rather arche-temporal, as it is ontological; as Schürmann says, beyond the epoch of the various principial economies, it points to the *plural* temporalities of a condition that no longer stabilizes presence in terms of "causes, grounds, or principles".[80] Seeing the possibility of transition to such an an-archic condition in the contemporary configuration of advanced technology involves grasping the specific ways in which this contemporary configuration itself points, at the boundaries of the totality of its claim over beings, to the paradoxes underlying its own structural constitution. This involves, in

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[78] Luhmann (1990), p. 128.
[79] Luhmann (1990) pp. 128-29.
[80] Schürmann (1987), p. 285.

particular, seeing the concrete basis for a demonstration of this underlying paradoxical structure in the actual structure of the technologies and techniques that constitute and make possible the contemporary regime of unlimited technology, both in ways that Heidegger himself pointed out and in ways he did not.

In particular, Heidegger sometimes suggests that the "end of metaphysics" is determined not only by the universal mechanical or instrumental enframing and manipulation of beings but also, and perhaps even more deeply, by the totalization of calculability, information exchange, or cybernetics as a "regulating-regulated" technology of the exchange of information.[81] In connection with this, the conditions of the contemporary existence and predominance of what are called "information technologies" gains a particular and telling indicative significance. Here, the interrelated problems of self-referential paradox, axiomatic incompleteness and metalogical undecidability themselves prove decisive in pointing to the specific constitution of these concrete conditions as well as their specific limitations. In particular, as I have suggested elsewhere, it is by no means accidental that Turing's own demonstration of the specific phenomenon of the necessary undecidability of logical and axiomatic systems is, at the same time and in the same gesture, the first conceptual construction of the actual underlying architecture of all algorithmic or programmable computers.[82] In the very argument that first yields the contemporary sense of an algorithmic procedure that thus underlies all communicative and computational information technologies, the claim of such procedures to total effectivity is decisively limited by the demonstration of the actual necessity of undecidability and incalculability with respect to any such procedure. This amounts, as I have suggested, to an inherent and mathematically motivated critique of effectivity that appears to demonstrate, at the basis of any constituted procedural realm of the application of regular procedures of calculation or information processing, a more basic *ineffectivity* resulting from the original structures of paradox, incompleteness, and undecidability. In an ontological perspective suggested by Heidegger but also separately motivated by the theoretical and technical problematic of logic and its foundations in the twentieth century, this rigorously the critical reserve of what, in any effectively regulated system of meaning, resists the force of its constitutive rules and standards, manifesting in this resistance the original withdrawal at its ground.

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[81] Cf., e.g. Heidegger's description of this contemporary condition in "The End of Philosophy and the Task of Thinking": "Es genügt, auf die Eigenständigkeit der Psychologie, der Soziologie, der Anthropologie als Kulturanthropologie, auf die Rolle der Logik als Logistik und Semantik hinzuweisen. Die Philosophie wird zur empirischen Wissenschaft vom Menschen, von allem, was für den Menschen erfahrbarer Gegenstand seiner Technik warden kann, durch die er sich in der Welt einrichtet, indem er sie nach den mannigfaltigen weisen des Machens und Bildens bearbeitet. Dies alles vollzieht sich überall auf dem Grunde und nach der Maβgabe der wissenschaftlichen Erschlieβung der einzelnen Bezirke des Seienden.
Es bedarf keiner Prophetie, um zu erkennen, daβ die sich einrichtenden Wissenschaften alsbald von der neuen Grundwissenschaft bestimmt und gesteuert warden, die Kybernetik heiβt." *Zur Sache des Denkens* (GA 14), s. 71-72.
[82] See Livingston (2012), chapter 6.

Time, Number, Ideal Genesis

(Chapter 8 of Draft MS: *The Logic of Being: Heidegger, Truth, and Time*)

I

In the 1968 article "Ousia and Gramme: Note on a Note From *Being and Time*", Jacques Derrida carries out a rigorous deconstructive reading of a footnote in the last chapter of division II of *Being and Time*. In the note, Heidegger asserts the direct connection of Hegel's conception of time to Aristotle's and the determination of both by the "ordinary" or "vulgar" conception of time as a "leveled off" series of present "now" moments, the concept of time which is, for Heidegger, characteristic of metaphysics in its privileging of presence in general. The reading yields terms in which Heidegger's assertion of this connection, and along with it his entire opposition of an "ordinary" temporality linked to metaphysics and to presence from the underlying "authentic" temporality of Dasein's ecstases, are put into question. In particular, by developing the implications of the originally aporeatic structure of Aristotle's discussion of time in *Physics IV*, Derrida can argue that the constitutive problems in terms of which time is thought by Aristotle remain characteristic of every subsequent discussion that recognizes time "as the condition for the possibility of the appearance of beings in (finite) experience" (p. 48) and thus, and even in exemplary fashion, for Heidegger's *own* discourse on time as well. Through the connection that links every discourse on time to the question of the conditions for the possibility of finite appearance, Derrida suggests, every such discourse remains characterized by a "profound metaphysical fidelity" to the thought of presence. This fidelity is marked most of all in those moments where time is subtracted from the realm of positive beings in order to appear as an underlying form of their appearance, of presentation or of presencing in general.

Such a moment, according to Derrida, is as much characteristic of Kant's conception of time as it is of Hegel's and Aristotle's; and it is once more characteristic of the determinative moment of *Being and Time* in which Heidegger *repeats* the critique of the "silent" determination of the nature of time by the assumed presence of some present being that already in fact characterizes the discussions of all three earlier philosophers. The insistence of this repetition is characteristic of a necessity that will have constrained the questioning of presence on the basis of time to remain in a certain sense "within" this metaphysics itself, repeating it by explicating its principles, or recovering what are its original paradoxes by putting them more radically into play. In particular, if Aristotle's discourse on time is irreducibly situated, Derrida suggests, within an interrelated series of aporias about time and the "now," aporias that are never resolved within Aristotle's text or indeed anywhere else in the history of metaphysics, the necessity of their repetition will have determined a certain necessary submission of the critical destruction of metaphysics on the basis of time to metaphysics itself. The "formal necessity" by which every discourse of metaphysics carries with it both the resources of the "vulgar" concept of time and its deconstructive critique arises already, according to Derrida, as soon as the *sign* "time" begins to function in discourse and is an outcome of this functioning itself. It is thus an exigent task for deconstruction to examine the necessity of this repetition of the original aporias of being and time, Derrida suggests, and indeed even to "formalize" its "rule." (p. 48). As such a formalization of the

necessity to repeat the original aporias, a necessity lodged in their own structure, this deconstruction would illuminate or formally indicate the original problem of the givenness to thought of the relationship of being and time as such. In this section and the next, I will attempt to follow this formal illumination of this problematic as it occurs in Derrida's text and Heidegger's, but also to formulate its original link to the problem of the givenness of number, which is laid bare in a radical way by the mathematical and metalogical thought of the twentieth century. In connection with some suggestions of the late Plato, I shall also suggest a basic link of this problem to the problem of the ideal genesis of number, in relation to the finite and infinite as such.

Aristotle's explicit discussion of time in the *Physics* begins by proposing to work out (*diaporesai*) two questions which, as Derrida points out, both gesture, by way of what Aristotle characterizes as an "exoteric" argument, to basic aporias of the constitution and nature of time. The first is the question whether time is a being or not (*ton onton estein e ton me onton*), and the second is the question of its *phusis*. The difficulties involved in both problems will lead to the opinion that time "does not exist at all or only barely, and in an obscure way." Most immediately, there is a problem about how time can exist at all, given that one part of it is no longer, and the other part is not yet. But both "infinite time" and "any time you like" are made up of these parts, each of which thus seems not to exist, and it is natural to conclude that something whose parts do not exist cannot take part in being (*metexein ousias*) at all. The discussion proceeds as a consideration of the nature of the "now" (nun), which appears to be the boundary between past and future, and its possibility. Is the "now" always the same, or is it continually or continuously "different and different"? The second hypothesis is untenable. For on it, if the moments succeed one another without interval, each new "now" moment will replace the last and the last will not, then, exist; or if there are moments between one "now" and the one that succeeds it then these intervallic moments, of which there are innumerably (*apeioros*) many, will be simultaneous, which is impossible. But the first hypothesis is equally so; for if the "now" is always the same, then both what is "before" and "after" would always be in this same "now" and "things which happened ten thousand years ago would be simultaneous [*hama*] with what has happened to–day, and nothing would be before or after anything else." These are the problems that will allow Aristotle to say that the "now" both that it is the "same", in one sense, and that it is not, in another, and that time is both a continuity with respect to the "now" and divided by it. (219b; 220a; Derrida p. 54). For this reason, he will apparently reject the claim that time is to be seen as composed of "nows" as a line may be thought to be composed of points; but this does not mean that he clearly or entirely rejects the idea of the "now" as a limit. Nevertheless, the sense in which the "now" is a limit between past and future is itself aporeatic: for a point to be a limit between two spans, it will have to be the end of one and the beginning of the other. For this to happen, the "now" will have to involve an "arrest or pause", but there is no such pause among the constantly flowing nows.

As Derrida suggests, the problems here posed are, in one sense, not distinct from the problems posed in general by the mathematical question of the relationship of the point to the line; but by the same structure and at the same time, they are none other than the problems of what jointly allows space and time to be thought at all. If the aporias of its constitution from "now" moments shows that time is not to be thought as composed of points at all and is in some sense irreducibly continuous, still it cannot be

identified with the *gramme* as the linear inscription in space. For the spatially inscribed line is such as to have all of its parts co-existent *at once*; but it is of the essence of time, however it is composed, that its parts do not exist simultaneously. More generally, in thinking the difference between space and time in as a constituted and given difference, we think it exactly as the difference between the order of coexistence in the same time and the order of succession in which there is no possible coexistence in this sense. As Derrida points out, it is not even possible to say meaningfully that the coexistence of two "nows" is impossible, for the very sense of coexistence is constituted by this impossibility. Thus, "Not to be able to coexist with another (the same as itself), with another now, is not a predicate of the now, but its essence as presence." (p. 55). The very *meaning* of the present is constituted by this "impossibility", and thereby, Derrida suggests, so is "sense itself," insofar as it is linked to presence and *its* possibility. According to an aporia which is already implicit in Aristotle and is repeated in Hegel's discussion of time as the dialectical "solution" of the contradiction between the (spatial) point and the (spatial) line, the "with" of time (simultaneity) will thus presuppose the "with" of space that it also constitutes. If Aristotle is able to presuppose the difference between space and time as the difference between the order of coexistence and the order of succession, the supposition will be maintained only on the ground of a more basic structure of paradox which is at the same time evaded or dissimulated, as much in Hegel's explicitly dialectical discussion as in Aristotle's own. To assume the difference between space and time in this way is, Derrida suggests, to assume that it is already possible to know what it is to ask what time and space *are* in general; and thus to assume that one already knows that the question of essence can be "the formal horizon" of the question about both. But this is to assume that what essence *itself* "is" has not been "predetermined secretly – as presence, precisely – on the basis of a 'decision' concerning time *and* space." (p. 56).

The question is evaded in Aristotle by means, Derrida suggests, of his reliance on the resource of a single word which is according to its sense undecidable between a spatial and temporal significance, or rather whose sense is constituted by an undecidability between time and space. Aristotle can give himself the difference between time and space only on the basis of both *presupposing* and *foreclosing* this specific undecidability:

> Now, if Aristotle gives himself the difference between time and space (for example, in the distinction between *nun* and *stigme*) as a constituted difference, the enigmatic articulation of this difference is lodged in his text, hidden, sheltered, but operating within complicity, within the complicity of the same and the other, within the *with* or the together, with the *simul* in which Being-together is not a determination of Being, but the very production of Being. The entire weight of Aristotle's text comes down upon a word so small as to be hardly visible, and hardly visible because it appears self-evident, as discreet as that which goes without saying, a word that is self effacing, operating all the more effectively in that it evades thematic attention. That which *goes* without saying, making discourse play itself out in its articulation, that which henceforth will constitute the pivot [cheville] (clavis) of metaphysics, the small key that both opens and closes the history of metaphysics in terms of what it puts at stake, the clavicle on which the conceptual decision of Aristotle bears down and is articulated, is the small word *hama*. It appears five times in 218a. In Greek *hama* means "together," "all at once," both

together, "*at the same time*." This locution is first neither spatial nor temporal. The duplicity of the *simul* to which it refers does not yet reassemble, within itself, either points or nows, places or phases. It says the complicity, the common origin of time and space, appearing together [com-paraltrej as the condition for all appearing of Being. In a certain way it says the dyad as the minimum. But Aristotle does not say it. He develops his demonstration in the unnoticed self-evidence of what the locution *hama* says. He says it without saying it, lets it say itself, or rather it lets him say what he says.

By taking advantage in this way of the resource of the undecidable meaning of "hama", Derrida suggests, Aristotle can suspend his entire discourse, and with it the whole tradition of discussion of time and being that follows it, upon the original structure of aporia which it already involves. If this is correct, the original undecidability of *hama* points not only to, as Derrida says, the "small key that both opens and closes the history of metaphysics," but also to this originally paradoxical structure of time, a structure that also underlies the specific possibility of the critique of presence in general on the basis of time and which therefore *cannot* be closed or resolved by its means, but only (more or less explicitly) repeated.

To the extent that Aristotle himself is able to arrest or remove from play this original undecidability, it is by appealing to the distinction between potency and act, or between *dunamis* and *energeia*. Thus, as Derrida suggests, Aristotle can resist the claim that the *gramme* is as such a series of points, each of which amounts to a limit, by considering that the point *as limit* does not exist essentially and "in act", but only as potency and as accident. In particular, given this distinction, Aristotle can argue (220a) that just as the point, as boundary between two line segments, does not exist in actuality "in" the line but only in that and insofar as it is *drawn*, so the "now" as boundary is not an actual part of time but only potentially so; and thereby the necessity that the line be constituted by points is apparently avoided. There is thus no need to assume an actual "pause or arrest" of time in the now as boundary, but only the *possibility* of drawing a distinction between past and future in general at any time, and the problem of positing such a pause is apparently avoided. The argument is, further, facilitated by the relationship or analogy between time and motion that Aristotle develops as a consequence of the "most usual" supposition about time, that it is a kind of motion or change. Aristotle contrasts this with the views that time is the circular motion of the whole, or that it is this whole (as sphere) itself. The first is to be rejected, since a partial revolution would also take time, but would not be the revolution of the whole, and since there might be other heavens which would then have their own time; but the second is also to be rejected, since it leads to "too many impossibilities to be worthy of consideration". Aristotle thus proposes beginning again by considering the view that time, though it is not the motion of the whole, is some kind or type of motion. But this view, too, must be rejected. First, motion or change is only in the thing that moves or changes; but time is "equally present everywhere and with all things". Second, motion or change is fast or slow, but time itself is not. Aristotle concludes that time is not motion, but it is nevertheless not independent of motion; indeed, Aristotle goes so far as to assert, if there were no motion, there would be no time.

He argues for this on the basis of the observation that we *sense* time *simultaneously with* motion: "it is together that we have the sensation of movement and time." (*hama gar kineseos aistheanometha kai khronou*). When we are in the dark and are not externally affected by any body, we may still perceive time; in this case, it is a movement that appears to be in the soul that is perceived or observed. It is thus that the perception of time is dependent on that of movement, and if (Aristotle concludes) it is only when we "perceive and distinguish" that time seems to elapse, it follows that time is, if not actually movement, at any rate something "belonging to" it.

This analogy or unity between motion and time allows Aristotle to argue, in the present context, that there is no aporia involved in the now as limit; for motion is as such continuous, and has a limit only in its possibly being completed or broken off. Analogously or for the same reason, the "now" which distinguishes before and after with respect to time is not its real constituent, but only a product of the potential distinction, which may be, but need not be, drawn at any point. In this way, Aristotle links the *actuality* of the "now" as limit to the activity of the mind's perceiving or distinguishing, an activity whose structure itself also verifies that time is something "belonging to" motion in the "simultaneity" or "togetherness" (hama) of the way both are given. Even when this co-givenness of time and motion does not involve the psuche's being affected from without, it is thus still on the basis of its own activity or its *seeming* to be active that time is originally given.

As Derrida notes, to understand the basis of time in this way is already to make it something like the form of inner sense. This is the form of a capacity to be affected in general, whose ultimate basis is the thought of the mind's self-affection in the interiority of its own self-presence. Aristotle has thus anticipated, even in detail, the structure of Kant's conception of time and indeed, just as much and with the same structure, the terms in which Heidegger will both repeat and criticize it in *Kant and the Problem of Metaphysics*. In particular, the analogy or connection that Aristotle already draws between motion and time thus both includes and dissimulates the original form of given time as a paradoxical auto-affection that is equally, and primordially, active in the giving and passive in the taking and in which the mind is both receptive in perception and active in creating its very possibility. If Aristotle can already pretend to resolve the aporia of the presence of the now by appealing to the distinction between the actuality of the continuous and the mere possibility of its discontinuous limit as drawn, he can therefore do so only by suppressing or evading the terms of this originally paradoxical structure of the givenness of presence, which will thus itself determine its own more or less critical repetition, in Kant, Hegel, and Heidegger himself. The form of this givenness can then only be determined, as Derrida suggests, as the finitude of a circle that "regenerates itself *indefinitely*", that constantly gives the possibility of the present without ever giving it as actual end. The very structure of the present is thought in terms of this auto-affective circle in each of the figures that interpret the possibility of time in terms of the possibility of a giving of presence to an intellect determined as finite. It is within this circle that all thinking of time as experienced or experienceable, as thought or thinkable, will then take place. Correlating the original structure of the present to this paradoxical structure of circular self-givenness, it will thus also pre-determine the constitutive terms of critique in which any reflexive consideration of the privilege of the present can subsequently take place.

But there is another essential component to Aristotle's analysis of the relationship between time and motion, one that equally and just as essentially determines its structure as given in Physics IV and also (as I shall argue) the possibilities of its "metaphysical" repetition, though it also (as I shall try to show) provides for a certain kind of problematic communication of the "metaphysical" discourse on presence and the limit with something that is no longer simply metaphysics, or (more accurately) never was, but nevertheless itself determines the problematic basis of the finite and the infinite *as such* in more original terms. This further component is the thought of *number*; and the more original problematic discourse of the finite and the infinite is mathematics itself. For while on the one hand the constitutive relations of continuity and discontinuity, or of the finite and the infinite, are unfolded and developed as posed problems (and were already in Aristotle's time) through the actual practice of mathematicians, on the other hand what is thereby unfolded provides terms which illuminate the very possibility of the givenness of the infinite as such. In construing time in relation to motion as its number, Aristotle is doubtless already aware of a peculiar relationship between time and the mathematical infinite, one whose resources he in fact relies on in detail, as I shall try to show, though he also dissimulates and represses it, by means of the distinction between the potential and the actual, and by means of his official view that mathematics is, as such, only a *regional* discourse. But this relationship can be brought to light in a way that both verifies and displaces the deconstructive analysis, as I shall try to show, by developing the consequences of the formal thinking of formalism itself, especially when it is a thinking by means of formalism of its own inherent limits. Such a thinking, in which what is at stake is no longer the limit provided by any empirical figure of restriction or any pre-figuration of the actual as dunamis, is rather illustrative of the very constitution of the limited, and hence of what can be held within the limits of any presence. As such, it is an original thinking of the limited and unlimited that was already actively pursued in Plato and Aristotle's time, particularly under the impetus of the discovery of irrational magnitudes such as the diagonal of the square. But it is transformed and put on a new footing through the radical discoveries of the twentieth century in its reflexive investigation of formalism and its own limits, whereby it can illuminate in an original way, as I shall try to show, the "ontological" problematic of the givenness of time. The structure here is nothing like that of an unrestricted mathematicism, or a simple and direct application of calculative or mathematical thinking or structure to a matter given in itself prior to that application. It is rather that of what may be seen as the internal dialectic of limit and unlimited which structurally unfolds the basis of any such "application", or which does not precede its actuality as a condition for possibility but rather inheres in its actuality as its *real* virtual structure. As Lautman himself suggests, we may see the reflective discoveries of twentieth-century mathematics, especially in those of its areas that are usually described as the theory of computation and the theory of proof, as themselves providing an original and more basic illumination of the underlying structure of paradox in which, according to Derrida's argument, all metaphysical thinking of time and presence, including Heidegger's own, is lodged. If this is correct, the analysis will then also deepen in an obvious way the "ontological" problematic of the givenness of time, on which Heidegger himself formulates the general critique of what he treats as the metaphysics of presence.

How, then, does number enter into Aristotle's analysis of the structure of time? At first glance, secondarily and by analogy, although it will also basically determine what is Aristotle's most official "definition" of time: that it is "the number of motion with respect to before and after." In particular,

having introduced the problematic "non-independence" of time from motion in virtue of which it is possible to consider time as something "belonging to" movement, Aristotle can consider the apprehension of time as analogous to or actually dependent on the marking of a movement by the judgment of a difference of "before" and "after" between two of its points. With the marking comes the possibility of measuring the interval as such, and of considering what is so bounded; when we consider the interval as bounded by two distinct "nows", Aristotle suggests, we consider it to be time. If we perceive a "now" alone as one, we do not perceive its relation either to another moment or to a "before" or "after"; then we do not, according to Aristotle, perceive time. On the other hand "when we do perceive a 'before' and an 'after', then we say that there is time." And this leads to the "official" definition: "For time is just this–number of motion in respect of 'before' and 'after'."

The definition depends on a twofold applicability of number, both to magnitude in general and to motion, and an analogy between the two kinds of application: since "we discriminate the more or the less by number, but more or less movement by time", time is *itself* a kind of number. What is intended here is, Aristotle clarifies, not that time is a "numbering number", the kind of number with which one counts, but rather a "numbered number" , the kind of number that is counted. Time is number in the sense in which one says "the number of horses" or "the number of men", which may be the same, whereas the things concerned are themselves different. Time is not, then, a mathematical being such as a number in itself; rather it is what is counted in the counting, or what is discerned in the discrimination of "before and after." It is in *this* way – and only this – that the "now" itself exists; it "corresponds" Aristotle says, to a "body that is carried along" in motion in that we become conscious of the "before and after" with respect to it, but it only when we regard these as counted or countable that we get the "now" itself. Time is not motion, but it is motion "insofar as it admits of enumeration." ()

As Derrida notes, the categories that govern the whole relationship of number, motion, and time, are those of *analogy* and *correspondence* (p. 58). Time is on the one hand analogous to motion, in that what one can say of motion (its continuity, its structure of the "before and after") one can say of time as well; on the other hand, it "corresponds" to motion, as in the correspondence of the "now" to the body that is carried along *spatially* in a motion, or it actually *is* motion, "insofar as" it *can* be enumerated. Again, time is the counted *number of* motion (and in that sense corresponds to it as number corresponds to what is numbered, for instance as "10" corresponds to the group of 10 horses) or it is what *is* counted in the counting, as (analogously) motion is itself measured in determining two distinct points within a unitary motion as boundaries of a span. If Aristotle can alternate between the relations of correspondence, analogy, and identity with respect to motion and time in this way, it is because the whole construction turns on the dependence of time on the awareness that measures it, and thereby on, as Derrida shows, the ultimate simultaneity *or* togetherness (*hama*) of the perception of both. By privileging this *hama*, Aristotle can foreclose the aporias of the actually existing "now", treating it instead as the merely *potential* outcome of an act of measurement, an accident with respect to time in itself, rather than its actually constituting substratum. But this is itself only possible insofar as the essential undecidability of the *hama* remains, and is accorded an absolute privilege as the very form in which the whole considertation takes place.

On the terms of analysis that Derrida suggests, Aristotle will have presupposed or actually performed a derivation of the structure of time from the conditions of its givenness as the possibility of its perception by a finite being and from its possible measurement *by this being*. Hence, he will have derived it from the present being of a presence in general whose form is finitude in general. Only a being that is in general in the situation of having to perceive motion and change outside it, and is in particular in the position of being able to perceive in a similar fashion its own internal motion, will be able to count time in the way that Aristotle considers definitive of it. The structure is thus one of a kind of criteriological derivation of the structure of time *from* what appears to be the necessary form of its own givenness to a finite being; this is the structure that, as Derrida emphasizes, will be repeated, more or less explicitly, in Kant, Hegel, and Heidegger, and will also, in each case, in each case and by the same structure, conversely suggest terms for the critique of the assumption that time is silently determined simply *by* the being to whom it is given. There is no simple escape from this circle, as Derrida says, because it is characteristic (as he also says) of the underlying logic of the signification of "time" – as soon as it is a signifier that can enter language – at all. As such, it propagates its structure on each discourse and each analysis that attempts to make the structure of time evident by considering the form of its givenness

However, without breaking out of the circle or declaring it at an end, it is nevertheless possible to reconsider its structure in relation to a constitutive topic that is, doubtless, presupposed as determined in every one of these instances and as determining with respect to each of these structures, but is itself not simply a chapter of the "metaphysics of presence" or of metaphysics in general. This is the topic of the *relationship* between the finite and the infinite and the *availability* of the infinite as such. This topic, as it has been pursued in the actual discourse and discoveries of mathematicians since the Greeks, is not primarily or generally undertaken on the basis of an idea of the "constitutive finitude" of the subject, human, self, or person, but it has obvious *relevance* for any conception of time that is criteriologist in the sense that Aristotle's is: that is, for any conception that relates time essentially and constitutively to the possibility of its counting and measuring. For if the conceptions of Aristotle, Kant, Hegel, and Heidegger himself *each* recurrently reformulate, as Derrida suggests, the circle of the criteriologist definition of time as givenness to finitude and its critical undermining by means of the question of the basis of its giving, each also presupposes, in presupposing the very possibility of *counting* time as such, the *availability* of number, as such and "in general" for the counting. To presuppose this is in itself to presuppose one determinate conception of the relationship between the finite and the infinite or another, and the necessity of the presupposition effectively opens the question of the constitution of time to the effects of the investigation of the infinite that is, in many ways, constitutive of mathematics as such. As we have already suggested (chapter 5 above), the ultimate consequences of this investigation in twentieth century mathematics and logic, in unfolding and decomposing the structural idea of an effective procedure on which the concept of a regular "progression to the infinite" rests, are such as to call into question the very ideas of completeness and consistency with respect to the constituted abilities of a finite agent. They thereby suggest a certain kind of displacement of any conception on which the capacities of such an agent are constitutive of the infinite as such, or (seen another way) point to its insistence, in what Godel called the "inexhaustibility" of mathematics, beyond anything that can be simply ascribed to the forms of its givenness to such an agent. This is not, in itself, to break the circle that recurrently links the "metaphysics of presence" to its own internal critique on

the basis of given time; but rather to resituate it on rather different ground which also (as we shall see) puts it in relation to a wholly different "text."

In particular: if Aristotle can, then, define time as the counted number of motion on the basis of the criterion of the soul as the agent of counting, he is only able to do so by assuming the availability of number *to anyone* and *in general* of the numbers that count. The implications of the assumption are particularly evident when Aristotle considers the objection that, if time is dependent on counting, without the soul there would be no time:

> Whether if soul did not exist time would exist or not, is a question that may fairly be asked; for if there cannot be some one to count there cannot be anything that can be counted, so that evidently there cannot be number; for number is either what has been, or what can be, counted. But if nothing but soul, or in soul reason, is qualified to count, there would not be time unless there were soul, but only that of which time is an attribute, i.e. if movement can exist without soul, and the before and after are attributes of movement, and time is these qua numerable.

> One might also raise the question what sort of movement time is the number of. Must we not say 'of any kind'? For things both come into being in time and pass away, and grow, and are altered in time, and are moved locally; thus it is of each movement qua movement that time is the number. And so it is simply the number of continuous movement, not of any particular kind of it.

> But other things as well may have been moved now, and there would be a number of each of the two movements. Is there another time, then, and will there be two equal times at once? Surely not. For a time that is both equal and simultaneous is one and the same time, and even those that are not simultaneous are one in kind; for if there were dogs, and horses, and seven of each, it would be the same number. So, too, movements that have simultaneous limits have the same time, yet the one may in fact be fast and the other not, and one may be locomotion and the other alteration; still the time of the two changes is the same if their number also is equal and simultaneous; and for this reason, while the movements are different and separate, the time is everywhere the same, because the number of equal and simultaneous movements is everywhere one and the same.

> Now there is such a thing as locomotion, and in locomotion there is included circular movement, and everything is measured by some one thing homogeneous with it, units by a unit, horses by a horse, and similarly times by some definite time, and, as we said, time is measured by motion as well as motion by time (this being so because by a motion definite in time the quantity both of the motion and of the time is measured): if, then, what is first is the measure of everything homogeneous with it, regular circular motion is above all else the measure, because the number of this is the best known.

It is notable that Aristotle considers the objection, but also that he does not answer it straightforwardly. He is willing on the one hand to endorse the claim that time is dependent on the soul, but tries, on the other, to limit the consequences of this by appealing to the possibility of coordinating the counting in such a way that the individuality and the temporal limitedness of the soul does not matter. If time is the counted number in, or of, a motion, it will be present only when, and insofar as, there is a counter. This would seem to imply that there could be many times, corresponding to the various souls or motions, and that time does not indeed have the character of being "in everything, both in earth and sea and in heaven". But both conclusions can be blocked, on Aristotle's argument, if it is possible to *coordinate* the measurements of the individual motions by means of a standard that is regular and uniform. If two spans that are simultaneous (hama) can also be "equal" in that they begin and end at the same moments, they are not two simultaneous times but the same one. But even if two times are not simultaneous and are thus different they can be equal by being the same "length" of time. The identity is akin to the identity of the number 7 in the groups of seven dogs and seven horses; the groupings are of different things, but there is nevertheless something in common in their measure. In both cases (extending the metaphor) the measure depends on the particular unit; thus, as groupings of horses must be "measured" by the horse, so time must be measured by something "homogenous" with it. This something is the regularity of a circular motion, which functions as a standard for the counting of time that is everywhere and to everyone accessible (not accidentally, it is the "best known" of motions). The regularity of the motion implies the possibility of using it in general to measure time, which possibility it both creates and regularizes: the regular motion of the heavenly bodies serves as a standard that is accessible to everyone living "under the sun," watches and clocks are to be synchronized. It is implicit in this that the regular standard is as such repeatable, anywhere and at any time, and is moreover accessible to anyone in general. Aristotle finds the form of this standardization in circular locomotion, which is structurally and identically *iterable*, capable as such and by the simplicity of its form of being repeated anywhere in general, and at any time.

In thus appealing to the possibility of a general structural iterability, Aristotle limits or modifies the consequences of the dependence of time on the soul's activity of measurement by submitting it to another condition that is also implicit in the activity of measurement in general, that of the general availability of the *standard* and its repeatability *ad libetum*. Like the availability of number for counting, to which Aristotle compares it, this availability is *in principle* unlimited: it is only if one can assume that the standard is always available, and everywhere, that it will be usable at all; only in this way will it be possible to vindicate the claim, which is surely correct, that time is not only or just "in the soul" but is *also* "in everything, both in earth and sea and in heaven". In appealing to the standard or using it, one applies in a particular case a structure that is in itself self-similar across *all* the cases of its particular application and is always and in general applicable. Both the (unlimited) *potentiality* of this possibility of application and its *unlimitedness* in principle determine equally its structure: even if the standard is not actually applied everywhere and all times, it must be possible to do so, and this possibility must never give out. The appeal to the standard which blocks or modifies the problematic implications of Aristotle's identification of time with the soul's particular activity of measuring is thus inherently and structurally related to the specific structure of the infinite, here under the particular conception of the *indefinitely* repeatable as such. As such, if Aristotle can avoid the further consequences of saying that time is simply

motion or what is measured in the measuring of it, it is because he can appeal to the relationship, both identical and metaphorical, of this application of the standard to the use of number in counting, and thereby to the (metaphorical or actual) identity of this availability with that of number. In terms of this analogy or identity, it is crucial that number is, as such and in itself, iterable in two senses: both in the indifferent availability of one and the same number, say 7, to serve for the measure of distinct groups of different kinds of things, and in the indefinite possibility of generating numbers themselves by iterating the "plus one". In both senses, the standard itself is determined as indefinitely iterable, everywhere and in general, and this indefinite iterability is essential to the very structure of counting as such that is not only criterial for time, according to Aristotle, but generally definitive of it.

There is good reason to think that this indefinite accessibility of the standard, as the possibility of counting, is itself determined, in Aristotle's discourse, by a particular conception of the infinite and *its* availability to thought. To begin with, the account of time given in *Physics*, book 4, is both preceded by and visibly prepared by the discussion of the infinite in book 3. Over the course of this discussion, Aristotle argues that it is not possible for any actually completed infinite magnitude to exist and hence, as a consequence, that no actual material object can be infinite in size. This is because the infinite by addition exists always only potentially and never actually; what is infinite in this sense has the character of "always" being able to be added to but is never an actually existing infinite in the sense in which a sculpture exists as complete and actual. This does not preclude, however, that continuous magnitudes are divisible *in infinitum*; indeed, Aristotle suggests in introducing the topic of the infinite, the specific character of the infinite is first and most directly shown in connection with the continuous. Nor is it to say, however, that there is not the infinite at all and in some sense; indeed, Aristotle lists five considerations that point to its existence, and to the "many absurdities" that would result if it did not. The fifth and most telling of these is the consideration that "not only number but also mathematical magnitudes and what is outside the heaven are supposed to be infinite because they never give out in our thought."

This is related to the other considerations in favor of the infinite that Aristotle introduces: that the limited always finds its limit in something else, that "coming to be and passing away do not give out," that magnitudes are infinitely divisible in a mathematical sense, and indeed to the consideration that he places first, that time, in its phusis, is infinite. Aristotle never disputes this claim, either in book 3 or in book 4; nor does he challenge the structurally determining relationship he points to here between this infinitude of time and the character of numbers such that they "never give out" in thought. Rather, his strategy is to *reinterpret* this determinative "never giving out", both of number and of time, in terms of the distinction between potentiality and actuality:

> The infinite exhibits itself in different ways–in time, in the generations of man, and in the division of magnitudes. For generally the infinite has this mode of existence: one thing is always being taken after another, and each thing that is taken is always finite, but always different. Again, 'being' has more than one sense, so that we must not regard the infinite as a 'this', such as a man or a horse, but must suppose it to exist in the sense in which we speak of the day or the games as existing things whose being has not come to them like that of a substance, but

consists in a process of coming to be or passing away; definite if you like at each stage, yet always different. But when this takes place in spatial magnitudes, what is taken persists, while in the succession of time and of men it takes place by the passing away of these in such a way that the source of supply never gives out.

The characteristic of "never" giving out that is characteristic of both number as thought and time as counted is thus interpreted, not as pointing to the source of both in some principle or basis of plenitude which underlies it, but rather as the boundlessness of a potentiality that is never fully exhausted in the completeness of its actualization. This is the potentiality of what, in its taking, "always" involves takes something "outside" itself. In the taking, what is taken is, as such, finite. But it can always again be taken, and the taking is in each case "always different". The "always" that is applicable here to magnitude as such is not applicable in the same way to things that may exist fully and actually, such as bodies, whose being comes to them "like that of a substance." Nevertheless, it is in a certain way the specific formal basis of potentiality as such, for bodies and substances that can exist in full actuality just as much as for *taken* processes and magnitudes for which, as Aristotle says, the "source of supply" of the possibility of taking "never gives out." For even in the case of fully actual beings, their potentiality precedes their actuality as the principle of *its* coming-to-be; the transition from potentiality to actuality is the form of the coming-to-be and, in this way, the procedural or temporal *basis* of determinate being. Here, as Aristotle elsewhere suggests, potentiality is opposed to actuality as matter is opposed to form; the subsistence of matter in form amounts, on the one hand, to the determining possibility of its coming to be actual and, on the other, to the substrate of its *actual* being, its determinate being thus-and-so and thereby its being measurable, as finitely determined and within always finite limits.

In the measurement of finite things, they are determined to be thus and so; for example, a distance is determined as having some finite extent, or a span of time between two events is determined as having some length. What is determined in the determination cannot exceed the finite, even if the possibility of determination itself always goes further than any finite limit. This is what allows Aristotle to argue that the potentiality divisibility of magnitudes and times in *infinitum* does not imply the actual existence, as underlying stratum, of any infinitely determined point; and in this way to resolve or foreclose the aporias of the actual constitution of the continuous from the discontinuous. But if the idea of potentiality can serve Aristotle, in this doubled fashion, as both the principle of coming-to-be of limited things and the basis of the *unlimited* possibility of their measurement as being thus-and-so, there nevertheless still arise certain formal antinomies characteristic of the assumed character of the unlimited possibility of measurement itself, and in particular the character of its *always* being possible, or its *never* giving out.

What, in particular, is the form of this potentiality: what guarantees the "always" of the unlimited possibility of continuation, and the "never" of the "never giving out", both in the case of number as thought and time as counted? How does one know, in general, that the possibility of counting will "always" continue, that the "source of supply" will "never" subside? Assuming the terms of the analysis, this question does not simply involve the structure of counted time, for it applies just as much to the measured magnitude of spatial and other continuous quantities. Nevertheless it is "temporal" in either case, and even in a pre-eminent sense. For what is here thought as the general form of an unlimited

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potentiality of "taking" in measurement is thought, in either case, as the unlimited potentiality of the *serial* continuation of an iteration, the endless possibility of repeating what is in some way the "same". In the passage just quoted, Aristotle describes the mode of existence of the infinite as that in which "one thing is always being taken *after* another" and indeed in such a way that what is taken is "always finite, but always different". Both the "after" and the "always" are, here, irreducibly temporal, as is (indeed), as we have seen in connection with Aristotle's use of the hama, the basis of the assumption that what is taken is as such always finite. But if Aristotle can here claim that the taking is *of* what is again and again different, the possibility of the taking is in general guaranteed, as we have already seen in connection with the specific analysis of time as the number of motion, only by the subsistence or availability of what is again and again the same.

The possibility of the iterative "taking" of difference, to which Aristotle here points as the basic character of the infinite, is thus itself dependent on a more basic repetition of the self-identical same, whose irreducibly spatial/temporal figure Aristotle finds, as we have seen, in the repetition of circular motion. By means of the same argument, the possibility of the infinite to comprehend the different in general is thus subsumed, or subtended, under a more structurally basic principle of identity, the repetition of the self-identical in its regular series. With this, the tendency of becoming to produce or induce difference is itself controlled, placed under the assurance of a regularity, constrained within the boundaries of a limit that guarantees that it can always be measured. This is already the structure of the measurement of spatial distance, which presupposes the serial applicability of a standard that measures the unit, as when a meterstick is applied repeatedly to the span to measure it. Here, as Aristotle says, measurement is the measurement of what remains in coexistence when the measurement is taken; even the spatial case is thereby essentially determined, as Derrida points out, by the actually irreducibly spatial *and* temporal category of coexistence. But the case of the actual "measurement" of the span of time between two moments, where what is continuously or repeatedly taken in the measuring, as Aristotle says, does not continue to exist in the present but rather is such as to "pass away," brings out the underlying aporia of identity, repetition and difference in yet a clearer and more direct way. This aporia is, as Derrida suggests, nothing other than the aporia of the existence of the "now" in its constant "coming to be" and "flowing away," and as such defines the multiply aporeatic structure of the presence of the present as such.

What consequences follow, if these aporias are not arrested, foreclosed, or avoided, as they are in Aristotle's text, but rather brought to light and formalized? The formal *problematic* that leads to them is then visible as a more general structure underlying them in the structural relationships of the ideas of the finite, the infinite, repetition, identity and difference, continuity and discontinuity as these are unfolded in the mathematical thinking of number itself. Here, the specific idea of the infinite as always only potential, on which turns Aristotle's whole analysis, is recognizable as grounded in *one* particular conception of the givenness of number; but it is not the only one, and alternatives are to hand in the mathematical or metamathematical unfolding of the problematic relationships of these ideas in concrete thinking about the mathematical finite and infinite that articulate the paradoxes and point to their more original structure. What is more, just as Aristotle's specific conception of the infinite as potential determines the temporality of what is for him the being of becoming as well as the temporal

form in which the being of the finite becomes known in measurement, each of these alternatives will suggest alternative images of time, each one articulated according to the paradoxical structures of limitedness and unlimitedness that insist in them, though differently in each case. Because of this insistence of the paradoxes of the finite and the infinite in each case, it will no longer be possible to think any of the structures involved as both wholly consist within themselves and complete in the sense of offering a unified and coherent schema for the application of mathematical thinking to the structure of time; rather, the structural question of the *applicability* of number to time becomes integral to the *topic* of the mathematical or metamathematical reflection on these constitutive ideas.

Methodologically, this has a consequence that is in fact already suggested by Derrida in his analysis of Aristotle: number or the mathematical in general can no longer be presupposed as simply exterior to the being of time, or opposed to it in the way that Aristotle does, as the counting number to the counted number, or as the determining is opposed to what is thereby determined. Rather, since the general possibility of the "unlimited" application of number to the determining or thinking of time determined as more or less itself becomes a topic for mathematical reflection on the finite and the infinite as such, the topic of the being of time can no longer be excluded from the proper scope of this reflection as accident is excluded from essence or as matter is opposed to form.

Henceforth, it will be of the *essence* of time that it be counted, or at least that it be determinately and originally related to number in *its* original givenness, and not simply as what is to be determined is related to what determines it. Without reducing it to "being" simply a mathematical object, it will then be possible to affirm that time is, at any rate, not *simply* extra-mathematical; at any rate it is not extra-mathematical in the sense in which horses or dogs, for instance, are extra-mathematical, even though, as Aristotle points out, the numbers of their groupings may be counted and compared.[1] But by the same

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[1] Cf. Derrida: "[For Aristotle] time is a numbered number…This means, paradoxically, that even if time comes under the rubric of mathematics or arithmetic, it is not in itself, in its nature, a mathematical being. It is as foreign to number itself, to the numbering number, as horses and men are different form the numbers that count them, and different from each other. *And different from each other*, which leaves us free to think that time is not a being among others, among men and horses." (p. 58-59). According to Derrida, moreover, this exclusion of time from the *being* of the mathematical is possible only on the basis of the argument, ambiguously itself both mathematical and non-mathematical, by means of which the "now" is treated as accidental and only potential with respect to the continuity of time in itself: "Like the point in relation to the line, the now, if it is considered as limit (peras) is *accidental* in relation to time. It is not time, but time's accident … The now (*Gegenwart*), the present, therefore, does not define the essence of time. Time is not thought on the basis of the now. It is for this reason that the mathematization of time *has limits*. Let us take this in all possible senses. It is in the extent to which time requires *limits*, nows analogous to points, and in the exent to which the limits are always accidents and potentialities, that time cannot be made perfectly mathematical, that time's mathematization has limits, and remains, as concerns its essence, accidental. A rigorously Hegelian proposition: let us recall the difference between the present and the now." (p. 61). According to Derrida, the mutual exteriority of mathematics to time, and hence the claim of the inherent limit of possible mathematization with respect to , will thus have been determined, in a way continuous from Aristotle to Hegel, by the same thought that excludes the present from the flow of time by thinking it as its limit. In fact, in light of the present analysis, it is probably possible to draw out the connection even further, and to question on its basis the specific way in which the consequences of formalism, or of mathematization in an extended sense, are *standardly* put out of commission, arrested or ignored in considerations of the structure of time, not only from Aristotle to Kant to Hegel but also in Heidegger and even (it must be said) in Derrida himself.

token and for the same reason, it will no longer be possible to exclude the mathematical in *general* from the "topic" of time. If this exclusion, whereby the mathematical as such has been maintained as separated from all possibilities of becoming and as the extra-temporal in itself, though it remains in an obvious way determinative of them, remains determinative for metaphysics as such, it is here possible to begin to grasp the possibility of an overturning or reversal of it within the ambit of a retrospectively more basic thinking of the being of finitude and the infinite themselves. Here, moreover, the constitutive figure of the infinite in its relation to finite time is not thought, in the characteristic mode of ontotheology, as an infinite-absolute, austerely removed from becoming and change. Rather, it is to be unfolded in the specific logical and metalogical structures that are indicated in the inherent paradoxes of mathematical being and its specific relation to finitude. With this, the characteristic discourse of the *phusis* or metaphysics of time, which Derrida suggests is structurally continuous from Aristotle to Heidegger, is made to communicate integrally with another kind of text, the text of mathematical reflection, or of a mathematical dialectic which is presupposed in every concrete application of the concept of number in counting time but is not itself simply "metaphysical" in this sense. The implications of this mathematical or formal text thereby also become relevant, in a direct way, to the "ontological" problematic of the original relationship of being and time, and the internal or external possibilities it structurally poses for the reversal of the "metaphysical" determination of this relationship are thereby more originally shown.

Even though it may seem to be presumptively and officially excluded in this context by Heidegger himself, the relevance of such a development of the mathematical and metamathematical problematic for the ontological relationship of being and time could be verified in many ways in reference to Heidegger's texts. Here, I will just point to one place in which it is obviously relevant: Heidegger's most extended discussion of Aristotle's "treatise" on time, in *The Basic Problems of Phenomenology*. Heidegger here reads Aristotle as drawing out, with his concept of time, the determinate consequences of a specific interpretation of what it is to be *in* time: namely, that it is to be an object of nature, of the sort that is shown by our "natural" experience of things and of time itself. This is what, according to Heidegger, determines that he will privilege the character of local motion as the basis for his analysis of the structure of time in itself; for it is in such motion that time indeed most naturally and basically measured and experienced. Nevertheless, equally and at the same time, Aristotle holds that time is "in the soul", and this raises the *question* of how it can indeed *also* be everywhere and in all things. The question is particularly insistent, Heidegger notes, at the point at which, in concluding the whole discussion, Aristotle poses the question about whether time, as counting, would or could still exist without the counter. According to Heidegger, he does not resolve this question but merely "touches on it"; nevertheless it points, in the ontological context of Heidegger's own inquiry, to the further question of "*how* time itself exists." And this question, Heidegger argues, is not to be settled on the basis of any determination of time as "subjective" in belonging to the subject or as "objective" in being basically determined by number. Rather, though an "unending dialectic can be developed here", no progress is made unless we get clearer about "*how* the Dasein's being itself is," and in particular how it is connected to the specific phenomenon of world. Because of and in this connection, "everything extant that the Dasein encounters is necessarily intraworldly, held-around [con-tained] by the world." (p. 255). In particular, to resolve the specific aporia of time *as the counted,* it is necessary to attend to the way in

which Dasein's original being is already being-in-the-world, and so that conditions for the possibility of Dasein's being affected by objects in general, such that they can be measured in local motion, are themselves rooted in its structural transcendence, its openness toward the world as such. Nevertheless, Aristotle's indication of the numerical character of time is here treated as decisive, and even as something to be preserved in the course of the analysis that goes toward the more fundamental structure of underlying temporality:

> The numerical character of the now and of time in general is essential for the fundamental understanding of time because only from this does what we call intratemporality become intelligible. This means that every being is in time. Aristotle interprets "being in time" as being measured by time. Time itself can be measured only because on its part it is something counted and, as this counted thing, it can count itself again, count in the sense of measuring, of the gathering together of a specific so-many.

> At the same time the numerical character of time entails the peculiarity that it embraces or contains the beings that are in it, that with reference to objects it is in a certain way more objective than they are themselves. From this there arose the question about the being of time and its connection with the soul. The assignment of time to the soul, which occurs in Aristotle and then in a much more emphatic sense in Augustine, so as always thereafter to make itself conspicuous over and over again in the discussion of the traditional concept of time, led to the problem how far time is objective and how far subjective. We have seen that the question not only cannot be decided but cannot even be put in that way, since both these concepts "object" and "subject" are questionable…It will turn out that this manner of putting the question is impossible but that both answers – time is objective and time is subjective – get their own right in a certain way from the original concept of temporality. (p. 256)

After this, there follows an analysis of the derivation of the "natural" and "common" understanding of time, as it is evident in the use of a clock to measure time, from the more "original" and underlying structure of Dasein's own temporality. This is essentially an extended version of the analysis of the derivation of "world time" from the original ecstatic-horizonal temporality of Dasein that is given in *Being and Time*.

The analysis will lead Heidegger to suggest the prior rooting of the possibility of the kind of measuring of time that occurs in clock-reading and clock-using in the original temporality of the ecstases, by which Dasein gives itself and takes time for itself; in this original temporality, Heidegger suggests, we move constantly in a "silent discourse: now, not until, in former times, finally, at the time that, before that, and so forth." (p. 259). The derivation of the unlimited possibility of measurement that is characteristic of clock-time and world-time as so determined is therefore possible only on the basis of a levelling off or privation of the basic character of significance, in terms of which, as Heidegger argues in Being and Time, time is always basically understood, in relation to Dasein's projects, as "time to…" Nevertheless, in locating the possibility of measured clock time in the prior structure of Dasein's temporality in this way, Heidegger nevertheless neither doubts nor challenges the universality of the *applicability* of time measured, on its own level, to *all* beings in general. This is the universality that shows up in Aristotle's

development of the "numerical character of the now and of time in general", and it is from *this* character, and it alone, according to Heidegger, that the intratemporality of beings in general becomes intelligible. The generality of this intratemporality is not to be denied: indeed, every being is in time. And even if Aristotle's particular determination of it in terms of the possibility of the measuring of local motion causes the aporeatic question of its "subjective or objective" nature to arise in a particularly sharp form, the general form of the analysis, as an analysis in terms of the form of access to the phenomenon which is itself taken to prescribe the definition of the phenomenon itself, is not in question. It is only, here, to be deepened by undertaking a more ontologically basic analysis of this underlying form of givenness itself.[2]

As we have already seen in chapter 6, there are questions to be raised about the coherence of the "derivation" of world-time from fundamental temporality, insofar as this fundamental temporality is specified or specifiable as the *individual* Dasein of authenticity and projects whose fundamental and individuating horizon is death. Whereas, on the one hand, it is mysterious how any collection or colligation of such individual projects could *itself* yield the general and intersubjective time of the standard applicable to every such Dasein "simultaneously", on the other it is not obvious on the basis of this conception *how* the in-principle infinity of countable time is projectable or coherently applicable to events and phenomena taking place before the existence of any individual at all, or as they would be if no Dasein existed. As was suggested there, these problems can be ameliorated or even in large part resolved if we may take "Dasein" to be, in the relevant sense, not an individual at all, but rather an inherent structure of disclosure or of its formal-structural conditions, the inherent structural configuration of the interlinked possibility of sense and truth that Heidegger later thinks as the "open", which is not any longer the (individual) Dasein but rather its structural form and underlying condition.[3] As we are now in a position to see, however, this original structure, as much mathematical, cosmological, or logical as it is "ontological" in the sense of the "fundamental ontology" of Being and Time, also stands in an original and *basic* relationship to the structure of number and its givenness as such. This relationship, though it is not developed explicitly by Heidegger in the course of his analysis of the ontological problematic, and though it draws upon and unfolds the ideas of the finite and the infinite in a way wholly different from the way that they are developed in *Being and Time* itself,[4] is also not opposed to anything suggested in that analysis, particularly if we can take the analysis of Dasein there already to gesture, in a certain sense, in its direction.

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[2] "…the Aristotelian definition of time does not contain a tautology within itself, but instead Aristotle speaks from the very constraint of the matter itself. Aristotle's definition of time is not in any respect a definition in the academic sense. It characterizes time by defining how what we call time becomes *accessible*. It is an *access definition* or *access characterization*. The type of definiendum is determined by the manner of the sole possible access to it: the counting perception of motion as motion is at the same time the perception of what is counted in time." (pp. 256-257).

[3] Because of Heidegger's later overcoming of the structure of transcendence (see chapter 4 above), it is also no longer a *condition of possibility* for the individual Dasein. It is not opposed to the "actual" Dasein as potentiality is opposed to actuality in general, but rather really inherent in it as a structural-ontological moment, more or less in the sense of what Deleuze will call the "virtual". (For more discussion of this kind of inherence, see chapter 9).

[4] But much closer, as we have seen, to their development in *Kant and the Problem of Metaphysics.*

In particular, with respect to the analysis of the "basis" of world-time in Dasein's ecstases that is offered there, the problematic of the finite and the infinite as it figures in the very basis of the possibility of numbering and counting is an *equally* "primordial" one, articulated along a different dimension but just as "foundationally" significant to the analysis of Dasein's structural relationship to the possible givenness of sense and time. Sense is projected, and the agent of the projection is (in some sense) Dasein, but the individual Dasein is neither the creator nor the controller of sense. Rather, in speaking or understanding a language I am always already in relation to possibilities that are not simply my own, and which I understand as pre-existing me and indeed capable of continuance beyond my own death. Sense is thus *real* in that it inheres in beings, in themselves and as they are in themselves; and this is equally (or eminently) the case, as well, for their mathematical structure and the temporal possibility of their repetition or continuance beyond the specific conditions of my own life and death. And similarly for time itself: even if my time and the horizon of my possibilities is set by the limitative conditions of my birth and death, it does not follow that I do not understand the time of my life as situated within the broader structure of time that pre-exists me and will continue after me. These fundamental structural possibilities do not need to be understood as corresponding to an ontic being that exists eternally, or to a place of eternal existence structurally subtracted *from* time, in order to be comprehended in terms of their more basic formal structure. Rather, they are illuminated, as I have suggested, in an irreducibly twofold way, both by the analysis of the underlying structure of the individual Dasein which is "in each case mine" and by the anonymous conditions revealed in the internal mathematical consideration of the problematic of the finite and the infinite, with which the larger problematic of the relationship of being and time is, as I have argued, irreducibly in communication.

In the next two sections, I will attempt to verify some of the implications of this communication of the ontological problematic with the text of mathematics in its reflective consideration of itself by drawing on the work of two philosophers who themselves consider Heidegger's problem in terms of the structurally interrelated problems of "mathematical existence": Oskar Becker and Albert Lautman. As I shall argue, the work of these philosophers verifies, in different ways, that the relevance of the text of mathematics, *including* its own internal development of the ideas of the finite and infinite, and the continuous and discontinuous, are immediately and as such relevant to the ontological problematic of being and time. This relevance is itself not new, since it is presupposed more or less explicitly in *all* "mathematical" thinking of time and becoming; but from Aristotle up to the twentieth century, it is put out of play or arrested, immobilized and held in a fixed form by the standing assumptions that Aristotle himself inaugurated: that number itself relates to time only as the counting to the counted or as the general form of calculability to what is calculated in it, that the counting of time is primarily or basically the numbering of motion on the basis of regularity whose own form is not questioned but which guarantees its calculability in general, that there can be, under these conditions, no *actual* infinite, even for thought. Along with the mathematical text itself, these assumptions *continue* to dominate thinking of time and being just as much and without any *essential* change even when space is re-thought by Descartes, by means of a reconsideration of the Aristotelian physics that is also in a certain way its repetition, as pure calculable extension, and even when the physics of matter and motion is subjected to the significant internal complication of the actual inherence of the infinitesimal which appears to be a consequence of the differential calculus, in Leibniz and Newton. Nevertheless, as I shall argue, they are

transformed and also displaced in a fundamental way in twentieth-century mathematical thought, first and foremost by the train of consequences that result from Cantor's demonstration of the possibility of a coherent mathematical thought of the *actual* infinite.

Many of the consequences of this demonstration are not difficult, in themselves, to observe, since they are visible in the internal paradoxes and external disputes that would mark the development of reflective mathematical thinking over the next few decades, in particular in its relation to the old question of the logical or extra-logical "foundations", which could now, in the wake of both Cantor's discovery of the transfinite and Frege's quantificational logic, be pursued under a new methodological impetus and with renewed vigor. These consequences would play out, in particular, in the structure of foundational paradoxes, such as the paradox of Burali-Forti and Russell's paradox, which were developed in quick succession from Cantor's development of set theory, in the logicist project of Frege that attempted the renewed definition of the being of number on a purely logical ground and in the form of its ultimate failure, and again in the "foundationalist" debate of the 1920s between formalism and intuitionism, which mobilizes in a direct and profound way conceptions of the mathematical being of time or the temporal being of mathematics, and was only resolved or overcome (and in a fashion unsatisfactory to both parties) by means of Godel's own profound metalogical results in the early 1930s. The relevance of the issues discussed and debated in each of these moments to the "ontological" problematic of being and time already taken up by Aristotle is direct and obvious. To begin with, and perhaps most obviously, the problem of the existence of the (discontinuous) now to the line and to continuity in general is nothing other than the problem of the continuum, which was put on a new foundation by Cantor's investigations into point sets and also led him to formulate the continuum hypothesis and labor, fruitlessly as it turned out, to prove or disprove it throughout the last decades of his life.

Subsequently, the methods developed by Dedekind and others for defining real numbers in general in terms of sets of sets led to, on the one hand, the determinacy of real numbers as such being put on a new formal basis and, on the other, foundational worries about the "impredicativity" of any such definition that were developed in a critical and limitative way by intuitionists such as Brouwer and those sympathetic with them (such as Weyl). More generally and broadly, the Cantorian demonstration of the coherence of the actual-infinite and its positive accessibility to mathematical thought sets in motion the train of formalization and reflection about mathematical proof and truth that culminates in Godel's theorems and in the idea of the nature and limits of effective processes that they bring to essential articulation. As I have already suggested (chapter 5 above) and will try to verify in the following, the ultimate implication of this development *for* the ontological problematic of being and time lies in its demonstration of the undecidable as a positive and constitutive phenomenon, and of its constitutive and problematic relationship to the logical idea of consistency, which of course determines the determining form of specifically logical thought from Aristotle on. Relatedly but somewhat differently, the undecidability of the continuum hypothesis in terms of the foundational axioms of ZF set theory itself positively witnesses the inherence of the aporia of the continuous and the discontinuous, just where Aristotle himself attempts to block or foreclose it. Subsequently, undecidability in both senses must be taken to articulate the very structure of any structural unfolding of the finite and the infinite as

such. As such it points as well to the underlying character of time, and to the actually positive thought of the undecidable as inherent in all (countable and measurable) time as such, and to its reality as an actual inherence that can no longer be treated as possibility or dunamis over against actuality as effectiveness, but is instead the structurally indicated real of ineffectivity itself.

II

The mathematically informed work of Oskar Becker and Albert Lautman on Heidegger's philosophy and the problems raised therein has received relatively little attention in Anglophone scholarship. For instance, Becker's important early work, *Mathematische Existenz*, published in 1927 in the same issue of the *Jahrbuch fur Phaenomenologische Forschung* that also contained the first publication of Heidegger's *Being and Time*, and reflecting Becker's close engagement with Heidegger arising out of his participation in Heidegger's courses and seminars in Marburg, has never been fully translated into English, and the first translation of Lautman's main works into English appeared only in 2011. Yet as I shall attempt to show in this paper, Becker's and Lautman's work on the nature of mathematical existence and the implications of mathematical practice, in constant dialogue with Heidegger's fundamental questions of the meaning and truth of Being, points the way to important new ways of understanding Heidegger himself and yields unanticipated directives and new resources for making progress with some of his most important questions. These include the question of the thinking of Being from out of, and beyond, the ontological difference, the ultimate nature of truth as unconcealment or *aletheia*, and the original structure of time as it is given both in history and in nature.

At first glance, interpreting Heidegger in close connection with the question of mathematical existence, as both Becker and Lautman do, may seem a problematic enterprise in several different ways. Heidegger himself famously and repeatedly rejected any direct application of mathematical or formal-logical methods to the problems of the meaning and truth of being, and the "Platonistic" interpretation of mathematical objects as timeless or sempiternal existences represents for Heidegger a primary and guiding instance of the tradition's interpretation of Being as presence, which Heidegger would constantly oppose. But for both Becker and Lautman, the question of mathematical existence is not primarily the question of the ontological status of mathematical entities, but rather that of the possibility of mathematics itself – that is, of the possibility of a science in which it is possible to know that which was called, from ancient times, the *mathemata,* that which can be transmitted across languages and cultures without remainder or loss, and for this knowledge to be applied to the world as comprehended by the natural sciences and understood in its fundamental regularities.
And this question in fact retains a methodological and thematic priority for Heidegger, in several different ways. First and perhaps most obviously, within the later Heidegger's interpretations of the history of Being after the mid-1930s, the contemporary epoch of the dominance of technology and enframing is seen as possible only on the basis of the dominance of an understanding of the world based on mathematical natural science and prepared through the thoroughgoing mathematization of nature.   Here, the decisive possibility of a mathematically based, calculative understanding of abstract

space and matter has the significance of a projective pre-understanding that makes possible the regime of the unified calculability and manipulability of beings in accordance with the overarching values of efficiency and productivity, a regime which, Heidegger suggests, represents the culmination of the metaphysical tradition in its ever-greater forgetfulness of Being. But second, and more deeply, this link between mathematization and metaphysics is by no means limited, for Heidegger, to the last historical stage of the metaphysical tradition, but is in fact already decisive in producing the very possibility of a natural-scientific understanding of the world, a possibility that is already prepared, according to Heidegger, through the conception of time and measurement that emerges at the beginning of Western thought, in Plato and Aristotle.[5]

If, in particular, already for Aristotle, "time is the number of motion," the tradition's understanding of time unfolds, throughout its itinerary, in close and determinative connection with the mathematical possibility of measurement, counting, and the givenness of a structure of numerical order, a structure that is conceived ambiguously as given from outside temporality and yet as constituted within it (for instance by the constitutive activity of the soul, the mind, or the transcendental subject in counting and measuring). From Aristotle up to Husserl, this ambiguous mathematical conception of the givenness of time determines as well, according to Heidegger, the general possibility of the epochal projection of beings by which the disclosure, sense and meaning of entities is determined in specific domains of scientific praxis and the discrete epochal regimes of the history of metaphysics; in each of these cases the fore-projection of the character of beings as determined by what appears to be a privileged entity is itself prepared by the conception of time, already present in Aristotle, that sees time as a sequence of measurable, present "nows". As we shall see, Becker and Lautman find at the basis of this Aristotelian definition a more original Platonic problematic of the givenness of time as the possibility of number and measure, the limitation of the *apeiron,* to which the obscure Platonic doctrine of the Ideal-numbers apparently answered. If this more original schematization can indeed be seen as ontologically underlying the possibility of the measure of time and the givenness of the world of nature it numbers, this points the way to an ontologically unified understanding of the basis of natural time as equiprimordial with the historical time of eventality, and in a certain way permits them to be understood (in ways that go beyond the letter of Heidegger's text) on a unified ontological basis.

In each of these ways, the problem of mathematical existence poses in a radical fashion the question of temporality itself. As we shall see, Becker and Lautman's different ways of posing this question point the way to what is in certain respects a radicalization of Heidegger's inquiry into the ontological structure of time. What most emerges from this is that the resources of a metalogical discourse whose methods and reflective specificity in the twentieth century have often been difficult to place are liberated for an improved ontological understanding of the problem of projection, of the possibility of the fore-structure of understanding by which we always already have obscure access to the sense of Being in itself, and of the possibility of all ordering that always has a specific relation to the metaphysics of presence and the interpretation of Being in beings.

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[5] HCT, p. 5.

Oskar Becker's work *Mathematische Existenz*, published in 1927 in the same issue of the *Jahrbuch fur Phenomenologische Forschung* that contained the first edition of Heidegger's Being and Time, undertakes to investigate the "being-sense" [*Seinsinn*] of mathematical phenomena through the research methodology of "hermeneutic phenomenology," here understood as "ontology" in Heidegger's sense of a "hermeneutics of facticity" (p. 1) In particular, according to Becker, it is essential that the question of the meaning of mathematical existence be posed in relation to the structural basis of factically existing "human Dasein," which, Becker follows Heidegger in suggesting, provides the foundation for the unity of all possible interpretation of meaning. (p.1) Thus, the interpretation of mathematical existence must always refer back to the phenomenological interpretation of the mode of life in which the activity of "mathematicizing" (*mathemaitikeusthai*, analogously to philosophizing or making music) takes place and it is the structure of this life that must provide the ultimate guideline for understanding its deliverances or productions. (p. 1) However, as Becker acknowledges, since ancient times *mathema* has also had the sense of objects and objectivities existing in themselves, quite independently of human activity, and even bearing the strong temporal determination of being eternal or timeless. (p. 2) Even if this interpretation does not ultimately prove correct in the course of the hermeneutic interpretation, it has provided the conceptual context of the most usual way of interpreting the existence of an "external world" that is "obviously ruled and illuminated, in unsuspected ways, by mathematical harmony," and must accordingly be taken into account in the context of a more fundamental phenomenological inquiry into the ontological structure of the natural world. (p. 2) In fact, as Becker suggests, this inquiry may reveal the "objects" of mathematics as, in a peculiar but substantive sense, "transphenomenal," and even in a certain way "beyond being" and thus as testing the very boundaries of phenomenological interpretation itself. (p. 3)

Becker takes the basic directive for his interpretation of the sense of mathematical existence from the (then-contemporary) debate in the foundations of mathematics between the formalism of Hilbert and Bernays and the intuitionism of Brouwer and Weyl. Because of the decisive way in which the structure of the infinite enters into foundational research through Cantor's set theory and other advances of nineteenth and early-twentieth century mathematics, the question of the nature and accessibility of the infinite is crucial to this debate and its possible resolution. For the formalist, access to formal-mathematical structures, including infinite ones, is possible only on the basis of a "proof theory" that sees mathematical proofs as, themselves, combinatorial mathematical structures that are necessarily finite; in the most extended sense, the accessibility of a mathematical structure or object (including infinite and transfinite ones) is guaranteed by the existence of a finite, non-contradictory proof within a specified, axiomatic system. This gives rise to the problem of demonstrating the noncontradictoriness of particular axiom systems and of providing axioms which allow the noncontradictory specification of infinite sets and totalities; for Hilbert, this provision allows for the Cantorian hierarchy of transfinite numbers actually to be demonstrated and guaranteed. For the intuitionist, by contrast, no mathematical object or set is demonstrated to exist unless, and until, it is concretely provided to the actual intuition of the mathematician. Moreover, for the intuitionist, in a basic sense, "only finite discrete wholes" can be so given. (p. 7) The infinite, for instance the infinite series of whole numbers, can be given only through what Weyl calls a "basic arithmetic intuition" of the unlimited *possible* progression of the series 1, 2, 3, 4...; more generally, according to intuitionism it is possible to give an

unlimited series of natural numbers only insofar as it can be specified through a finitely intuitible formula (for instance, the series 1, 4, 9, 16… through the formula: n^2). (pp. 8-9)

Becker develops the contrast between the two approaches by considering the nature of various types of infinite series. In addition to series that we can consider to be determined by a well-defined and known mathematical rule expressible in a finite formula, we can also imagine another kind of series known as a "freely becoming choice series"["*frei werdenden Wahlfolgen*"] (p. 8). Such a series is, for instance, the series of numbers 1-6 determined in random fashion by successive throws of a die. As Becker emphasizes, it is essential to such a series that it develops only over time and it is thus nonsensical to speak of its properties except at a particular stage of its temporal development. For instance, with respect to the question whether a "6" appears at any stage in the series determined by successive die throws, it is impossible to answer this question affirmatively or negatively at any specific stage (assuming a "6" has in fact not yet appeared). This suggests to the intuitionist that the law of the excluded middle admits of "certain exceptions" in the realm of infinite series (p. 9); in particular, it is not always the case that, for a specific property E and an infinite sequence F, the statement "Either there is, in the series F, a number with the property E or there is not" is an exhaustive disjunction. Moreover, according to the intuitionist this denial of the general applicability of the law of the excluded middle can be generalized to the question of the decidability of arithmetical and other unsolved mathematical problems (for instance the problem of whether there are more than 5 primes of the form 2^n+1, or the truth-value of Fermat's last theorem, both problems unsolved at the time that Becker wrote) (pp. 11-12). According to the intuitionist, therefore, in answer to the general question of the decidability of these (in fact unsolved) mathematical questions there is nothing general to say, and it is moreover impossible to determine infinite sets and structures through a general application of the law of the excluded middle or the procedure of proof by *reductio*. This leads to what are from the alternative, formalist standpoint, severe limitations on the availability of infinite totalities; for instance, there is no sense in speaking of the totality of all number-series or indeed of most non-denumerable infinite sets, and the standard Cantorian definition of the continuum as a point-set fails within the intuitionist context. Nevertheless, Becker suggests, the intuitionist limitation makes possible a phenomenologically rich theory of the continuum and the infinite as a "medium of free becoming" ["*Mediums freien Werdens*"] (p. 13) in which, as with the freely becoming choice sets, temporality plays an ineliminable and decisive role.

Given these distinctions, Becker can now specify the positions of intuitionism and formalism on the question of mathematical existence as two specific but differing criteria for the existence of mathematical entities and structures (pp. 21-31). According to the first, formalist definition, that something is mathematically existent means that it can be made thematic within a mathematical theory in which it can figure without contradiction; in line with this definition, a proof of the *noncontradictoriness* of an object or structure within an axiomatic theory suffices to demonstrate its positive existence. The second, intuitionist definition, by contrast, holds that mathematical existence requires *constructability* from certain basic concepts by specific means; here, therefore, the proof of the existence of a mathematical object or structure requires that its construction actually be carried out. Becker now offers (pp. 32-53) a series of phenomenologically based objections to the formalist position.

First, Becker suggests, Hilbert has not motivated the link between non-contradictoriness and truth. Within Hilbert's formalist approach, in fact, individual mathematical statements are not evaluable as true or false at all, but only as consistent or inconsistent with a particular axiomatic theory. The *meta*-mathematical statement that a sentence is indeed consistent with a theory may be itself be treated as true or false, but this does nothing to support the actual truth of the sentence in an ordinary sense. Second, the analogy that Hilbert draws between the formalist's method of introducing the transfinite (by showing its non-contradictoriness) and the provision of an "intuitive substrate" for imaginary numbers by Gauss is misleading. With Hilbert's method of demonstrating non-contradictoriness, nothing like an intuitive representation of the transfinite is achieved; rather, in addition to what can be directly intuited, a second, "strange" [merkwürdige] (p. 41) kind of mathematical objectivity is invoked. Seen phenomenologically, Becker suggests, this is the puzzling category of non-contradictory objectivities that nevertheless are in principle inaccessible to what Husserl called a categorial intuition; since the availability to such an intuition is, for Husserl, constitutive of formal-ontological Being, we would be justified in treating the transfinite as understood by formalism as a mysterious third realm, in between existence and non-existence, something like what Leibniz called an "amphibium between being and non-being" (p. 41). Third, even the proofs of non-contradiction upon which Hilbert relies to permit the existence of transfinite sets rely on a strong form of *complete mathematical induction*. Becker argues (pp. 47-54) that the use of induction in this form essentially demands reasoning over a totality of proofs of transfinite as well as finite length; accordingly, the procedure essentially presupposes the actual existence of the transfinite and therefore cannot be used to demonstrate it. More generally, according to Becker (pp. 69-71) Hilbert has failed to provide a "logic of truth" capable of describing the actual *presentation* of the mathematical objectivities and states of affairs in a comprehensible givenness; instead, he has provided for the supposed transfinite objectivities, at best, a "logic of consequence" that is in fact not directed toward objects at all, but rather only toward pure "legalities," formal structures of rules, that are in themselves "impenetrable in their inner structure" and about which it makes sense to affirm neither truth nor falsehood.

Even if these objections succeed and thus constitute a negative argument for the alternative, intuitionist position, the possibility of an actual *intuitive* presentation of the infinite and transfinite is still very much in question. Becker thus turns to the question of whether and how it is possible to understand the infinite and transfinite as actually given to mathematical cognition and experience. A crucial guideline for addressing this question is given by the conceptual determinants of Cantor's own conception of the hierarchy of transfinite sets. As early as 1883, Cantor had conceived of the sets beyond the finite as forming an ordered series of actually existing infinite wholes, while at the same time categorically denying the possibility of any determination of the "absolute" or unincreasable infinity, which he identified with God. In particular, Cantor initially thought of the transfinite hierarchy as generated by means of two "generation principles," which Becker interrogates as to their ontological significance, in close connection with the phenomenological/ontological idea of the infinite "horizon", as it had already been developed by Husserl, which makes available the "mastery of the infinite by means of a finite

'thought'" .[6] (p. 109) The first principle is that, to a present, already formed number, it is always possible to produce a new number by adding one; this is the familiar basis for counting with finite whole numbers, which Cantor extends as well beyond the domain of the finite. It is the second principle, however, which is decisive in producing the transfinite cardinals. It holds that: "If there is ever presented a succession of definite whole actual numbers, of which no largest member exists... a new number will be created, which is thought as the *limit* of those numbers, that is, is defined as the next-bigger number beyond those." (p. 109). In other words, Cantor's second generation principle allows the passage from one's grasp of the definite rule or law governing the creation of a particular unlimited series to the formation of a new number which is thought of as succeeding *all* of the numbers in the series; thus, for instance, the regularity of the sequence of natural numbers 1,2,3,4... engenders the first infinite number, ω.

In their ordered, hierarchical structure, Becker suggests, Cantor's transfinite sets still bear a certain relationship to the Aristotlian picture that sees the infinite as only existent in potentiality and constant "becoming," and thus denies the existence of *actual* infinite wholes. Seeing things this way, one might take at least the indeterminability of the "absolute" infinite, in the form of the "maximal" cardinal W, to be evidence for the fact of the impossibility of an *absolute* infinity ever to be given as an actually completed whole. (pp. 112-119). And as was shown by Burali-Forti, it is indeed impossible to suppose such a "maximal" cardinal to exist without paradox. Nevertheless, it is crucial to Cantor's conception that the transfinite sets are indeed understood as actually existent totalities, actually generated in accordance with the two "generation principles". In accordance with the second principle in particular, it must be possible to generate the limit of any well-defined series; thus the first infinite number, ω, is engendered along with the rest of the transfinite hierarchy. However, owing to the antinomy of Burali-Forti, it must be impossible to suppose the "absolute" infinite W to exist as the limit of *all* (finite as well as transfinite) counting processes.

As Becker notes, although this shows the transfinite cardinals (as opposed to the totality W) to be specifiable without contradiction, it still leaves very much unanswered the phenomenological question of their possible givenness. One option, on an intuitionist framework, would be simply to deny the possibility of any actual givenness of the (completed) infinite at all. This finitist option is the one actually taken by Weyl, who denies the actual existence of even the "first" transfinite cardinal ω (p. 88). In this "radical intuitionism," Weyl goes even farther than Brouwer, denying categorically the possibility and usefulness of anything like a general set theory. For Weyl, all mathematics is based in the actual progression of natural numbers; given a particular number, it is always possible to "create" [*erzeugen*] one more in intuition, but the series as a whole never comes to an end in some completed totality. (p. 88) Against this, according to Becker, we may assuredly consider properties of the series of natural numbers, determined by its legality, as a *whole*; thus we should sympathize with Cantor's affirmation,

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[6] "According to a basic insight of Husserl's, it is precisely in the nature of the infinite "open horizon", the "and so on", that infinitely many members "lie before us" [vorliegen] but nevertheless can be surveyed with *one* look. The mastery of the infinite by means of a finite "thought" – that is the sense of every "horizon". (p. 107)

against finitism, of the fundamental "right" to consider the infinite. (p. 89) In particular, Cantor acknowledges that infinite totalities cannot necessarily be grasped in a single intuition; in this respect, in fact, they are like large *finite* numbers, which themselves cannot actually be *surveyed* at a single glance or within a single, intuitive act. Nor do they need, obviously, to be "actually created" by discrete finite acts from their direct predecessors in order for us to consider their properties. (pp. 89-93). Cantor thus claims that the objection that the transfinite wholes cannot appear directly "at once" in a single intuition does not bear decisively against the existence of infinite wholes. "Nevertheless we have the right to treat finite numbers, no matter how large, as objects of *discursive human* knowledge and to conduct scientific research into their constitution; *we have the same right with respect to the transfinite numbers*." (p. 89)

Thus, it must be admitted that the impossibility of bringing transfinite wholes into intuition "all at once" does not bear decisively against their existence from a phenomenological standpoint; were this objection decisive, it would bear, as well, against even the existence of large finite numbers. In fact, as the comparison with large numbers shows, in order for the mathematical existence of the infinite wholes to be phenomenologically motivated, it is not in fact necessary that they be given "uno intentio" *as* surveyable wholes at all; all that is necessary is that there be phenomena in which they are "concretely" or "phenomenally" rather than merely "symbolically" given. But Cantor's crucial step, formulated in the second generation principle, from the reality of the (unlimited and always proceeding) counting process to that of the completed, actual transfinite sets remains, according to Becker, "extraordinary" and puzzling – is there any example of this kind of transition that can actually be drawn from concrete phenomenological research? As Becker notes, from an early stage in his work Husserl recognized the possibility that large sets whose members are not individually surveyable are nevertheless intuitable by means of a sensory "figurative moment" (*Philosophy of Arithmetic*) that allows the "running-through" of their totality in thought to be taken as completed, even without each individual being separately and distinctly considered. Later, Husserl understands this possibility of the givenness of large *finite* wholes as possible through a "categorial intuition" that yields a present but non-sensory intuition of the whole as such. In fact, within Husserl's framework even the "...and so on" of an unlimited process of counting or addition is phenomenally underwritten through the phenomenon of the "open horizon" (which, according to Husserl, has both sensory and non-sensory aspects). Nevertheless, this kind of givenness of the infinite still stops short of providing a "concrete undergirding" for the Cantorian generation principle and for the designation of the higher orders of the infinite, which, as Becker points out, one can actually pursue and carry out, at least to a certain point. It is thus necessary to find a motivation within concrete, phenomenologically understood experience for the givenness of the infinite in general, as well as for the specific givenness of at least some transfinite sets. How, then, is it possible for the Cantorian second "generation principle," which yields the successive orders of infinity, actually to be supported in concrete experience?

Becker gives two examples intended to show how it is possible, in actual, concrete experience, to pass from the awareness of an indefinitely iterable process to the actual presentation of its completion. The first (pp. 96-98) arises from the possibility of an iterated skepticism, or relativization, of specific propositions. For instance, taking a particular claim or sentence p_0, as a starting point, it is possible to

doubt that sentence, or treat it as merely relative (e.g. to particular historical circumstances). We thus form the sentence "It can be doubted that p_0" or "the truth of p_0 is merely relative" We can designate this p_1 and iterate the process, up to the whole series of sentences p p_1, p_2, p_3, ...p_n, $p_{n+1...,}$ etc. Grasping this possibility, we now have the series "It can be doubted, that it can be doubted, etc., etc.,...in an endless sequence" (and we may designate this, Becker says, p_ω). The iteration of the process of doubt, or of historical relativization, may seem an empty and unmotivated process, one that would in fact hardly occur (beyond, say, the second or third levels at least) in simply epistemological reflection. However, according to Becker, it can be made concrete and provided with an actual phenomenal reality if we add, at each level, the consideration that the formation of that particular level is actually a possible act of the "individual Dasein, in the way it each time [jeweilig] is" (p. 98). Thus the possibility of each level is given concrete motivation by reflexively returning, at each stage, to the concreteness of actually lived experience:

> There arises, therefore, a strong motivation to conceive arguments of this type in such a way that they gain more content. For instance, one can seek such a motivation along these lines: if one begins with the view that all concrete opinions expressed in the form of judgments *in the spiritual-history of mankind* are not "absolutely true," but rather dependent upon the specific contemporary historical situation, one can grasp these concrete judgments as "assertions of the 1st level" (A_1) and this position as an "assertion of the 2nd level" (A_2). Now, of course, this assertion A_2 also actually becomes something that also occurs in the process of spiritual history, therefore *now* and in the West, so it also belongs to the historical-concrete assertions in a wider sense. (This is no longer a purely empty game: the development of historiography, of the historical and "cultural-philosophical" consciousness, are themselves spiritual-historical processes). The consideration thereby formed is one about expressions of the second level, and so is itself of the third level. (Critique of historical consciousness). But it does not end there: one can also, in various ways, proceed to the fourth level. (For instance: Critique of the critique of historical consciousness, or history of the history of historical consciousness, and so forth). One therefore has a seemingly *contentful possibility of iteration*. The greater "contentfulness" of this last example was reached by turning back to the concretely historical, i.e. finally to one's own Dasein (*das eigene Dasein*), in the way it each time (*jeweilig*) is. If one pushes further this turning-back to one's own Dasein, one arrives at the conception of other closely related examples of the transfinite iteration of reflection in itself, related to the example of relativization. (p. 98)

A second example (pp. 98-101) is provided by the familiar kind of picture which includes an iterated reproduction of itself; for instance, the cover of a picture book for children depicts a scene in which a child is holding that very book, which in turn depicts itself again, etc. Of course, in actual pictures of this nature, only a finite number of iterations can, in fact, be included; nevertheless, as Becker points out, in imagination it is possible to conceive of the iterations proceeding into the infinite. Thus we can achieve an imaginative or schematic (and thus not merely "symbolic" but actually *intuitive*) presentation at least of the first transfinite level (that of ω); and we can again imagine this picture to be depicted, obtaining $\omega+1$, $\omega+2$, etc.

These examples point to a more general possibility for the phenomenological givenness of the infinite in concrete reflection and, in particular, in consideration of the standing possibility of iteration of reflection on oneself. Husserl, in *Ideas I*, had discussed the "step-characteristic" arising from iterated reflection on experience; this is a kind of "index" that phenomenologically marks the levels of reflection, reflection on reflection, etc.[7] Though Husserl himself develops this possibility of iteration only up to indefinitely high *finite* levels, it is in fact possible, Becker argues, to derive from it an "actually living motivation" (p. 102) for a particular type of iteration of reflection which can be conceived as continuing to the transfinite level. In particular, Becker considers (pp. 102-103) Karl Löwith's development of an existentially motivated kind of reflection which Löwith finds exemplified in Dostoevsky's "Notes from the Underground" and calls the "parentheses reflection" [*Parenthesen-Reflexion*]. Dostoevsky's work presents the self-dialogue of a fallen man who considers himself and his life as he has factically lived it. This reflection is fruitless and self-defeating; at a certain point, however, "just this fact," i.e. the fact that he can and does reflect on his life (even in this unfruitful and self-defeating way) itself becomes a theme for reflection. And even *this* fact, that he is considering his own reflection, can itself become the theme of reflection, and so on. All of this, moreover, takes place within the course of the concrete, factical life that was the initial theme of the reflection; in this way, the iteration of reflection gains a concrete motivation from the structure of that life itself, and in particular from the "living motivation to flee the groundlessness and nullity of one's own Dasein and to find an inner stability by means of sincere, unsparing self-examination." (p. 103). In this way the concrete structure of this Dasein itself proves to be (in a way that, Becker suggests, can be supported by Heidegger's analyses) the actual motivation for the structurally presented possibility of the iteration of reflection to the infinite, and beyond to transfinite levels.

This description of the phenomena gains further support from Emil Lask's phenomenological description of the distinction between particular contents and the categorial forms that "encompass" them. For Lask, the relationship of form to content, which allows all determinations of "validity," is analogous to a "clothing" of material with form. This process of clothing can be iterated in reflection or in iterated validity-judgments, and it thus becomes possible that, in this iterated process, the *univocity* of the concrete steps of iteration is recognized. (pp. 104-106) Analogously, in the case of the parentheses reflection, one can in fact recognize that the impulse to take "flight" before facticity has no end: in this recognition, the impulse to flight itself drives "out over the infinite" [*über das Unendliche hinaus*]. But this consciousness of the possibility of unlimited, univocal iteration through *all* finite steps is itself, according to Becker, the ωth step, and it is now possible to continue to the $\omega+1^{st}$, etc. In this way the givenness of the infinite receives structural motivation from the concrete possibilities of factically experienced life, and "one actually finds…a way from concrete, 'historical' life-motivations to a *transfinite* iteration of reflection."[8] (p. 106)

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[7] p. 101; Becker references, in particular, sections 38, 77, 78, 100, 101, 107, and 112 of *Ideas* I.
[8] Becker here considers a possible objection: as a matter of what factually occurs, we continue the process only up to a *finite* step, say n, and then *realize* that the steps can be continued indefinitely. This realization (so the objection goes) is then only the $n+1^{st}$ act; thus only n+1 (a finite number of) acts have actually taken place. However, (Becker answers), we need to distinguish the *contemplation* of the iterated inscription from the iterated

The possibility of this kind of awareness is in fact already implicit, Becker suggests, in the phenomenon of "horizon" described by Husserl; for it is precisely the nature of the "open horizon" that it yields a structure in which an *infinite* number of elements can be, in a certain sense, potentially present or ready-to-hand but which can itself be surveyable in a *single* "glance". In this sense, the meaning of the epistemological "horizon" is nothing other than "the mastery of the infinite by means of a finite 'thought.'" But with Lowith's parentheses-reflection, Lask's iteration of validity judgments, and the general possibility of grasping the standing possibility of iterating reflection on one's concrete life-situation, one gains, according to Becker, a structural motivation for the actual availability of the transfinite that is not merely "epistemological" but actually concretely rooted in the structure of factical life itself. In particular, it is in consideration of the tendency to flee one's factical existence, revealed by, these standing possibilities of concrete reflection, that the structure of the transfinite first appears and becomes concretely motivated as a structural *feature* of that existence itself.

Although the law that determines the transfinite process of reflection in its iterability up to the transfinite it itself, "according to its content," finite (as, Becker says, is every content of consciousness), it provides the reflective basis on which it is first possible phenomenologically and formally to demonstrate and grasp the *whole* of the infinite series that it permits.

The formalization that indicates this structural inclusion of the infinite in the form of Dasein's factical life is, according to Becker, to be sharply distinguished from any kind of abstraction. In fact, the method of this demonstration is, Becker suggests, nothing other than the Heideggerian device of *formal indication*, whereby what is concretely given in factical life is hermeneutically investigated according to the underlying ontological ground of its givenness in the *singular* [jeweilig] case.[9] In the phenomenological demonstration, the ultimate basis of the possibility of the formation of Cantor's transfinite sets, and at least some aspects of their ordering, becomes evident in "constructivist" terms (in accordance with Cantor's two generation principles) through reflection on the concretely experienced process of iteration of reflection. However, *by contrast* with the usual process of mathematical formalization, which results in a certain categorial "leveling" whereby, for instance, a dynamic sequence of iteration is

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inscription itself. The former is indeed finite, but the latter is *structurally* infinite. It is in this way that the finite and factical process of reflection indicates, in itself and *as* a process, the specifically infinite structure.

[9] "But it seems to us that the sense-analysis (hermeneutic analysis) of facticity can only do justice to facticity itself if it treats it in *its individuality* [*ihrer Jeweiligkeit*]. This individually existing [*jeweils so und so seiende*] life has such and such characteristic features which can and must be presented *in a certain generality*. But this requires a special kind of conceptualization, namely a "formally-indicative" (Heidegger) kind, whose "generality" lies in its directedness to the "in each case" [*Jeweilige*]. One can *also* call this "formally-indicated" being-Sense "essence" – but this "essence" is then basically different from any "*eidos*" (especially from any material *eidos*!)[9]

For us, this requires, therefore, an *interpretation of factical Being* [*Auslegung faktischen Seins*.]" (p. 183) Becker also says here, in a footnote, that one can speak of this as a disclosure of the "transcendental", provided that "transcendental" is used "more in a medieval than a Kantian sense," and identifies this sense with that in which Heidegger says in *Being and Time* (section 38) that "Being is the *transcendens*, pure and simple."

"flattened out" into the static character of a set, here the grounding of the demonstrative method in concrete, hermeneutic experience allows the essential structure of iteration to be preserved, along with its dynamic, temporal character of succession. In the formal indication of the iterated series, in particular, the "sign-function" of indication is not a generalizing abstraction, but is *itself* a "particular comportment," i.e. an actual directedness to the matters at hand[10]. Thus, for the structure to be indicated, it is thus not a question of finding a general symbolization, or a static mathematical abstraction of the usual kind; rather the "sign-function" here remains of a "dynamic" type and thereby retains the sequential and temporal structural aspects of what it indicates. [11] (p. 192)

In the formal indication of the transfinite levels through consideration of the structural possibility of iterated reflection, the series of these levels is itself thus indicated through a *particular concrete comportment* that preserves the dynamic and temporal character of the progression as it is actually given in concrete experience. In this, according to Becker, one can see again the reflexive (or hermeneutic-circular) structure of hermeneutic reflection on factical life, which is again *itself* an activity within factical life. What is thus formally indicated is nothing other than the underlying ontological structure which gives rise to the possibility of reflexive iteration itself, as this is implicated in, among other things, the iteration of symbols in mathematics; indeed, according to Becker, in the formal indication of the iterative series as such, "the possibility opens up of a deep insight into the essential

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[10] Cf. pp. 191-192: " Relative to authentic substantive claims, in life and in descriptive science, every mathematical grasping of a thing, which is closely bound up with mathematical designation (e.g. by letters), is a bodily-holding-oneself away from the object, a turning-oneself away from its actual Being. The thing becomes, in a certain sense, a bare holding-point, toward which the thread of a (generally peculiarly empty) intentionality is directed. All that is actually in view is the "object of a higher order," which is structured on the basis of the (in itself now indifferent, therefore "leveled") intentionality of the first order. These intentionalities of the first order form possibilities, by way of their equivalence, for a multiplicity of relations to be ordered with respect to one another ("multiplicity of references" (Heidegger)). The possibility of "flattening" the references in this sort of multiplicity distinguishes the mathematical-formal, in an ontological respect, from the formally-indicative. For in the "formal indication" (Heidegger) the reference-sense remains in suspense; it is not fulfilled, but also not displaced (i.e. "abstracted" (through *aphairesis*), but rather constantly is in readiness, at the ready, in a certain sense, for the *search* for fulfillment. The sign-function, the indexing in formal indication is a particular comportment; it is of a dynamic type. By contrast, the mathematical form is in itself quiet, autarkic, static; indeed, capable of fulfillment, but in no sense requiring it."

[11] "The mathematical-formal of the traditional type is recognizable precisely through this leveling of categorial differences, as opposed to the "formally indicated" (Heidegger) which cleaves to the peculiarity of the phenomenon-body like a thin plastic garment. On the other hand, even this formalization of the "indicative type" is capable under certain conditions of a certain kind of mathematical treatment. This is perhaps surprising, when one considers that the formalization of the indicative type is actually the methodological ("conceptual") basis of the interpretable human sciences [*Geisteswissenschaften*] (philology, history, and so on). In any case it is to be emphasized that this possibility of mathematically explicating the formally-indicated characters does not hold in general, but only has its ground in any specific case in the *iterative* structure of the phenomenon. Here, the possibility opens up of a deep insight into the essential character of mathematics in general, in which the iteration, "repetition" of whatever is in any respect the *same* (or *identical*) plays a decisive role." (pp. 125-126).

character of mathematics in general, in which the iteration, "repetition" of whatever is in any respect the *same* (or *identical*) plays a decisive role." (p. 192).

In this way, concrete, phenomenological research, underwriting Cantor's two generation principles on the basis of actually lived facticity, provides a phenomenological demonstration of the actual existence of the series of transfinite cardinals, at least insofar as they are "constructible" (in accordance with Cantor's second generation principle) by means of a successive grasping of the law underlying each successive, unlimited series. What, though, of the *totality* of the transfinite hierarchy (what is today sometimes called the "set-theoretical universe," V), or the "maximal" ordinal W? Can we consider this totality itself to be given through the Cantorian principles as underwritten by the concrete, hermeneutical analysis? In fact, Becker argues, we cannot. For the leap from a lower to a higher transfinite level is accomplished in each case only by reflection on the legality and regularity of the series conceived as coming "before"; in each case, it is only by considering each member of this series as generated by a law that is, in a certain way, "always the same" that we attain the essential insight that allows us to move up in reflection to the next, higher level. It is, thus, only in concrete reflection on the law determining a particular series that we are able to move up the ladder of transfinite cardinals. In the case of the (paradoxical) ordinal W, however, there is *no particular series-law* which can support such a reflection. In fact, in order to form the ordinal W in accordance with the phenomenological demonstration, it would be necessary to reflect concretely on the totality of all *possible* series-laws; but this is not possible, according to Becker, since there is no such totality. In fact, in the ordered series of transfinite cardinals, each successive series-law builds on earlier ones, but the process is "in no sense ever given in its completeness;" rather, "it is always grasped in becoming (*dunamei on*)." (p. 112) The hermeneutic demonstration, despite showing how the actual infinities of the transfinite hierarchy can in fact be generated on a factical basis, thus preserves with respect to the *absolute* infinite the intuitionist's basic conception of an unlimited and free becoming. This verifies Burali-Forti's insight into the paradoxical (and thus impossible) character of the totality W, while also vindicating the Cantorian conception of the accessibility of the transfinite cardinals in a process that nevertheless never reaches the absolute.

In fact, the circumstance that the totality W itself is not given, and cannot be given, as the limit of any definite series-law itself points, according to Becker, to an inherent complication in the transfinite process of reflection itself, which in turn provides the occasion for the re-introduction of a certain element of "freedom" and temporal futurity into the concrete process of reflection and the dynamic structure that supports it. In particular, as the contemporary work of Mahlo and Veblens had shown, in the development of the transfinite sequence it is necessary again and again recursively to define new symbols and new principles of connection between them; in so doing we must recurrently, at new transfinite stages, introduce "certain new forms of manifolds." Expressed in the terminology of intuitionism, this means precisely that the "*sequence of successively presented formal series-laws*" is itself a "*becoming sequence, whose "future" is not forseeable in advance*" [*eine werdende Folge, deren 'Zukunft' nicht voraussehbar ist*]. (p. 112). At each stage of successive complication, in other words, reflection on the legality of the series at a previous level requires what is genuinely a new and creative formation, one that is not mechanically determined at the level below. This is why the totality W can

never be thought as the outcome of reflection on the limit of a particular law; instead, according to Becker, the "*number W corresponds only to the wholly indeterminate "free" horizon of the transfinite process continued on endlessly through the two generation principles."* (pp. 112-113).

Because of this, it is possible to see in the transfinite development of the hierarchy of reflection, as determined by the two generation principles, an essential element of freedom that goes essentially beyond what was achieved by the initial "breakthrough" to the transfinite level. In this initial "breakthrough," what guaranteed the progress of insight "out over infinity" was the insight that the stages of iterated reflection are all, in a certain sense "the same"; this amounts to the initial grasping of the series-law that determines them. Here, the infinite totality thus simply has the sense of the totality of a series determined as the law-bound repetition of the same; Becker compares this to the "bad infinity" of Hegel (p. 113). But in the further development of the transfinite hierarchy, it is essential that the formation of new stages, each of which includes but in a certain sense goes beyond what has come before, involves new creative activities and cannot be thought of as completely determined by the regular process of the foregoing. Accordingly, Becker suggests, it is possible to see in the whole unlimited progression of the transfinite, which (as is shown by the actual unavailability of W) can never be completely schematized by a rule, the essential structure of a temporal process allowing a constantly unfolding future that cannot be predicted in advance:

> One guesses that the philosophical (that is, ontological) final meaning of the transfinite process thereby brought to givenness would consist in the fact that in it the phenomenon of the endless, of the foray into the unknown future, comes to its highest conceptual formation – that in it the formally-indicated schema of the true infinity comes to appear, [a schema] which never may – as Hegel so often forcefully expressed – be confused with the familiar "bad infinity" schematized through number series. (p. 113)

In this complication of the transfinite series, which thus requires at each stage new creative acts of innovation, Becker thus sees the possibility of a motivated structure of transfinite becoming that does not amount simply to the lawbound infinite repetition of the same, but actually brings into existence a genuinely creative and unanticipated future as underwritten by the possibility of concrete reflection given in the actual structure of factical life itself. The necessity for new creative acts at each stage demonstrates the genuinely open character of this ongoing temporal process of reflexive becoming, while its actual uncompleteability, in accordance with what is abstractly demonstrated by the Burali-Forti antinomy shows that the process of hierarchical reflection can never come to an end. According to Becker, this witnesses the ultimate impossibility of life "actually fleeing before itself" and thus corresponds to the "radical groundlessness" of the concrete life thereby reflected on (p. 113). This groundlessness means, in turn, that in concrete life the individual Dasein is always free to determine itself in the unfolding of a temporal process that can never be completely captured by rule.

Returning, then, to the contemporary debate between intuitionism and formalism about the possibility of the givenness of the infinite, Becker concludes that the phenomenological-hermeneutic analysis decides this debate unequivocally in favor of intuitionism. In particular, it provides a description of the actual givenness of the transfinite hierarchy, in unlimited becoming, that does not deny the reality of the vast reaches of Cantor's hierarchy but nevertheless motivates their existence concretely as an

aspect of the structure of concrete Dasein itself. By contrast, Hilbert's formalism, which sees the existence of mathematical objects as guaranteed simply by their freedom from contradiction provides no such motivation, and is accordingly to be rejected. To show this more specifically, Becker considers the different ways in which the functioning of signs in mathematics is understood by formalism and intuitionism. Hilbert's formalist mathematics is often discussed (perhaps somewhat misleadingly) as treating mathematics as a combinatorial game played with "signs that mean nothing;" in fact, Becker suggests, the phrase "sign that means nothing" is a contradiction in terms, since a sign without meaning (in the sense of being "denuded of [its] indicative function") is not a sign at all. (p. 193) But there is nevertheless something right about the phrase, in that it captures the way, in mathematical demonstration, the referential meaning of signs is held "at arm's length" and demonstration proceeds, first and foremost, through the manipulation of the signs themselves. Thus, "the ontic accent falls on the reference" [*Bezug*] and the possibilities for the manipulation and intercombination of signs in a certain sense dominate and even determine the properties of their referents. (p. 194) accordingly, here, the noesis is in a certain way "primary" over the noema (and this is quite different from, for instance, the structure of perception, in which the opposite is the case). In mathematics, as distinct from other cases of signification, the activity of synthesizing signs (for instance in an "existence proof") thus in a certain sense "produces" mathematical objects, rather than their simply being "encountered" as ideal objects in the world of ideas. This is the legitimate core of insight in Hilbert's formalist approach, according to which the regular, noncontradictory synthesis of signs *alone* is sufficient to guarantee existence; to this, of course, the intuitionist adds the notorious requirement of actual intuitability or presentability in concrete intuition. But what this requirement actually comes to, according to Becker, is that already-meaningful signs can *in fact* be synthesized in such a way as to refer to an "objectivity of a higher type." (p. 194)

Thus, although the referential meaning of the actual signs can never be ignored, as it is in Hilbert's approach, the weight of the demonstration of existence, and hence the *provision* of an actual reference, is borne by the demonstration of the actual executability of certain referentially meaningful "syntaxes" of signs, the demonstration that certain kinds of combinations of meaningful signs to produce combinations with the referential meaning of a "higher" objectivity indeed can be carried out. In other words, in mathematics, "the source of the ontic "vis" (the Being-power) of mathematical phenomena lies in the execution of mathematical syntheses (syntaxes)," and this provides the key to the resolution of the formalist-intuitionist debate in favor of the intuitionist. For:

> ...if the ontic "vis" of the mathematical lies in the execution of syntaxes, then these syntaxes must be in a stringent sense *factical*, that is, *they must be able to be actually executed*. But the "transfinite" syntaxes obviously *cannot* be executed. Hilbert's transfinite axioms express the requirement of *de facto* unexecutable syntheses ...
>
> *With this, the phenomenological analysis as hermeneutic, i.e. as interpreted from out of the Dasein, decides the disputed question about the definition of mathematical existence in favor of intuitionism.* For the intuitionist requirement that every mathematically existing object must be able to be "presented" through a construction completeable *de facto* and *in concreto* contains nothing other than the postulate: all mathematical objects shall be able to be reached through

factically completeable syntheses. And that says, more accurately expressed: genuine ("existing") mathematical phenomena "are" only in factically completeable syntaxes. (p. 196)

In Hilbert's formalist approach, the mathematical existence of the transfinite sets is seen as guaranteed simply by a proof of the noncontradictoriness of certain symbolic formations within a particular axiom system. But such a proof does not guarantee that the actual phenomenologically founded synthesis that would be needed to motivate their existence *can* actually be carried out; and in fact in many cases, owing to the necessity of transfinite induction to carry out the proof, it is clear that it cannot be. In particular, in these cases, it is impossible to consider the relevant infinite wholes to be "actually formed" on the basis of syntheses that can actually be *de facto* carried out. By contrast, within the intuitionist framework, the demonstration of actual mathematical existence always amounts to the demonstration of the factical completeability or executability of a combination of referentially meaningful signs; this demonstration allows the combination to sustain its own, distinct reference and is in fact, Becker suggests, the whole significance of the intuitionist requirement of the actual "presentability" of the objects in question. And the actual, factical completeability of reflective syntheses that *de facto* allows the progress of reflection into the infinite underwrites, as we have seen, its actual existence and its continuation into the transfinite.

More broadly, Becker suggests that the requirement of factical executibility provides grounds for resolving what he sees as a larger dispute, within which the local dispute between intuitionism and formalism is situated, between what he calls an "anthropological" and an "absolute" conception of knowledge overall. (p. 185) For the "anthropological" conception, "man (or, better: the factical human Dasein) stands at the heart of the philosophical problematic" and the phenomenon of "world" is seen as "interpretable proceeding from the sense of [man's] factical Dasein, his facticity, from which all other facticity in the world first gains its meaning [*ihre Bedeutung gewinnt*]." (p. 185) By contrast, for the "absolute" conception, "the world is there as the universe of Being "in itself", supplied with a particular organizing structure, following certain formally general laws "according to essence"." (p. 185) Becker suggests that this distinction between conceptions underlies, in a certain way, the familiar debate between idealism and realism, but in a certain sense also goes further. For whereas the familiar forms of idealism, including Husserl's transcendental idealism, interpret intentionality only in the sense of an idealized "pure I" or "I-pole" that does not bear an essential reference to concrete life (p. 186), the "anthropological" position as Becker describes it (following Heidegger) conceives of the historical Dasein as essentially "historical" and of its basic comportment as "care"; here "the concept of the pure I or pure consciousness disappears in favor of the concrete, full, authentically ontological questioning." (p. 187). This concreteness of the "anthropological" position allows the "constitution problem" of (Husserlian) eidetic-transcendental phenomenology to be replaced with a problematic in which "the objects of the world now appear as objects of care (in different ways: e.g. as already present material, as workable, as tasks, as obstacles, etc., etc.)" and "the "how" of their meaningfulness for life is what the actual manner of the "constitution" of the object achieves." (p. 187)

From this perspective, it is thus possible to reconsider the two definitions of mathematical existence given by the formalist and the intuitionist, respectively, and in particular to consider the particular mode

of "care" which each implies. As we have seen, the formalist considers mathematical existence to be guaranteed simply by freedom from contradiction within an axiomatic system and by the unlimited possibility of continued deduction that this allows. Thus:

> If one brings into view the meaning of the demand for freedom from contradiction and asks what kind of care, or more specifically what mode of care, stands behind this demand, we receive immediately the answer: care about the unlimited continuation of deduction itself. That means, also: care about the preservation of the specific mode of care which is alive in the formal-mathematical researcher. And insofar as one holds to this preservation, one ignores the question of actual existence: that something is free of contradictions says nothing about its being-sense; it says, by contrast, precisely: one can ignore this being-sense; the question about this being-sense is wholly irrelevant for the progress of mathematical science. Thus, care here does not ask about mathematical objectivity in the how of its being; it is not concerned with Being, but only with its own being-maintained….In fact, here the "idea" of mathematical existence, paradoxically, includes the possibility of a defense against being able to ask about the "existing" objectivity in its Being. (pp. 188-189).

By contrast with this, the intuitionist standpoint requires in each case, more than the simple possibility of continued deduction without contradiction; at every stage of demonstration, the actual existence of the mathematical object must be guaranteed by an actual carrying-out of the relevant synthesis, and thus the "being-sense" (i.e. the meaning of the being) of the mathematical object remains in view and is always again founded in factual life. Thus, the requirement of factical executability (the requirement that "the intuitibility of mathematical objects rests finally on the factical executability of the corresponding syntactical noeses") decides in favor of the "anthropological" rather than the "absolute" conception of knowledge:

> With this, a certain position is finally won with respect to the alternative posed earlier between the "anthropological" and the "absolute" conceptions of knowledge. Through the fact that from the uniqueness of mathematical phenomenon the necessity arises of placing execution at the center of the analysis, the individual [*eigene*] (historical) human Dasein is decisively included. Mathematics thereby is revealed as having an "anthropological" foundation.   Not a measuredly structured *universum*, "objective" in the traditional sense and existing "in itself" (as even the newest metaphysics, in whatever form, takes it to be), but rather the factical life of humans, the in-each-case-one's-own [*jeweils eigene*] life of the individual (or at least the occurrent [*jeweiligen*] "generation") is the ontic foundation, thus also the foundation for mathematics.

In this way, the phenomenological inquiry into mathematical existence itself motivates, at least with respect to mathematical objectivities themselves, a thoroughgoing foundation in Dasein, linked to the requirement of actual presentability, i.e. executability of the relevant syntaxes. However, Becker sees this result also as having profound implications for the consideration of the interlinked issues of time, decision, and finitude themselves. In particular, it is now possible to consider the implications for Hilbert's "decision question", the question of the existence of problems that are not capable of solution by finite means.

> This expresses itself in an especially heightened form in the "decision problem", which stands, not accidentally, at the center of the mathematical logic of intuitionism. For this problem is

specifically human or at least a problem for a "finite" nature (a "creature"). For Kant's "intuitive intellect" (intellectus archetypus) it would not exist. God does not need to count. (Contrary to Gauss's opinion). *Counting is much more conditioned by the essential time-boundedness of humans (more exactly their "historical" confinement)*, just as Kant had indeed already referred number back to time, that is, to what is according to him a specific human form of intuition. (section 6c, III D.) That something like a choice sequence arises step by step in time and cannot be surveyed in one moment in its whole endless extent is a direct consequence of our time-boundedness.

Thus arises the task of investigating the standing of mathematical objects with respect to *temporality*, this exquisitely *human* moment of Dasein. (p. 197)

After developing the problem of the ontological meaning of the transfinite progression, Becker next takes up the closely related problem of the constitution of the *continuum*. Although this problem is, as Becker suggests, in fact one of the most ancient problems of mathematical-philosophical thought, the phenomenological demonstration of a concrete, factical underpinning for the givenness of at least part of the Cantorian transfinite hierarchy raises the question in a new light. Becker develops the history of the problem, leading up to Cantor's identification of the continuum with a point set and his proof, through diagonalization, of the excess of its cardinality over that of any countable set. However, according to Becker, this development can only be seen in its proper ontological significance by returning to the way in which the problem of the nature of the continuum, as it appeared particularly in the problem of the nature and definition of irrational magnitudes, already played a crucial role in the methodological and thematic reflections of Greek mathematics and philosophy.

According to Becker, for the Greeks in general, the method of construction had an unquestioned priority for the demonstration of mathematical existence; the demonstration of the actual constructabilty of irrational lengths, such as that of the diagonal of the square, posed challenges to this method but did not prevent the detailed classification of these lengths by mathematicians such as (the historical) Theaetetus and Euclid:

> For [Euclid], the classification and construction of irrationals was so important because it showed how one could, by demonstrating the existence of these "quantities", progress step-by-step away from relations expressible by rational numbers. The unheard-of surprise that the discovery of the irrationals made is well-known – even if the story that Hippasos, as the betrayer of this secret of the Pythagoreans, was killed by divine force in the sea is a later invention. That something should "exist" which is not expressible by means of relations to whole numbers, something which, when one attempted to express it through the whole of number-relations, showed itself as unending (*apeiron* unlimited), seemed to threaten the thoroughgoing rule of form, the principle of order, and indeed not only in the realm of sensory, fluctuating becoming, but even in that of precisely construable Beings (those that can be grasped by *dianoia)*. The difficulty nevertheless was overcome through the precise construction and classification of the irrationals themselves; a new domain was ripped from out of Chaos and incorporated into the Kosmos (cf. Plato, Philebus 16c-18c). (p. 136)

This classification of the irrationals as lengths or magnitudes, in accordance with the constructive method, thus brought a certain measure of reassuring order back in the face of the threat posed by the apparent existence of numbers that cannot be expressed as ratios. Additionally, Becker suggests, the Greeks avoided conceiving of the continuum explicitly as anything like an actually completed whole or set of individual points or magnitudes, and thus stopped short of applying to the problem of the continuum anything like set theory in the modern sense (p. 144). The most central reason for this avoidance, according to Becker, was the desire to avoid the paradoxes and contradictions about motion and becoming that had apparently been demonstrated by Zeno to be inevitable, given the assumption that a continuous span is constituted out of an actually existing infinity of points. (p. 144) The reaction to Zeno's paradoxes of the actual-infinite developed, in antiquity, in two directions (pp. 144-45). First, the atomists developed a finitist doctrine of the continuum as divided into a finite number of very small but themselves indivisible line-segments or line-atoms; and second, drawing on precedents from Eudoxos and others, Aristotle developed, in accordance with his own doctrine of the non-existence of actual infinities, a conception of the continuum as merely potential and as coming into existence only through the successive progress of actual division of the line into smaller portions. Thus, for Aristotle the continuum is not understood as an actual, completed infinity, but rather is always understood as in a process of becoming.

This Aristotelian treatment of the continuum is closely connected, on the one hand, with Aristotle's understanding of the *apeiron* always only potential (and the correlative denial of actual infinities) and thus as given only in processes of division and counting; and on the other with his specific conception of the relationship of number and time. (pp. 145-47) In particular, according to Becker, Aristotle's accommodation of apeiron as potential arises in the context of a historical tradition from an anciently rooted and mystical conception of number as figure to the conception decisive in Aristotle's thinking and indeed in all subsequent mathematical investigations into number and the continuum, that of number as seriality and order (p. 200). On the initial, "mystical" conception, still present in Plato, number is a kind of figure that gives the possibility of measure; Becker suggests that this shift is at the root of Aristotle's polemics against Plato's idea-numbers (p. 201). Here, infinite number is basically unthinkable; for the figural character of numbers is basically understood as its being limited.(pp. 201-202) On the other hand, as Aristotle certainly grasped, the conception of number as a position in a series immediately demands the thought of the possibility of an endless procession, one that can be continued indefinitely without running to an end. Aristotle in fact sees in this endlessness a basic link not only to number and the mathematical, but to the "basic phenomenon of time." (p. 202)

As we have seen, above, time is for Aristotle i) basically continuous and becoming; ii) capable of measurement. It is through the definition of time as measurable in the sense of counting, Becker suggest, that Aristotle "tames" the *apeiron* and makes it tractable (understands its thinkability) in terms of the repetition of the same. But there is in fact a basis for i) which goes much deeper, although Aristotle does not thematize it and it appears in Aristotle's text mostly through his polemical criticism of the late Plato. The thought of time as the continuity of the *apeiron,* prior to and before the possibility of measurement has a deeper provenance in the linked conception of time and number already appears in

the somewhat obscure Platonic conception of the "unlimited Dyad" as at the root of both the existence of "number" and its "generation" in accordance with a temporal or quasi-temporal anteriority, ordering of before and after.

> The most decisive examples of the unlimited, i.e. the concrete phenomena in which we encounter it, are number and time. With this we can also include the analysis of magnitudes into parts, which belongs as an analogous phenomenon to number (*synthesis* parallel to *diaresis*).

> In this sense, the late Plato had already considered something like doubling and halving in a parallel way. Whole numbers as well as fractions originate through the genetic possibility of the *aoristos duas* (the unlimited dyad). Stenzel has made it appear very probable that the diaretic development of number generates the whole of the natural numbers as well as the (binary) fractions according to the same principle.

> This opinion of Stenzel's is anticipated by Alexander Aphrodisiensis as well as by the commentary of Simplicius on the passages of the Physics about the apeiron (III, 4, 203a15). (citations): the most remarkable aspect about this discussion is that it shows that essential determinations of the Aristotelian conception of the infinite already pertain to the "unlimited dyad", such as the *ateleutetos* (uncompleteable, endless) *proienai*, *prochorein eis to tes apeirias aoriston*, the *adialeipton*, etc.

> One can thereby conclude that already in the late Plato the progression from number as figure to number as series-member is developed, in close connection with the concept of the *apeiron* as something becoming [*eines Werdenden*]. The unlimited dyad is, according to him, the potency *generative* [*erzeugende*] of number (*duopoios*).

There is thus reason to take the Platonic synthetic-diaretic generation of the numbers from the unmlimited dyad as already answering to the basic problem which Aristotle also formulates: that of thinking the possibility of a ordering, of the "before and after" of time.

If the connection is legitimate, then the character of time as it is developed by Aristotle has distal roots in the late-Platonic conception of the *ideal genesis* of numbers, according to which, as we know from Aristotle's reports, ideas are themselves in some sense to be identified with numbers and both are explained as resulting from a process of generation or coming-into-being in relation to the more basic principles of the *aoristos duas*, or the "great and the small," and unity. In the later (1931) article "The Diairetic Generation of Platonic Ideal Numbers," Becker, developing suggestions made initially by Stenzel, argues that the generation of numbers can be considered actually identical to that of the diaretic definition of a concept by division. Stenzel had suggested, in particular, that the positive whole numbers may be seen as generated by means of a process of successive binary "division," whereby each number n, beginning with 1, generates $2n$ and $2n+1$. According to Becker, although this solution tends in the right direction, it does not explain how "ideal" (as opposed to familiar mathematical) numbers can

actually *be* ideas, and it also does not explain how ideas can thereby be thought as *dynamically* generated rather than simply recovered subsequently by analysis. As an alternative, he suggests that the ideal numbers are generated by a repeated process whereby one divides into two, but in the division the original one is "sublated" or overcome in the division. In this way, the powers of 2 (2, 4, 8, 16, etc.) can be thought of as generated by the symmetrical iteration of binary division itself, while all other numbers are seen as arising from an asymmetrical development of a diairetic tree structure (e.g. 3 is generated by the division of an initial unit, a, into two, (b and c) and the subsequent division of c into d and e, while b remains unaffected; the remaining (unsublated) elements are then three (b, d, and e).) In this way, the actual seriality of number can be seen as generated in a way that is "formally identical" to the structure of the diairesis of concepts that Plato suggests in the *Sophist* and the *Statesman*; Becker further suggests a structural analogy to the Hegelian logic of "sublation" (*Aufhebung*) in the actual temporal generation of idealities and ideal relations. According to the solution, what corresponds to the diairetically disclosed "parts" of a defined concept in the ideal number is not the number itself but its "units" (e.g. b, d, and e in the example above); in this way the formal structure of the decomposition of the idea in the definition is exactly formally analogous to the generation of the number. Becker also notes the possibility of connecting this to the structure of the division of a continuous quantity by iterated fractional decomposition to produce an exact (rational) point; in this way, the process of diairesis which results in the identification of the constituents of an idea as "monads" or "ones" may be thought to produce examples of the sort that Plato appeals to in the *Philebus*, e.g. the identification of the fixed letters or discrete musical notes from the fluid continuum of possible sounds.

We shall return to this suggestion of a connection in Plato between the genesis of numbers and ideas, as this connection figures in Plato's consideration of the problems of becoming, in section V, below. For now, though, before leaving Becker's *Mathematische Existenz*, it is useful to note one further suggestion that Becker makes there: that the conception of the infinite as potential which yields Aristotle's understanding of time as the number of motion may be seen as having even deeper roots, before Plato, in the thinking of the Pythagorean Archytas, as well as the pre-socratics Anaxagoras, Zeno, and finally Anaximander. In each of these thinkers, according to Becker, the question of time already played "a decisive role in the definition of the apeiron." For Archytas and, before him, Anaxagoras, the existence of space and entities already had, in itself, the character of the aei, or "always", of eternity. We can, according to Becker, apparently trace to Zeno the first clear understanding of this *aei* as implying the infinite repeatability, in principle, of the individual instance, as well as the idea of the infinite divisibility of continua of motion and space which yields his notorious paradoxes of motion. And before all of these, of course, Anaximander understood the principle (or *arche*) of things as the *apeiron*, or the unlimited, holding (in what may be the first direct quotation that reaches us from the pre-Socratics) that:

> "Where their arising is from, therein arises also their strife, according to necessity. For they count against one another strife and compensation according to the ordinance of time."

According to Becker, we can already see in this the origin of the conception of time which dominates Greek thought, a conception of time as the eternal, rhythmic alternation of birth and death and the repetition of the same:

> The eternal alteration, which necessarily must be thought as rhythmic, the eternal wave-crashing of birth and death – this is the *apeiron* as principle [*Prinzip*] (*arche*). [Anaximander's] statement is thus not to be thought moralistically; rather it posits a search for the expression of the endless world-process – with words that are taken from living-significance. The *apeiron* is the original power (compare Diogenes von Apollonia) that becoming never allows to cease.

In this respect, according to Becker, the Anaximander fragment already yields the prototype for the interlinked conception of the infinite and time that comes to the fore in Aristotle's developed conception of time as the number of motion. In particular, for Anaximander as well as the other pre-Aristotelian thinkers (including Plato), the sense of infinity originates from the aei, or the "always," specifically understood in each case as the eternal repetition or recurrence of the same. This endlessness of repetition is also already thought, in these original conceptions, as the decisive feature of number; and hence number is brought into a "completely original connection with time" and understood, as part of an unlimited series, as having within this unlimited horizon the character of temporality. More specifically, however, according to Becker, in all of the Greek conceptions, the relationship of number with time is thought as the eternal *repetition* of the same, the "moment" or "now" infinitely repeated in its presence. However, the previously undertaken analysis of the transfinite structure of concrete, factical reflection on facticity provides, according to Becker, a radical alternative to this. In particular, according to Becker results of Cantor, Mehlo and Brouwer demonstrate in the development of the transfinite hierarchy, at each stage, an essential *openness* that cannot be understood on the basis of the eternal repetition of the same. Here, the "progress" into the future is no longer understandable on the basis of an eternally existing substrate of present moments, each one in principle the same as the last, but as an irreducibly dynamic process of open, reflexive becoming, which Becker designates as "historical temporality." This temporality is further, according to Becker, to be seen as connected or identical to the "authentic" or primordial time that had already been described by Heidegger as the reflexive structure of Dasein through which Dasein "gives itself its time" and is in a certain way "time itself."[12]

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[12] Becker here relies primarily on the conception of time that Heidegger had expounded in his lecture on "Time" given to the Marburg theological faculty on July 25, 1924. As Heidegger suggests there and Becker emphasizes, authentic time cannot be conceived as primarily the outcome of a measuring or numbering, but must instead be grasped as a "coming-back" to "what is constantly the same unique instance," namely the "how of care" in which I "linger." In this way, time's running-forward into the future is not to be understood as an indifferent stretching-out or becoming longer; in fact, time originally has "no length in general" but is rather to be understood as containing "all time" within itself, including the very structure of its running-ahead, in the form of "momentariness" [Jeweiligkeit]. This authentic temporality, grounded in the original structure of Dasein's reflexivity, is to be sharply distinguished from the "non-historical" temporality typical of Dasein in its inauthentic everydayness; this inauthentic temporality, by contrast, is determined by measurement and by the clock. Its basic pattern, by contrast with the authentic temporality of Dasein, is set by the cycles of nature and the interpretation of processes in what is conceived as the natural world; thus, by contrast with the determination of authentic,

III

As we have seen, Becker's investigation of mathematical existence, conducted under the twofold condition of the history of Greek mathematics and the then-contemporary "crisis" of the foundations of mathematics, points to an original connection between the givenness of number and time, given and further specifiable on the level of the "ontological" problematic of Dasein. Another thinker who develops the suggestion of such an original connection of number, time, and mathematics to Heidegger's ontological problematic is the French philosopher-mathematician Albert Lautman. Despite exerting decisive influences on the work of recent and contemporary French philosophers such as Deleuze and Badiou, Albert Lautman's penetrating considerations of the nature of mathematics and its relationship to the world have, so far, received little attention in the literature on Heidegger or, indeed, in their own right. But like Becker's work, Lautman's investigations provides essential directives for an understanding of the basic Heideggerian question of the structure and givenness of time in the light of the concrete life of Dasein as well as the most important results of contemporary mathematical research.

In his essay "New Research on the Dialectical Structure of Mathematics," first published in 1939, Lautman develops the problem of the *structure* and *genesis* of mathematical objectivities, employing "certain essential distinctions in the philosophy of Heidegger" to demonstrate a specific kind of genesis of mathematical theories in what Lautman calls a "dialectic" that governs their constitutive structures as well as its concrete realization in practice. Here, Lautman (like Becker) refuses to locate the origin of mathematical objectivities and effective theories in a timeless realm of pure being, instead conceiving of the problem of the genesis of mathematical objects as intimately connected with the question of the givenness and structure of time itself. He reaches the conclusion that the capability of mathematics in understanding and influencing the physical world, and hence its application to the temporality determined by the phenomena of physical nature, must be understood on the basis of a more primary and original order of genesis, one which also yields an original, pre-natural structure of time. This original time, for Lautman (as for Becker), is grounded in the reflexive and ec-static structure of Dasein, according to which Dasein is originally "transcendent" in that it exceeds itself and in a certain sense "surpasses" beings in the direction of its always presupposed, if typically inexplicit, fore-understanding of Being itself.

Lautman's 1939 work develops the thesis of his 1938 dissertation, according to which concrete mathematical theories develop a series of "ideal relations" of a "dialectic abstract and superior to mathematics." In particular, Lautman understands abstract "dialectical" ideas as the development of the possibility of relations between what he calls (by contrast) pairs of *notions*: these are pairs such as those of "whole and part, situational properties and intrinsic properties, basic domains and the entities defined on these domains, formal systems and their realization, etc." (p. 204). The dialectical ideas that

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"historical" time, determined by a momentariness that is in each case unique, the basic characteristic of this "natural" time is the possibility of the recurrence of the same.

pose these relations do not presuppose the existence of specific mathematical domains or objects. Rather, they operate, in the course of mathematical research, essentially as "problems" or "posed questions" that provide the *occasion* for inquiry into specific mathematical existents. In reference to differing specific mathematical theories such as, for instance, the theory of sets or (in a different way) real analysis, the dialectical relationship of whole and part may be seen as posing a general *problem* which is to be resolved differently in each domain, on the basis of concrete mathematical research, and thereby partially determines the kind and structure of entities which may be seen as existing in that particular domain. Thus general problems such as the problem of the relationship of formal theories of proof to actual mathematical results, the relationship of whole to part, and (especially) the relationship of continuity and discontinuity pose conditions under which they are resolved concretely, in different ways, in specific mathematical theories; at the same time, the development of the specific theories in terms of the particular kinds of structures and entities said to exist therein points back to the general problem and articulates its own more general structure.

The problem, here, thus has a priority over its particular solutions, and cannot be reduced to them. According to Lautman, this priority is not that of an ideality existent in itself prior to its incarnation in a specific domain, but rather that of the kind of problematic "advent of notions relative to the concrete within an analysis of the Ideas." In particular, it is only in developing the actual structure and configuration of particular concrete domains, that the actual meaning of the governing Ideas is worked out; here the concrete development of particular domains does not, moreover, exhaust the general problem but rather, typically, suggests new questions and problems in other concrete domains which are also to be related to the same general dialectical structure. Lautman sees this dynamic as structurally comparable to the analysis of the concrete structure of the factical disclosure of being undertaken by Heidegger (p. 200). In particular, here, as for Heidegger, the method of analysis depends, upon the possibility of the prior posing of a *question* and on the "prior delimitation" that this involves. This need not, as Lautman emphasizes, involve knowledge of the essence of the thing asked about but is rather based in what Heidegger calls a "pre-ontological" understanding. Like the posing of ontological questions on the basis of this "pre-ontological" understanding which first makes it possible, according to Heidegger, to interrogate specific beings as to their being, the posing of the dialectical questions is not separable from the questioning of the specific, concrete, ontic beings that are involved in each case. Rather, as for Heidegger, with disclosure of the superior, "dialectical" (or "ontological") truth, the concrete structure of (ontic) beings is inherently *co*-disclosed, in particular with respect to the determination of the factual existence of the domains or regions in which they are categorically structured. In the analysis of the structure of mathematical theory, there is thus an anteriority of the global dialectical relationships "incarnated" in it to the specific theory; the priority of the dialectic is specifically "that of 'concern' or the 'question' with respect to the response." (p. 204)

Dialectical Idea, in this sense, "govern" the "intrinsic reality" of mathematical objects (p. 199). and it can even be said, using the Platonic terminology, that the reality of the mathematical objects, as concretely demonstrated in mathematical research, thus resides in their "participation" in the dialectical ideas. But as Lautman emphasizes, this sense of "participation" is quite at odds with the way Plato's conception of participation is typically understood; in particular, whereas participation is often

understood as that of an ideal model to objects which in some respect copy them, here the Ideas are understood "in the true Platonic sense of the term" as the "structural schemas according to which the effective theories are organized." (p. 199). What is at issue here is not a "cosmological sense" of the relationship between ideas and their concrete realization such as is developed, for instance, in the *Timeaus*. According to such a sense, which is fundamentally understood by reference to the concept of creation as forming or shaping, the realization of the ideas in concrete reality depends on their capacity to impose law and structure on an otherwise undifferentiated matter, itself knowable only (as Plato in fact suggests) by a kind of "bastard reasoning" or "natural revelation." (p. 199) By contrast with this "cosmological sense" of the relationship between ideas and particulars, it is essential in the case of mathematical objectivity to understand the relationship between the dialectical ideas and the particular mathematical objects as a "cut [which] cannot in fact be envisaged," a kind of "mode of emanation" from dialectics to mathematics that does not in any way presuppose the "contingent imposition of a Matter heterogeneous to the Ideas." (pp. 199-200)

In the relationship between the dialectical ideas and the particular mathematical objects, there is thus a twofold relation of priority: although problems precede their concrete solutions as questions more generally precede their answers, it is of the essence of the articulation of the concrete domains of existence that it be possible only on the basis of a prior possibility of posing the questions which receive (partial) solutions therein. The question of the determinate ontic structure of a particular entity thus always has reference back to the level of an ontological determination on which the question of its being can be posed. According to Lautman, this structural configuration is analogous or homologous to the structural "transcendence," which is, according to Heidegger, constitutive of Dasein. In particular, Dasein exhibits an "ontico-ontological" priority with respect to the fundamental difference between being and beings; because of this double priority, Dasein is both an entity with a privileged possibility of questioning about being and is structurally (ontico-ontologically) determined on this basis of this very possibility of questioning. This theory of the transcendence of Dasein is most completely developed, in close connection with the fundamental-ontological analysis of *Being and Time*, in Heidegger's 1928 essay "Vom Wesen des Grundes," upon which Lautman largely relies. In the essay, Heidegger specifies the "transcendence" of Dasein as consisting in the particular way in which Dasein, in relating to beings in its concrete, factical life, is always implicitly guided by an ontologically prior "understanding of the being of beings" in the sense of "the constitution of being: what something is and how it is". Heidegger specifies this relationship of this "pre-ontological" understanding to beings by drawing a distinction between two kinds of truth: whereas "ontic" truth is the pre-predicative manifestness of beings, including their availability to specific acts of predication and judgment, this "ontic" truth of beings is itself preceded by an "ontological truth" which first makes possible this manifestness itself. This "ontological truth" is further specified (p. 130) as the "transcendental grounding" of things through the pre-ontological understanding of Being; it is the question of such grounding that is ultimately specified in the formulation of "why" questions such as the question "why [there is] something at all rather than nothing?" (p. 130).

Thus, whereas "ontic" truth always concerns beings as they are manifest, Heidegger understands this manifestness as possible only on the basis of a prior unveiledness of being itself which is already

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involved in the posing of every general question about beings and is guided by this inexplicit, pre-ontological understanding of being, itself structurally rooted in the disclosive structure of Dasein:

> The possible levels and variations of ontological truth in the broader sense at the same time betray the wealth of originary truth lying at the ground of all ontic truth. Unconcealment of being, however, is always truth of the being *of* beings, whether such beings are actual or not. Conversely, in the unconcealment of beings there already lies in each case an unconcealment of their being. Ontic and ontological truth each concern, in different ways, *beings in* their being, and *being of* beings. They belong essentially together on the grounds of their relation to the *distinction between being and beings* (ontological difference). The essence of truth in general, which is thus necessarily forked in terms of the ontic and the ontological, is possible only together with the iruption of this distinction. And if what is distinctive about Dasein indeed lies in the fact that in understanding being it comports itself toward beings, then *that* potential for distinguishing in which the ontological difference becomes factical must have sunk the roots of its own possibility in the ground of the essence of Dasein. By way of anticipation, we shall call this ground of the ontological difference the *transcendence* of Dasein. (pp. 105-106)

This means, as Lautman points out, that an explicit, conceptual understanding of being requires an analysis of this prior structure of the disclosure of being itself; in this analysis, the being of entities is marked off and fixed in general conceptual terms, "projected in general," and "expressly been made thematic and problematic." A primary moment of this projection is, as Lautman points out, the fixation of problems in the form of questions about entities; indeed, as Lautman emphasizes, according to Heidegger a determinate and essential moment of this process is the determinate "projection of the ontological constitution of beings" whereby a specific domain or field of beings (such as, Heidegger says nature or history) is marked off by means of specifying "fundamental concepts" that subsequently make possible the "objectification" of beings in this domain and their treatment by scientific means. Specifically, in this determination of regions by means of the fixation of problems:

> …a same activity is therefore seen to divide in two, or rather act on two different planes: the constitution of the being of the entity, on the ontological plane, is inseparable from the determination, on the ontic plane, of the factual existence of a domain in which the objects of a scientific knowledge receive life and matter. The concern to know the meaning of the essence of certain concepts is perhaps not primarily oriented toward the realizations of these concepts, but it turns out that the conceptual analysis necessarily succeeds in projecting, as an anticipation of the concept, the concrete notions in which it is realized or historicized. (p. 201)

It is in the analysis of this "projection" of being onto specific domains of beings by means of the fixation of determinate problems and questions that Lautman identifies the possibility of a "general theory of [the] acts…which, for us, are geneses" (p. 200) and hence provides the essential ontological structure at the basis of the existence of mathematical (as well as other) entities in their specific conceptual determinacy.

As Lautman points out, this structure of transcendence is, for Heidegger, at the root not only of the specific "projection" of domains of entities, but also of the phenomenon of "world" in general. On Heidegger's analysis, in particular, world is not simply a totality of extant entities but always to be understood as constitutively related to the structure of Dasein, and specifically to its transcendence or (what Heidegger, in "On the Essence of Ground," suggests is the same) its being-in-the-world. In this structure, world is that "toward which" or "for the sake of which" Dasein directs and ultimately comports itself (p. 121); thus Dasein surpasses beings as a whole *toward* the world; in this surpassing "world" does not refer to a totality of beings but to the "*how" of being* of beings as a whole; this reference is in a certain sense "prior" but remains specifiable only relationally, indeed "relative to human Dasein" (p. 112). There is thus a certain paradox involved in the place of Dasein in the world. Heidegger recounts versions of this paradox as they are suggested in Heraclitus and by Kant; according to Heidegger, what is "metaphysically essential" in all existing interpretations of *kosmos*, *mundus*, and world is the reference of each of these concepts to the interpretation of the relationship of human existence "to beings as a whole" (p. 121). In this structure, the world "belongs precisely to human Dasein, even though it embraces in its whole all beings, including Dasein". (p. 112); in this respect, the world is thus structurally based on the originally reflexive/paradoxical structure of Dasein itself. Indeed, more generally, the "selfhood" of Dasein itself depends on this original surpassing of Dasein by itself in the direction of world:

> World as a wholeness 'is' not a being, but that from out of which Dasein *gives itself the signification* of whatever beings it *is able* to comport itself toward in whatever way. That Dasein gives "itself" such signification from out of "its" world then means: In this coming toward itself from out of the world Dasein gives rise to itself [*zeitigt sich*] as a self, i.e., as a being entrusted with having *to be.* In the being of this being *what is at issue is its potentiality for being.* Dasein is in such a way that it exists *for the sake of itself.* If, however, it is a surpassing in the direction of world that first gives rise to selfhood, then world shows itself to be that for the sake of which Dasein exists." (p. 121)

As Lautman emphasizes in his own interpretation, this does not mean that the world exists only as a result of the factual existence or ontic activities of humans, for "it is not necessary that the sort of being we call human …exists factically. It can also *not* be." (p. 201). But on the level of properly ontological genesis, it points, according to Lautman, to the specific relationship between logical and creative determination at the root of every possibility of the grounding of entities by means of their rational explanation *or* their creative foundation. In particular, Heidegger understands Leibniz's principle of sufficient reason as the specific *interpretation*, within a specific and delimited understanding of "being in general", of the underlying unitary conjunction of truth, ground, and transcendence; this specific interpretation, according to Heidegger, finds further application within essentially the same idea of "being in general" in Kant's determination of the reality of transcendental truth "via the unity of time, imagination, and the "I think."". But when this original unity of being and grounding is grasped on the more originary basis of the structural transcendence of Dasein, what appears behind and at the basis of the application of the principle of sufficient reason to the rational determination of entities is a more basic creative activity of founding, which itself can be understood as a structurally original freedom.

Thus, by contrast with the principle of sufficient reason itself, which Heidegger understands, according to Lautman, simply as a "logical principle," there is a deeper transcendental principle implicit in every posing of the question of "why" and specifically involved in the "rather than..." of the questions: "why something exists rather than another thing"; "why something rather than nothing":

> For Heidegger it is a transcendental principle that the determination of the entity necessarily relies on a creative freedom rooted in the ontological constitution of the being that determines. It is thus that [rational] grounding gives rise to the formation of a project of the World, in which the creative freedom of the founding power is asserted (in the dual sense of founding and foundation). (p. 203).

According to Lautman, this freedom is not ontic or empirical freedom but rather a freedom of Dasein that is structural, and thereby points back to underlying temporality itself (p. 203). The structural configuration that here indicates a deeper structure of ontico-ontological genesis at the root of both the specific constitution of particular material domains and the possibility of Dasein's possible disclosure of them is quite general, and indeed can be seen as a structural-genetic precondition for the determinate being of beings in any number of domains. According to Lautman, this account of ideal genesis can, moreover, be separated at least to some extent from Heidegger's own preconceptions linking it to the specific projects of a "human" Dasein. Thus, although Heidegger himself assuredly thinks of the genesis of the "project of the World" as founded specifically in the idea of "human" reality, it is nevertheless, Lautman suggests, possible to read his genetic conception as having the more general significance of "a genesis of notions relating to the entity, within the analysis of Ideas relating to Being" that is characteristic of the determinate ontico-ontological ideal constitution of entities *in general* and bears no necessary reference to "human" being or anything specifically characteristic of it. (p. 202).

Understood in this way, the ontico-ontological account of has general bearing on the constitution, not only of mathematical reality, but of other "domains", including that of "nature", as well. For example, even beyond Heidegger's own "anthropological preoccupations", one can and should read this account of ideal genesis as bearing (as Heidegger himself suggests) on the basic concepts of *physical* science, such as "space, locus, time, movement, mass, force, and velocity." (p. 202) Indeed, by looking beyond the "anthropological" determination of Heidegger's project in terms of specifically "human" reality, it is more generally possible to see the real implications of his structural account of genesis as bringing out the implications of mathematical philosophy for "metaphysics in general:"

> Whereas for all the questions that do not come out of the anthropology, Heidegger's indications remain, despite everything, very brief, one can, in regards to the relation between the Dialectic and Mathematics, follow the mechanics of this operation closely in which the analysis of Ideas is extended in effective creation, in which the virtual is transformed into the real. Mathematics thus plays with respect to the other domains of incarnation, physical reality, social reality, human reality, the role of model in which the way that things come into existence is observed. (p. 203)

According to Lautman, the specific kind of relationship, characteristic of mathematical philosophy, that exists between the dialectical ideas and particular domains of existence is illustrated in an exemplary fashion by the metamathematical results of Godel and those who immediately followed him, which put an end to the debate of the 1920s between intuitionists and formalists, or at least situated it on very different ground. Near the conclusion of his principal thesis of 1938, "Essay on the Notions of Structure and Existence in Mathematics," making reference both to Godel's 1931 incompleteness result and to the proof of the consistency of Peano Arithmetic, by means of transfinite induction on the length of formulas, achieved by Gentzen in 1936, Lautman suggests that the particular situation of philosophical analysis with respect to mathematical problems is illuminated by both results. In particular, both Godel's limitative result, which shows that there can be no proof of the consistency of a theory by means of that theory itself, and Gentzen's positive one, which proves the consistency of arithmetic but only, as Gentzen himself says, by means that no longer belong to arithmetic itself, bear witness to the "exigency" of the logical problem of consistency with respect to any particular theory. This marks the distinctive status of a "metamathematical" inquiry into the nature of mathematical knowledge which essentially depends on, and accommodates itself to, logical results without being simply reducible to them. It is possible, in particular, to see "how the problem of consistency makes sense" without yet being able to resolve it by mathematical means. It is within such an "extra-mathematical intuition of the exigency of a logical problem" (pp. 188-189) that the whole foundationalist debate of the 1920s has essentially taken place, and it is only by drawing on it that Godel's results were able to transform the problematic situation and place it on new grounds.

More generally, with respect to problems such as that of "the relation between the whole and the part, of the reduction of extrinsic properties to intrinsic properties," or "of the ascent towards completion," progress in general depends not simply on the application of pre-existing logical schemas or regulative logical conceptions (such as the ones governing the competing approaches of formalism and intutionism in the 1920s) to already-defined domains but rather on the constitution of "new schemas of genesis" within the concrete progress of mathematics itself. Here, the philosopher's role is "neither to extract the laws, nor to envisage a future evolution," but only to "[become] aware of the logical drama which is played out within the theories." (p. 189). In this awareness, the philosopher does not and cannot identify general *a priori* conditions for possible theories or existents; indeed, the only *a priori* element here is to be found in the specific anteriority of the general problems to their solutions in particular domains. This is, moreover, an *a priori* only in a "purely relative sense"; it consists only in the "possibility of experiencing a mode of connection between two ideas and describing this concern phenomenologically independent of the fact that the connection sought after may, or may not, be carried out." (p. 189) Some of these connections, and the mode of concern that is correlative to them as the basis for the posing of the question of their particular possibility, are visible in the historical concerns of philosophers, for instance with the relationships between the "same and the other, the whole and the part, the continuous and the discontinuous, essence and existence." (p. 189) But the mathematician's activity has an equally significant role, according to Lautman, in giving rise to new problems that have not yet been abstractly formulated. In this twofold enterprise, the task is thus not to demonstrate the applicability of classical logical or metaphysical problems *within* mathematical theories, but rather to grasp the structure of such theories "globally in order to identify the logical

problem that happens to be both defined and resolved" by its existence. (p. 189). This is a peculiar experience of thought, according to Lautman, equally characteristic of the capacity of the intelligence to create as of its capacity to understand. In it,

> Beyond the temporal conditions of mathematical activity, but within the very bosom of this activity, appear the contours of an ideal reality that is governing with respect to a mathematical matter which it animates, and which however, without that matter, could not reveal all the richness of its formative power. (p. 190)

Finally, Lautman suggests that this particular experience of exigency, by means of which general philosophical problems communicate with the particular constraints of specific mathematical domains to illuminate the "contours" of such a superior reality, can be witnessed in the late Plato's understanding of the dynamical genesis of Ideas and numbers, as it is reconstructed by the "most authoritative" contemporary interpretations of Platonism:

> All modern Plato commentators … insist on the fact that the Ideas are not immobile and irreducible essences of an intelligible world, but that they are related to each other according to the schemas of a superior dialectic that presides over their arrival. The work of Robin, Stenzel and Becker has in this regard brought considerable clarity to the governing role of Ideas-numbers which concerns as much the becoming of numbers as that of Ideas. The One and the Dyad generate Ideas-numbers by a successively repeated process of division of the Unit into two new units. The Ideas-numbers are thus presented as geometric schemas of the combinations of units, amenable to constituting arithmetic numbers as well as Ideas in the ordinary sense. (p. 190)

Following Stenzel and Becker, Lautman suggests that the diaeretic "schemas of division" of Ideas in the *Sophist* can themselves be traced, in their logical structure, to the schemas of the "combination of units" that are also responsible for the generation of the Ideal numbers. Both are then genetically dependent upon a kind of "metamathematics" which unfolds a time of generation that, though it is not "in the time of the created world" is nevertheless, just as much, ordered according to anteriority and posteriority. This ordering according to anteriority and posteriority is equally determinative, and even in the same sense, with respect to essences quite generally as with respect to numbers themselves. Indeed, following a suggestion by Stenzel, Lautman suggests that this is the significance of Aristotle's claim that (EN 1.4) the Platonists did not admit the ideas *of* numbers: since the ideal-numbers are *already* the principle of the determination of essences as anterior and posterior (i.e. as before and after), there is not (nor can there be) a *further* principle of the division of essences that is prior to or superior to this numerical division itself. In this impossibility of equipping the metamathematics of the ideal-numerical principles of anteriority and posteriority with *another* determination (a "metametamathematics", so to speak), we witness once again, according to Lautman, the necessity of pursuing the dialectic in which the mathematical problems and the ideal relations communicate with and articulate one another. In particular, in such a dialectic, and only in it, are to be found the problematic conditions and the

possibility of mutual illumination in which the more original structures constitutive of anteriority and posteriority *as such* – and hence of time and genesis, in an original sense – can be brought to light.

IV

As we have seen, beyond the general fact that both seek to illuminate the problems of mathematical ontology by reference to Heidegger's development of the "fundamental ontology" of Dasein, there are also several more specific points of agreement between Becker and Lautman. Both find in the specific reflexive structure of Dasein by which it is characterized as both ontic and ontological the conditions for the possibility of an illumination of the mode of being of mathematical objects that also illuminates, at the same time, the conditions of their possible discovery or disclosedness in factical life. In both cases, these conditions are intimately linked to the conditions for the possible disclosive openness of the world as such, as these are themselves related to the constitutive ideas of totality, infinity, and the process toward an (actually or potentially infinite) horizon. Both Becker and Lautman consider how these constitutive ideas are linked and how their linkage is illuminated by the developments following from Cantor's creation of transfinite set theory and the new kind of availability of the actual-infinite to mathematical cognition that it makes possible. Both further suggest that this provides an important clue to the original constitution of *time*. And finally, both suggest that this interconnection can itself be seen as structurally anticipated or actually developed in the methodological and thematic views of the late Plato, developed under the condition of the general question of the *apeiron* as it presented itself to him, and especially with regard to what appears there to be the description of a dynamic genesis of ideas and numbers that is structurally prior to empirical or worldly time but nevertheless constitutive of it.

As pointing to aspects of the structurally underlying connection between the specific structure of Dasein and that of time, each of these suggestions may clearly be considered significant for the broader ontological problematic within which Heidegger already situates the analytic of Dasein in *Being and Time*, that of the relation between being and time themselves. The suggestions that Becker and Lautman both make in the course of their investigations of the specific problems of mathematical ontology point, in particular, to the possibility of an ontological interrogation of the actual *being* of time as it is, and insofar as it is, *mathematically* graspable and thinkable. Such an interrogation is, as I have suggested, plausibly not only requisite for a clarification of the structural possibility of what Heidegger calls "world-time" but in fact is positively entailed in the very idea of a realist conception of time itself; here, it is plausible that the mathematical form of time does not attach to it externally or only as an accidental determinant of what is in principle non-mathematical; rather, both Becker and Lautman point to the way in which the very structure of serial order, or of anteriority and posteriority as such, *already* involve the mathematical development of number in the "ontological" problematic of being and time. In this structure, on almost any conception of it, the idea of the infinite is already involved, and its interpretation according to one or another figure will thereby determine the kind of availability with which it can be characterized in the course of an application of it to the thinking of time in itself. This suggests not only an illuminating connection between the specific developments of the idea and

problem of the actual-infinite in the wake of Cantor and the "Heideggerian" problematic, but also a more basic link of both to the illumination of the structural conditions characteristic of given time.

Nevertheless, there are also important differences between the specific conclusions that the two philosophers draw about the nature of these connections in particular. First, as we saw above, Becker's concern with the concrete situation of mathematical research led him to take up the question of the phenomenological foundation of mathematical objectivities in terms of the foundational debate, then current, between Hilbert's formalism and Brouwer's intuitionism. Because of the requirement, in order for mathematical existence actually to be demonstrated in concrete experience, of the actual "executability of factical syntaxes" and combinations of signs, Becker judged the hermeneutic inquiry to decide the debate, on the basis of the actual structure of concrete life, in favor of Brouwer's intuitionism, provided (of course) that the intuitionist position not be understood simply as finitist, but as including the possibility of an actual givenness of infinite and transfinite structures in concrete life. More generally, Becker saw this as deciding in favor of an "anthropological" orientation toward mathematical existence, one that, in connection with the decisive link that Becker demonstrates between the structure of the infinite and that of time, suggests that time itself must be understood as given ultimately through a basically "human" structure of life and experience. By contrast with this, Lautman expresses skepticism about the prevalence of "anthropological" determinants in Heidegger's own thinking about transcendence and ontology, and positively suggests the possibility of a very general ontic-ontological analysis of the ideal conditions for the articulate existence of intelligible entities quite generally that owes nothing to any specifically "human" determination. Here, what is most significant in showing the underlying structure of disclosure and world is exactly not the *actual* "executability of factical syntaxes" but rather, as Lautman says, "the possibility of experiencing the concern of a mode of connection between two ideas and describing this concern phenomenologically *independent of the fact that the connection sought after may, or may not be carried out*." And if Lautman can thereby refer to the structure of a superior dialectic of ideas that is "governing" with respect to mathematical practice although nevertheless always concretely developed within it, he does not do so by referring this practice to any methodological criterion – whether it be the formalist idea of the unlimited continuation of non-contradictory inference, or the intuitionist limitative strictures on proof – imposed from outside it by a hermeneutic condition that is simply exterior to that practice itself. Rather he aims to develop the structure of disclosure as it actually takes place within the practice of mathematicians, and finds there a remarkable *confirmation* of the ontic-ontological structure independently developed by Heidegger.

Second, Becker and Lautman conceive of the *relationship* between what both see as Plato's understanding of the ideal genesis and Aristotle's own account of time and number very differently. In particular, whereas Becker conceives of Plato's picture as articulating a kind of formal and structural *precedent* to Aristotle's development of time as the measured "number" of motion, and in particular of the hylomorphism involved in its conception of the measurement of time as depending on the external division of the continuum into discrete "now" moments, Lautman points to the inherence in Plato's dialectic of a very different kind of structure of genesis. This is not a structure of potentiality that precedes the actuality of the *measurement* of the now, but rather a fully *actual* conjoint ideal generation of the ideas and numbers in the dialectic that presides over mathematical practice. Here,

the fixation of formal relations is to be sharply distinguished, as Lautman emphasizes, from any imposition of formal structure on a matter simply exterior to it. The time of genesis that it articulates is anterior to that of actual measurement and counting, not as the potential precedes the actual, but as the *actual* precedence of the problem over its concrete development, or of the inexplicit pre-understanding that provides the actual hermeneutic basis for ontic-ontological questioning.

The two differences are related on the level of the determinations of the ultimate structure of *time* that they both suggest. In particular, if Becker can conclude from his hermeneutic of mathematical practice that intuitionism is to be preferred over formalism as a description of its temporal facticity, this is only because he sees the applicable temporal structure as essentially that of the "endless becoming" of the infinite as *Aristotle* conceives of it. The actual structure of temporality that is involved in the development of the structure of the transfinite hierarchy, and for which Becker finds a concrete motivation in the actual possibility of the continuation of reflection up to and through transfinite levels, is not either that of a fixed, static structure progressively disclosed or an infinite development by means of a static repetition of a rule (what Becker identifies with the Hegelian bad infinity). Rather it is to be understood, according to Becker, as a constant becoming with a certain character of freedom, and this is what verifies the greater relevance of the intuitionist picture and with it, the more general "anthropological" orientation as opposed to formalism. It is true that the successive progression to new transfinite levels corresponding to Cantor's second formation principle, which Becker sees as factically motivated in the structure of the possible levels of reflection, have no direct parallel in Aristotle's picture of time and becoming. And it also not that the kind of becoming they represent is to be thought, according to Becker, as simply the repetition of a rule in the unchanging medium of the *aei on*. But even so, their development is to be modelled, according to Becker, as an infinitely extensible development *in potentio* without possible completion, having its basis in the reflexive structure of finite Dasein. By contrast with this, Lautman points, as we have seen, to a "superior dialectic" of Ideas that is incarnated in mathematical practice but not exhausted by it. This dialectic is explicitly modelled on the dialectic of Ideas in Plato, and particularly on his developments of it in the later dialogues. These developments witness, as we have already seen and will confirm further in the next section, a profound engagement in the late Plato with the problems of the structure of the *apeiron* as it is available to thought, and with it, the question of its *actual figuring* in temporal becoming. Here, the figuring of the apeiron in being and in thought is not limited to its potential development in always-finite fragments; it is rather insistent on the level of the "posed problem" of the real constraint it places on the interlinked structures of thought and beings.

In Becker and Lautman's two developments of the implications of the factical hermeneutics of mathematical practice, we thus see two very different pictures of underlying temporality apparently confirmed. On the one hand (Becker) we have an unlimited structure of possible continuance that confirms an "anthropological" picture of the ultimate temporal basis of mathematical reality; while on the other we have an immediate insistence of the *aperion* – as an inherent component of the various posed problems of the one and the many, the finite and the infinite, and the continuous and the discontnous – as articulating the real structure of a prior temporality of ideal genesis that owes nothing (according to Lautman) to any specifically anthropological determination.

Can a basis for resolving this difference be found in the actual development of mathematical and metamathematical reflection? Without a doubt, the metamathematical results achieved since the heyday of the intuitionist-formalist debate in the 1920s that bear the deepest implications for both pictures are Godel's two incompleteness theorems and the closely related results of Turing about computability and undecidability. Since these results themselves turn closely on issues about the infinite, the transfinite, and the form of their availability to human thought, it is worth considering whether they bear implications for the premises of Becker and Lautman's different conceptions of the nature of the infinite as it figures in mathematical thought and practice. And since they also (as we have seen in chapter 5) clarify the very structure of mathematical knowledge, truth, and proof, they may reasonably be thought to bear closely, as well, on the issues of mathematical ontology that both take up.

As is familiar, Godel's first incompleteness theorem (in the slightly strengthened form due to Rosser) establishes that for any consistent formal theory of a certain degree of expressive power, there is a sentence (the so-called Godel sentence) which is undecidable in the sense that neither it nor its negation is provable in the system. The second incompleteness theorem shows that no such system can, by itself, prove a statement of its own consistency. Turing, considering the problem of finding mechanistic decision procedures for solving classes of arithmetic problems, showed that there are certain well-specified problem classes for which there is no decision procedure, thereby showing that there are (many) *uncomputable* real numbers – numbers whose decimal expansions are not determined by any finitely specifiabile algorithm – and that solutions to certain well-specified problems are uncomputable in this sense. Collectively, these results (and especially Godel's second theorem) have often been taken to defeat Hilbert's formalist program by showing the impossibility of giving an internal "consistency proof" for formal systems of the kind Hilbert sought and proposed as a precondition for its success. On the other hand, though, these results also give little comfort to intuitionism in its classical forms. To begin with, they cannot even be stated within *finitist* forms of intuitionism. More seriously, the forms of incompleteness and undecidability they demonstrate do not clearly invite description in terms of intuitive presentations, "free choice" sequences, and the like. Godel himself, as is well known, saw his results as evidence for an (unorthodox) Platonism, one that he also saw, in the last years of his life, as consonant with at least some aspects of Husserl's phenomenology. Most generally, although the phenomena of undecidability and uncompleteness do not resolve these debates in favor of any single, well-understood position on the reality and givenness of mathematical objects and truths, it appears that they may witness a completely different and *sui generis* phenomenon of givenness, one to which we may have to look to understand the phenomenon of the givenness of mathematical truth in general more clearly. In seeing the truth of the Godel sentence for a particular formal system, one grasps on the basis of a proof-theoretical argument what may be seen as an arithmetic truth that is *provably* beyond the capacities of that system to demonstrate, assuming it is consistent. As we have already seen in chapter 5, this suggests an inherent formal limit of the capacities of finitely specifiable systems, in relation to the irreducible "inexhaustibility" of mathematical truths that no of them is thus able to capture in its totality. Whether this is understood as pointing to an essential limitation of human cognition itself, or rather to the somewhat mysterious inherence within it of a form or possibility of

"insight" going essentially beyond finitely specifiable capacities, it is clear that it articulates in a fundamental way what can subsequently be said about the constitutive forms and ultimate structure of the possibility that truths are given to an essentially finite intellect.

Writing in 1927, Becker in *Mathematische Existenz* (by contrast with Lautman, in his works of the late 1930s) did not have the benefit of Godel's or Turing's results. Nevertheless it is noteworthy that at least *one* part of his argument there appears to receive significant further support from them. As we saw, Becker argues that the development of the transfinite hierarchy is marked by an essential character of openness or freedom, which Becker sees as grounded in Dasein's "historical" temporality itself; a consequence of this freedom is that successive stages of the transfinite hierarchy are, although determined regularly by what has come before, also in a certain sense unforeseeable in advance. In fact, the phenomena of the undecidability and incompleteness of formal theories, on which Godel's and Turing's results turn, are *intimately* related to this phenomenon of the indeterminacy (or irregularity) of the successive stages of the transfinite hierarchy, to which Becker appeals at a decisive point. As Godel himself suggested in a footnote to his 1931 paper:

> The true source of the incompleteness attaching to all formal systems of mathematics, is to be found–as will be shown in Part II of this essay–in the fact that the formation of ever higher types can be continued into the transfinite … whereas in every formal system at most denumerably many types occur. … Namely, one can show that the undecidable sentences which have been constructed here always become decidable through adjunction of sufficiently high types (e.g. of the type ω to the system **P**). A similar result holds for the axiom systems of set theory. [13]

Godel here suggests that incompleteness results, in a fundamental way, from the *possibility* of forming the extended transfinite hierarchy, which relentlessly and infinitely outstrips the possibilities for expression given in any well-defined formal system, given that every such system can formulate only *countably* (denumerably) many possible expressions. For each such system, we can (as Godel showed) always constructively generate an undecidable sentence of the Godel type; if we then add the undecidable sentence to the system as an axiom, we produce a new system, but one for which we can then, once again, generate a new undecidable sentence. We can continue the process through indefinitely many finite levels; and we can indeed, as Godel says, continue it into the transfinite, adding (for instance) a sentence which expresses the limit of this process at level ω. But at each stage, there will be further undecidabilities, and it is not possible to summarize the *whole* process in any finitely expressible form which would also be capable of telling us how to iterate it at each stage.

The suggestion of a link between the character of the transfinite progression and the incompleteness of formal systems which Godel makes in the footnote has subsequently been developed in two rather different ways. The first is the investigation of the consequences of iterating the development of successive formal systems by means of what have been called "reflection principles"; such a principle for a particular formal system is, for example, one that asserts that all of its consequences are true, or an assertion of the consistency statement for that formal system itself. The inclusion of such a principle results in the production of a new system which can prove more than the original system; the question

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[13] Gödel (1931), footnote 48a, pp. 28-29

thus arises whether it is possible, by means of such a progression of theories through transfinite levels, to prove all arithmetic truths. Feferman (1962) has shown that there is in fact a certain kind of completeness that can be achieved by a suitable (transfinite) iteration of reflection principles in this way: *all* elementary arithmetic truths can be proved through an appropriate iteration of theories. However, because the need to represent the theories involved at each stage introduces an aspect of intensionality into the iterative process, there is no unique way to specify in advance the form that such an appropriate iteration will take. This leaves very much open, for actual mathematical practice, the question that is at stake between the mechanist and the non-mechanist interpretations of Godel's results (discussed above in chapter 5): namely, whether successive insight into the truth of Godel sentences for particular theories witnesses, in each case, only the finitely specifiable capacities of the determinate formal system that *we*, ourselves, embody, or whether there is a kind of extra-mechanical insight operative in it that exceeds the capacities of any such system.

The second, rather different, development of Godel's suggestion in the footnote (and in particular its last sentence) relates to the profound set-theoretical problem of the continuum hypothesis, which Cantor already posed in his lifetime and was vehemently pursued over the next several decades. Through Godel's own results in 1940 and Cohen's in 1963, we now know that the continuum hypothesis is *independent* of the axioms of ZFC set theory: that is, neither it nor its negation can be proven by its means. This formally demonstrable recalcitrance of the CH to proof or refutation on the basis of natural axioms has often been taken to demonstrate that the CH is either (in some sense) ill-defined or simply undecidable, some researchers have continued to pursue the idea that adjoining new axioms to ZFC may suffice to resolve its status. In particular, there is some reason to believe that the adjunction of certain "large cardinal axioms" – axioms asserting the existence of very large transfinite cardinals – may provide a basis for settling the CH in the positive or negative. Nevertheless, despite some promising initial results, the "large cardinal" axioms lack the degree of intuitive plausibility characteristic of the existing ZFC axioms, and none has yet been shown to be able to resolve the question of the CH determinately one way or the other.

In these ways, both Godel's results themselves and the further development of their consequences appear to confirm the suggestion of a deep connection between the development of the transfinite hierarchy and an underlying phenomenon of undecidability or essential incompleteness which, as we have seen, Becker already made on the basis of the partial results of set theory at his time. As Becker already suggested, they verify that the iterative development of reflective mathematical theorizing can be continued, in principle, indefinitely through the transfinite hierarchy, and that at no particular stage of this continuation does the phenomenon of undecidability completely subside. It is therefore apparently possible to speak, as Becker does, of an essential "freedom" involved in this development, whether it is conceived as the successive development of the hierarchy of ordinals themselves or as that of an ordered progression of formal theories. Moreover, the persistence of undecidability even given the repeated adjunction of reflection principles appears to parallel or confirm the link that Becker already draws between this "free" character of transfinite development and the actual structure of the stages of Dasein's concrete reflection on itself, which for Becker is grounded in the essential freedom of Dasein's "historical" temporality.

As we have seen, as well, Becker further connects the "free" and endlessly developing character of the transfinite sequence to the temporal basis that he sees, along intuitionist lines, as following from the necessary temporal form of a *human* agent at its actual and factical basis. The development of what cannot be predicated all at once and in advance by finite means must be actually undertaken, by a finite agent, in its own ongoing but always finite time. Thus the specific phenomenon of the "unpredictable" or "free" development of the transfinite hierarchy is thus seen as confirming the correctness of an intuitionist picture of mathematical objectivity as irreducibly given on the basis of its factical and concrete demonstration in a human life. For Becker, the analogy to the intuitionist "choice sequences" is, here, direct. Such sequences must essentially be developed step by step over time; this is a consequence, according to Becker, of "our time-boundedness." By contrast with a divine intellect which could survey them all at once and thus would avoid the necessity of such a sequential counting or enumeration in time, both the free choice sequence and the progression of ordinal numbers, including its tranfinite development, must be given "for us" only in their sequential and step-by-step development in time. This confirms, according to Becker, the relevance to the ontological problematic of temporality as the "exquisitely *human* moment of Dasein" which can thereby be seen as conditioning all mathematical existence in general.

Do the phenomena of incompleteness and undecidability, considered as indicative of the underlying structure of the temporality of mathematical thought in relation to the truths it discloses, then further verify this "anthropological" conception of the actual temporal basis of mathematical existence? In fact, they do not. This can be seen by considering once more the general implications of the undecidability results, this time in the specific form that they receive through Turing's proof of the unsolvability of the halting problem. As we have already seen, in fact, in chapter 5, Turing's proof of the limits of any finitely specifiable formal system with respect to the decision of mathematical questions does not depend on any formulation of the typical or representative capacities or abilities of a specifically human agent or thinker. It turns, rather, on the highly general concept of an *effective procedure*, or one that can be specified finitely and can be guaranteed to terminate in a finite number of steps: although this idea certainly involves *a certain* conception of finitude, this is not a conception that depends in any sense on any essentially "anthropological" conception of specifically human capacities or faculties. In demonstrating the inherent limitations of effective procedures in this sense, Turing's result does not witness a contingent limitation of the human (or any other) intellect, but (much more) something like the necessary and constitutive limitation of the very ideas of procedures and capacities themselves; and the truth of undecidability is thus shown to be inherent in the very structure of mathematical truth, insofar as it can be thought *at all*. It is relevant to this that, in the face of the phenomenon of undecidability, the contrast that was already drawn by Kant and which Becker repeats, that between a divine intellect that is situated outside time and the human intellect situated within it, no longer applies: for example, even the divine intellect would not be in a position to specify a decision procedure for an undecidable problem. Nor, relatedly, could such an intellect render the "maximal" ordinal W non-contradictory, or eliminate the contradiction inherent in the Russell set. If these aporeatic results of metamathematical reflection are taken seriously as pointing to real structural aspects of mathematical truth, they thus already point beyond the "anthropological" conclusion that Becker draws. Admittedly,

it is always possible to reinstate the intuitionist solution, for example by simply denying, by means of finitist or limitative strictures, the formulability of the problems to which these results respond. But to do so is not to reckon with, but just to ignore, the constitutive and ideal reflection they perform and the specific underlying structures that are indicated on their basis.

Given the local terms of the intuitionist/formalist debate, Becker is probably forced to the specific conclusion he draws by his desire to avoid the formalist position, which on the one hand abstracts from actual mathematical practice and on the other conceives of mathematical objectivity in the (presumably) timeless form of abstract symbolic relations. But the overcoming of this debate on the level of proof theory through Godel's and Turing's results points the way to another way of conceiving of the relationship of time to mathematical truth, one which is neither the dependence of inquiry on time that the intuitionist centrally pronounces nor the timelessness of formal/syntactical relations envisaged by the formalist. In particular if the structural phenomenon of undecidability can indeed be taken seriously as indicative of a particular temporal structure, this is quite different than the temporal structure on which the intuitionist argument turns, that of "our" essential boundedness in time, but it is also not the simple exteriority to time envisaged by the formalist or the (banal) "Platonist." By contrast with both of these positions, the temporality of mathematical development enters here as an *essential* feature of mathematical truth; this temporality, which is *both* the temporality of constitution and of disclosure, is here characteristic of truth as such, and not simply its character as shown to or pursued by *us*. As I have already argued, in chapter 5 above, the demonstrated character of undecidability in relation to the phenomenon of the "inexhaustibility" of mathematical truth imposes the requirement of a stringent *realism* with respect to the structural characteristics of the manifestness of forms; in particular, the metamathematical results which verify the inherency of undecidability in the disclosure of mathematical truth themselves already (I argued there) formally indicate the inherent point of a structural Real that cannot be referred to any anthropologically based or simply intra-temporal production or creation. As I further suggested, the metaformal realism that is thereby indicated can itself be related to the "Heideggerian" ontological problematic, in that the structure of the formal indication of Being is itself homologous or actually identical to that of this metaformal reflection.

What is the result, then, if the metaformal realism I recommended there is applied to the problem of time as it is originally given? The answer appears to be that the demonstrated phenomena of incompleteness and undecidability themselves can be seen as indicative of underlying constitutive structures of time and its givenness, where they are no longer simply negative and limitative, but rather also positively indicative results. Thus conceived, they unfold the implications of a constitutive infinitude that is given to thought as both the general medium in which (indifferently finite and infinite) number subsists and the general form of given time, and which is subject in its very structure to undecidability. In connection with the ontological problematic, this undecidability can be seen as articulating the original form in which the givenness of something like time becomes structurally possible; and this provides a dramatic alternative to the Aristotelian conception, which (as we have seen) develops the givenness of time rather on the basis of the presumptively finite form of its intra-temporal counting. With this, it is possible to break with the whole Aristotelian picture of the determinacy of time's givenness in measurement and the actually existent "now" as mere particular

actualizations of an indeterminate potentiality, itself fully given in advance; rather than resulting from the exterior and potential application of numerical measurement to a matter originally and in itself indifferent to it, original time is rather here to be grasped as unfolded in the actual structure of number itself, as determined by and determining the ideas and paradoxes of the infinite, the punctual, and the continuous which are clarified within it by means of metaformal reflection.

This is the dialectical determination on which Lautman, in his own picture of mathematical discovery and truth, insists, and which he links to the suggestions of a prior genesis of the ideas that are visibly determinative for Plato's own conception in his later dialogues. If Lautman is prevented from drawing out all the consequences of this account of ideal genesis for the underlying structure of given time, such as it is both thinkable and real, in itself, it is because he focuses his attention on mathematical practice and does not link the procedures of "mathematical philosophy" *directly* and in detail to the ontological problematic of being and time as I have suggested here. But if the ontological problematic indeed itself can be significantly developed, as I have suggested, on the methodological basis of a metaformal realism that furthers its questions by means of a reflective interrogation of the givenness of forms, then the relationships of the superior dialectic that Lautman suggests indeed bear direct and significant implications for its indication of the underlying character of given time. The constitiutive problematics of this indication may then be seen as formally underpinning any specific idea of the givenness of being to thought as such, and as especially inhering in the systematic developments of the form of this givenness that are characteristic of this relationship as it is has been thought in the history that Heidegger designates as that of Western "metaphysics." It is to this underlying exigency of this problematic of being, becoming, and the givenness of time to thought, as it is determinately thought, prior to its Aristotelian subjection to the anthropological rubrics of intra-temporal finite measurement, in Plato's own late conception of an ideal genesis that unfolds the prior temporality of both (supersensible) ideality and (sensible) reality, that we now turn.

V

In the foregoing sections, I have developed the suggestion of a basic structural link between the givennesss of time and the structure of number, including its inclusion of the specifically paradoxical structure of the infinite or *apeiron*. I have further suggested that the question of the structure of this original link is inherently involved in the development of the ontological problematic, at the point at which it ventures to ask about the constitutive form of given time. The further development of this question, in light of historical and contemporary developments of mathematical and ideal reflection, provides the basis for a critical deconstruction or actual alternative to the criteriological or anthropological conception of counted time that determines the form in which the givenness of time is thought in philosophers from Aristotle to Kant. The alternative is posed, in large part, by developing the implications of the original structural paradoxes of becoming and its availability to thought that are foreclosed (as Derrida suggests) or avoided in the Aristotelian conception of the infinite as the *dunemei on* and in the structure of essence and accidence that he draws from it. The problem of the being of the infinite and its link to the temporal structure of becoming in itself can then be retrieved both by means

of the interpretation of the internal development of metamathematical or metalogical problematics, and also discerned at the historical foundation of the "metaphysical" interpretation of being as presence and of the mathematical/ideal as the *aei on.* In particular, as we have already seen reason to suspect, it can be discerned in thought of the late Plato, where the original problem of the paradoxical structural configuration time, becoming and the *apeiron* is (prior to and by contrast to its Aristotelian foreclosure) still alive as an actual and decisively determining problem of ontological research.

In particular, the paradoxes of the actual inherence of the *apeiron* appear in Plato's middle and later dialogues in two characteristic forms: one cosmological, and one kinematic. The first kind of paradox, investigated for example in the *Parmenides*, the *Timeaus*, and the *Sophist*, relates the inherence of the infinite to the topic of the unity of the cosmological All, whereby the very structure of its logos always ensures "at least one more" and thereby tends toward the ultimate destitution of the One-All in a logically/structurally implicit unlimited many. The second kind of paradox, investigated in the *Cratylus,* the *Philebus*, the *Sophist*, the *Theaetetus,* and again the *Parmenides*, is that of the thinkabilty of becoming and change, and more generally of the possibility of any thought at all of what is subject to the condition of temporal flux. These are what Deleuze has treated as the paradox of an "unlimited becoming" which threatens to show that it is impossible for anything to have any determinate identity, insofar as all such identities are situated within continua that structurally allow of indefinite increase or decrease. Both types of paradoxes, in introducing a basic structure of contradiction into the thought of the One as such, underpin late Plato's two-pronged attack on the Eleatic monism which treats being as the cosmological One-All and time and change as illusory and impossible. The development of this critique and the positive demonstration of the phenomena underlying its possibility allows Plato to rehabilitate and develop certain suggestions of Pythagorean ontology and by expounding the underlying problematic of the structural givenness of number to which it responds. As nineteenth and twentieth century commentaries have verified, he here draws just as much on the active researches of Greek mathematics into the structure of given number, including their responses to the crisis immediately provoked by the historic discovery of the existence of incommensurable magnitudes, such as that of the diagonal of the square.[14]

There is evidence that the development of the problem of number may be closely connected with the content of what have been called Plato's "unwritten" teachings.[15] The sixth-century neoplatonist Simplicius notoriously reports descriptions by Aristotle and others (now lost) of a lecture given by Plato on the Good: in the lecture, Plato is said to have taught that the principles of all things, including the Ideas, are the "Indefinite Dyad, which is called Great and Small" and Unity.[16] There is a suggestion in Simplicius's quotations of Poryphry and Alexander that Plato had held that Unity and the Indefinite Dyad are also the elements of numbers and that each of the numbers participates in these two principles.[17] The lecture on the Good is said by Aristoxenus to have confounded Plato's listeners, who expected a lecture on ethics but were instead treated to a discussion of numbers and geometry, leading up to the

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[14] Stenzel; Becker; Klein; Sayre.
[15] Aristotle refers to Plato's "so-called unwritten teachings" at *Physics* 209b14-15
[16] Sayre p. 76
[17] Sayre, p. 77.

claim that the Good is to be identified with Unity.[18] Beyond these second-, third-, or fourth-hand reports, there are many suggestions in Aristotle's *corpus* of the late Plato's views about the connection of forms, numbers, and the principles of unity and the "indefinite dyad" or the "great or small". Aristotle says in several places that Plato identified forms with numbers.[19] He also makes the suggestions that Plato identifies Unity with the Good (and perhaps that he identifies the Great and the Small, by contrast, with evil), and that Plato treats the "Great and Small" as matter with respect to which the One is form.[20]

In a helpful analysis, Sayre has argued that the content of the so-called "unwritten teachings" that link the problems of number with those of the structure of forms and the Good can be largely recovered from Plato's middle and late dialogues themselves, thereby illuminating Plato's final conception of the method of the dialectic and of the nature of forms and participation. It is thus not necessary, Sayre argues, to speculate about the esoteric content of the Platonic teachings alluded to by Aristotle, since they can be shown to be actually present in the late dialogues themselves. In particular, Sayre reconstructs Aristotle's statements as clearly attributing five distinct claims about forms, sensible objects, numbers, and the Great and the Small; among these are the claims that sensible objects are constituted of forms *and* the Great and the Small, and that forms are *themselves* composed of the Great and the Small and Unity.[21] As Sayre notes, while the claim that the forms are the principles or causes of sensible things is familiar from many of Plato's dialogues and is present as early as the *Phaedo*, the suggestion of a composition of the forms themselves by more basic principles would be, if it can be attributed to him, a significantly novel element of the late Plato's final thinking about them. Sayre sees this late conception as developed both thematically and methodologically in Plato's descriptions of the method of dialectic in the Sophist, the Statesman, and especially the Philebus, where at 16c-e, where Socrates describes a "god-given" method for pursuing problems of the one and the many generally, including (it appears) with respect to the distinctive unity exhibited by forms:

> Socrates: It is a gift of the gods to men, or so it seems to me, hurled down from heaven by some Prometheus along with a most dazzling fire. And the people of old, superior to us and living in closer proximity to the gods, have bequeathed to us this tale, that whatever is said to be [*ton aei legomenon einai*][22] consists of one and many, having in its nature limit and unlimitedness [*peras de kai apeirian en autois zumphuton echonton*]. Since this is the structure of things, we have to assume that there is in each case always one form for every one of them, and we must search for it, as we will indeed find it there. And once we have grasped it, we must look for two, as the

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[18] Sayre, p. 77.
[19] E.g. Metaphysics 991b9, De Anima 404b24.
[20] Metaphysics 988a7-17; Metaphysics 1091b13-14; Physics 187a17.
[21] Sayre, p. 161.
[22] As Sayre notes (p. 292) the sense of the *aei* is here ambiguous, leading to the possibilities that i) Socrates may be speaking of forms, conceived as eternal existents, exclusively of sensible objects; that ii) he may be speaking of what are said to exist "from time to time", and thus of sensible objects exclusively of forms; or that iii) both are intended. Sayre prefers the third alternative, since Plato often uses the formulation "there is such a thing is…" even in cases not specifically relating to forms, although there are also many precedents in Plato for the discussion of forms as causes.

case would have it, or if not, for three or some other number. For we must not grant the form of the unlimited to the plurality before we know the exact number of every plurality that lies between the unlimited and the one. Only then is it permitted to release each kind of unity into the unlimited and let it go. (16c-e)

On Sayre's reading, the passage is meant to formulate a methodological response to the question of how the kind of unity (monadas) that a form is can characterize indefinitely many changing particulars, without thereby becoming dispersed among them and losing its unity. The problem is a specification of the more general question of how the properties and characteristics of individuals are thinkable at all, given that they are subject to ceaseless change in time. Thus specified, the problem does not simply involve the unity of forms as such, over against sensible beings thought as completely undifferentiated or irreducibly multiple; rather, since it is also the question of how sensible things are themselves thinkable as enduring unities despite the unlimitedness of their possible change, its solution involves a unified accounting for the unity of both. Since sensory objects would, if (somehow) deprived of the relationship to Forms that allow them to be thought as distinct individuals having definite characteristics, also have no definite character and in this sense be indistinguishable from the *apeiron*, the problem is that of characterizing how determinate forms are themselves defined and gain application to the changing particulars. (p. 124) The elements of a solution to this are to be found, Sayre suggests, in the *Philebus'* development of cases (17a-e) in which a number of specific characteristics are distinguished out of a continuum of possible variation, such as the identification of particular letters from the continuum of vocables, or the identification of discrete musical notes from the continuum of sound. (p. 126) In this way, a particular discrete number of intermediate forms are introduced between the general and continuous form (for instance sound itself) and the specific instances, for which the intermediate forms then serve as measures (pp. 125-126).

As Sayre suggests, the methodology may be considered a further development of the method of the collection or division (or synthesis and diaeresis) proposed in the *Statesman* and the *Sophist*. As is suggested there, the key methodological idea is that the definition of a thing begins by collecting a number of instances of the kind to be defined with a view to discerning the general form they have in common, and then that form, once found, is further articulated or qualified by a repeated *diaeresis* or division of its several components, until a unique set of specific characteristics is identified that distinguish the particular kind of thing in question from others similar to it. As Sayre notes, however, the major and glaring difference between the description of the "god-given" method in the *Philebus* and the descriptions of the dialectician's art in the Sophist and the Statesman is that the latter two involve no mention of the *apeiron* or of the need to distinguish among indefinitely many single things or to articulate what is in itself a continuum having the character of the "unlimited" in the sense of indefiniteness. Sayre sees the account given in the *Philebus* as responding to a problem about unity and the apeiron – both in the sense of the "indefinitely many" and that of the indefinitely continuous -- that is already posed in the *Parmenides* (157b-158b). The idea of a unified collection of individual members, or a whole composed of parts, involves both that there is a sense of unity characteristic of the collection as a whole and that there is a sense of unity characteristic of each member as a unique individual; unity in both senses must be imposed on what is in itself non-unified in order to produce the determinate

structure of whole and part. (p. 64). The possibility of identifying an individual as part of such a collection must thus result from the combination of a principle of Unity, in both senses, with a contrasting principle of the indefinitely many or multitudinous, what Plato calls in the *Parmenides* the *apeiron plethos* and which, Sayre suggests, can also be identified with the (later) mentions of the "indefinite dyad" (aoristos duas) or the "Great and the Small" of which Aristotle speaks.

On this basis, Sayre can argue that the final *Philebus* account of forms and participation involves a twofold application of the imposition of Unity on the Great and Small: first, in order to produce the determinate forms themselves, and second, in the imposition of the forms thus produced, now functioning as "measures", on the Great and Small again to produce the characteristics of particular sensible objects (p. 180). If this is right, both the Forms *and* sensible things are composed from the two principles, although according to different modes of combination. This suggestion of a unitary principle of genesis ultimately underlying both the forms and their sensory participants allows Sayre to contest both of two conflicting readings of the role of the *peras* and the *apeiron* in the *Philebus*. On the first of these, the relationship between limit and the unlimited is analogous to or anticipatory of Aristotle's account of form and matter; here, the unlimited is accordingly said to be a kind of undetermined potentiality of objects to acquire certain properties (p. 137). On the second existing view, the "unlimited" is not attributed directly to objects at all, but is rather a set of concepts which admit of variation as less or more. (p. 139). Sayre argues that both views have internal problems: the first, for example, has difficulty explaining why the imposition of Unity should produce particular objects that are in some sense valued as ordered as opposed to bad or disordered elements corresponding to other points on the same continuum; but the second has difficulty explaining how the mixing of Unity and the Indefinite could produce determinate individuals and not simply determinate *types*. Both existing alternatives, Sayre argues, are furthermore difficult to square with the text. A better alternative is to construe the combination of Unity with the *apeiron* as having the twofold application, both to the generation of forms and, once again, to the specification of particular objects, that Aristotle also suggests in his own glosses on Plato's theory of forms and numbers. In each case, the combination allows for determinate *measure* to be imposed upon what would otherwise be the *apeiron* character of what would become or change indefinitely and without limit.

Already in the *Parmenides* (143a-144c) Plato suggests (in the voice of Parmenides) a basis for the derivation of unlimitedly many whole numbers from the One and the basic consideration that in considering its being, we already consider something that is different from it; hence the two of the One and Being, or the three of the One, Being, and difference. If we may consider the account of determinate measure given in the *Philebus* also to suggest views about the generation, not only of *whole* numbers, but of numbers generally (considered here as essentially cognate to "measures") as fixed, definite magnitudes, we can bring (Sayres argues) it into line with what Aristotle says about Plato's views about forms, numbers, and the *apeiron* (or the Great and Small). In particular, Sayre suggests that in developing the idea of a generation of determinate measures from the principles of the unlimited and unity (or limit) in the Parmenides and the *Philebus*, Plato has in mind also a general method of identifying arbitrarily rational *or* irrational magnitudes which is analogous to or actually derived from a

method developed by Eudoxos and later applied in book V of Euclid's Elements, where Eudoxos is said to have been "Plato's teacher." (p. 69).

The method is essentially one of approximating an (indifferently) rational or irrational magnitude by the continued development of series of fractions. Though it is likely that the original presentation of the method was in a geometric rather than arithmetic form, it is also quite possible, Sayre argues, that some version of its arithmetic development was also known to the mathematicians of Plato's time. At that time, it would have been seen as a powerful tool of classification and comprehension in the face of the problematic discovery of irrational magnitudes; and it is clearly significant in connection with this that the main interlocutor of the *Sophist* and the *Theaetetus* is the mathematician Theaetetus, who historically contributed to the initial project of classifying irrational magnitudes and thus to the background of Euclid's book V. Sayre further notes (p. 74) that Dedekind himself, in discussing his own method for defining arbitrary real numbers as "cuts" in the rationals, cites Eudoxos's method as a direct anticipation of it. If this mathematical methodology is indeed something that Plato has, more or less explicitly, in mind with his account of the production of determinate number as well as the "measure" of fixed quantities along continua, then it yields a direct mathematical basis for the suggestion of the primacy of the principles of the limit and the unlimited in producing both forms and sensory individuals with determinately thinkable properties. And – as was undoubtedly important to Plato – if the account is indeed mathematically based in Eudoxos's method, it holds up generally even in the face of the challenge to rational thought that is *prima facie* involved in the existence of the incommensurable.

As Sayre notes, there is good evidence that these ideas about measure and number are intimately linked in Plato's thought with questions about time and becoming. The general problem of the determination of fixed points or measures within open continua gains its relevance from the consideration (which Plato may have developed, according to Aristotle's testimony, from Heraclitus) that sensory objects are generally subject to flux and change, and it is thus not evident how they can be thought as having determinate properties at all. Within the general problem thereby posed of the relationship of generation and becoming to being in itself as thinkable, the problem of the structure of time itself takes on a particular significance, and (as we have already seen in relation to Aristotle) the question of the relation of continuity and discontinuity involved in the possibility of its being measured at determinate instants becomes particularly urgent. At *Parmenides* 156c-157b, after discussing the apparent paradox that the One, if it partakes of time, must be simultaneously becoming older and younger than itself at all times, Parmenides introduces the problem that the One, in going from being in motion to being at rest, must apparently pass through an instant at which it is neither in motion nor in rest; but there can be no such time. Thus, the "queer thing" that the instant [*to exaiphnes*] is seems to "lurk between motion and rest" (156d) and exist in paradoxical fashion between the two opposed states which something is in before and after it. By the same argument:

> Whenever the one changes from being to ceasing-to-be, or from not-being to coming-to-be, isn't it then between certain states of motion and rest? And then it neither is nor is not, and neither comes to be nor ceases to be?" -- "It seems so, at any rate." -- "Indeed, according to the same argument, when it goes from one to many and from many to one, it is neither one nor

many, and neither separates nor combines. And when it goes from like to unlike and from unlike to like, it is neither like nor unlike, nor is it being made like or unlike. And when it goes from small to large and to equal and vice versa, it is neither small nor large nor equal; nor would it be increasing or decreasing or being made equal." -- It seems not." (157a-b)

As Sayre notes, the argument is general, applying not only to "the one" but to *any* particular thing, considered as a unity, as well as to any change that involves going from being in a determinate state to not being in that state. If any such change is considered as continuous, there will necessarily be a temporal moment at which the thing is neither in the state nor not in it. Thus considered, the instant is something with a paradoxical nature (phusis atopos) which seems itself to occupy "no time at all". (en chrono oudeni ousa) (156e1; p. 72).

The paradox of the instant that is here demonstrated is none other than one of the several aspects of the paradoxical nature of the "now" as a *part* of time that, as we have seen above, Aristotle points out in the *Physics*. As we saw in section 1, above, Aristotle is able to resolve or foreclose these paradoxes only insofar as he can treat the "now" not as an actual part of time but only as a limit, to be defined in the actual measurement of a span but not as a really existing part of the continuity of a continuous motion (or temporal span) prior to the measurement. Henceforth, the measured "now" will be opposed to the continuity of time as accident is opposed to essence, and the guiding conception of the *dunami on* will come to govern the whole framework in which the relationship of the temporal *apeiron* to its instantaneous determination is thinkable. This conception of the nature of the instant which renders it derivative of, and essentially dependent on, the possibility of measuring motion is also what produces, as we have seen above, Aristotle's "official" definition of time as the measured "number of motion with respect to before and after." With, however, the suggestion of a rather different basis for number in the sense of measure and its application to the determinacy of forms *and* particulars that Sayre reconstructs, we are now in a position to see in Plato's late view of the dialectic the basis for a conception of the relationship of the infinite to time that is quite opposed to Aristotle's own. Here, in particular, and as we have seen, as well, in relation to Lautman's reconstruction of the "dialectical" conception of ideal genesis, the kind of determinacy that number in itself has is not conceived as prior to the measurement of continuous time, but rather as determined *in the same way* and *by the same principles* that make possible the measurement of sensory objects themselves – namely, that is, by the combination of the principles of the *apeiron* (or indefinite dyad) and unity or the one. Measured time is thus, here, not the *numbered* number (or the counted number), but is rather (in terms of the generative structure of its constitution) simply number, and is thereby in an original relationship with the *apeiron* and the *peras* as such. The problems of the determination (and hence the possible givenness) of time are thus not conceived as distinct from the general problems of the generation of numbers and forms, and both maintain, in the theory of their ideal genesis, an irreducible and necessarily paradoxical temporal referent. As a result, the originally paradoxical character of the *apeiron*, both in relation to the cosmological totality of time as the *aei* and to its locally continuous character, is here allowed to maintain itself to a certain extent and is preserved in the dialectical relationships that connect it to the other organizing principle of the One or unity, rather than being foreclosed or deferred, as in Aristotle's account. This has certain consequences, as we shall see, for the integrity as well as the ultimate

overcoming of the forms in which Plato suggests a solution to the original problem of the mutual relationships of being, becoming, and time.

In particular, with these differences in view, it is now finally possible to return to the *logical* form in which the Eleatic Visitor proposes, in the *Sophist*, to solve the problem of the thinkability of change, becoming, and time. Recall (chapter 1 above) that in the context of the "battle of gods and giants" between those who hold that there are unchanging forms and those that hold that there are only temporally changing bodies, the Visitor extracts, from the consideration that change and motion must take part, in some way, in being, the suggestion of the peculiar structure of the *dunamis koinonia* or limited mixing among great types. The suggestion is developed in close connection with reflection on the structure of the *logos* and will yield, in its extended development, a purported solution to the problem of the sophist's ability to speak the false and thereby to represent an actual figure of the illusory. As we also saw, the Visitor's suggestion is developed along with a determinative questioning with respect to number which also yields various aspects of the attack on Parmenides that he effectively undertakes: here, for instance, the problem of the paradoxical status of the thinking or saying of the One, whereby it is already more than One, is repeated from the *Parmenides*, and seen as pointing to the irreducible plurality or manifoldness of the *logos* structure itself. The determination of the five great types and the particular kind of unity they have as a structure might also be thought to witness a determinative role of number in generating the structure of the logical koinonia. It thereby becomes possible, as well, to consider whether the *genetic* structure of number, and indeed its production out of unity and the *apeiron*, may also be considered to play a determinative role in producing the more general structural form of the logical *koinonia*, with which the Visitor attempts to solve both the problems of the thought of becoming and of non-being in themselves.

One commentator who suggests such a determinative role for the structure of *arithmos* in determining the Visitor's solutions to the problems taken up in the *Sophist* is Jacob Klein. In his remarkable study *Greek Mathematical Thought and the Origin of Algebra*, Klein places Plato's conception of number in the context of what he treats as the broader Greek *arithmos* concept as developed in different but related ways by the Pythagoreans prior to Plato and Aristotle and certain neo-Platonists after him. According to Klein, in all of these Greek developments the *arithmos* never means anything other than "a definite number of definite objects" (p. 7); the slow and difficult development of a theoretical (as opposed to practical) arithmetic thus involves the gradual understanding that it is possible to make use in any counting whatsoever of prior "counting-numbers" which then appear as a kind of "undifferentiated" objects consisting in assemblages of "pure" units. The more or less complete realization of this in Plato allows him, according to Klein, to find in the structure of the *arithmos* concept "the possibility of a fundamental solution of the problem of participation (*methexis*) to which his 'dialectic' necessarily leads without, however, being of itself able to provide a solution"; in particular, Plato is able on this basis to perform a kind of repetition of the Pythagorean attempt at ordering all beings according to number, this time "within the realm of the ideas themselves." (p. 8). This Platonic conception of numbers, which finally renders them basically "separate" from the objects of sense perception, is then attacked by Aristotle (in articulating a series of criticisms which Klein finds basically convincing) as actually possible only on the basis of a prior abstractive separation in thought; the "pure" units are thereby shown to

"have no being of their own" and thus to be inadequate for the foundation of an actual mathematical science.

In developing the structure of the particular relationship between dialectic and the structure of the *arithmos* that he sees as suggested in the *Sophist*, Klein relies on the prior analyses carried out by Stenzel and "especially" by Becker into the constitution of ideal numbers through the iterated diaeresis which allows for a definite number to be formed as a collection of "monads". (pp. 61-62). In ordinary activities of comparing objects and distinguishing the respects in which one object can be referred to, thought (in the sense of *dianoia*) comes into the position of being able to *count* (p. 77) several objects as of the same group, thereby discovering the relevant identity of the "unit" for counting things of *that* type or grouping. The most important recognition upon which Plato relies in developing from this the specific discovery of the logical/ontological *koinon* of the *Sophist* is, according to Klein, the discovery of a *different* kind of *koinon* characteristic of the *arithmos* as such. The conceptual basis of this discovery of the peculiar *koinon* of the arithmos is discussed, according to Klein, in the Hippias Major (300a-302b). There, in particular, Socrates notes the peculiar fact that although in general a property that is attributed to several things holds separately of each of them, in the case of number this is not so: thus Hippias and Socrates *together* are two, but neither of them individually is. Speaking more generally, the kind of *koinon* that is characteristic of predications of number is quite different than that exhibited by predications like that of "beauty" or "justice"; in the case of number but not in the other cases, what is predicated of a number of things "belongs to these things only in respect to their community, while each single thing taken by itself is one." (p. 81) Klein sees this as being deeply related to the problems of the Platonic *methexis*: in particular, the problem to which it responds is "nothing less than the *aporia*, the quandary, of the *Parmenides* (130e-131e) and of the *Philebus* (15b4-8) – namely how it is possible that one idea in its unity and wholeness is "distributed over" the many things which "partake" in it." (p. 80). This is just, according to Klein, the general problem of the *methexis*, albeit "merely on the level of the dianoia"; the problem, however, "reaches its full sharpness and force only when the relation of an idea of a higher order to the ideas under it, of a 'genus' to its 'species', is concerned." (p. 80)

Having distinguished the two types of *koinonia* and suggested applying the difference to the consideration of the relations of ideas with one another, Klein suggests that the *Sophist* proposes to resolve a "fundamental Platonic problem," that of the "community of ideas" (p. 82) or of the possibility of ideas or types mixing or refusing to mix with one another. According to Klein, the solution in terms of the particular *koinonia* of number and in accordance with the ideal genesis of number from the *aoristos duas* is crucially important in underlying the account the Visitor gives of the sophist's image-making and the character of the image in general. In particular, if the phenomena of imitation, mirroring, similarity, *etc.* are to be possible at all, it must be because being has a "primal character of *"imageability,"*; this character arises, according to Klein, from a kind of inherent underlying principle of doubling or of the "twofold in general" which is nothing other than the *aoristos duas*. (p. 82). In this way, according to Klein, the *aoristos duas*, which is the "*arche* of all duality and thus of all multiplicity" finds perfect embodiment in the person of the sophist. It is on this basis, according to Klein, that the Visitor is also able to articulate the specific structure which makes the *me on* a possible object of study (p. 85) and thus confirms the possible relation of non-being with being which occurs in the person of the sophist.

The structural relationship which first allows both kinesis and stasis to figure in being – though neither can mix "at all" with the other – points to the more articulated *koinon* structure of the great types. According to Klein, this structure must be characterized by the special arithmetic *koinon*, rather than the *koinon* of generality more usually characteristic of *eide*, in order for the *gene* to subsume the several ("(fintely) many", Klein says) *eide* that fall under them without losing their own unity. The relationships involved in the possible but limited mixing of types point to characteristics that the types have not individual but only "in community", and thus can only be structured in terms of the specifically arithmetic *koinon*. (p. 90). In this way, according to Klein, the special structure of the *arithmos* and the specific kind of *koinon* it involves is crucial to the possibility of presenting the structured *logical* relationships among ideas and types of subsumption and articulation that the late dialectical method of synthesis and diaeresis is charged with demonstrating.

It is certainly possible to see the structure of the "great types" and the methodology of synthesis and diaeresis on which their discernment is based, in the *Sophist*, as "on the way" to a taxonomy of species and genera of roughly an Aristotelian kind. In particular, both the relationships of mixing and failing to mix among great types and their individual relationships with the less elevated *eide* suggest what would today be treated as logical relationships of mutual exclusion, partial overlap, or greater or less generality, and Plato, insofar as he endorses the Visitor's solution, might thus be seen as presenting with the structure of the great types the most general or overarching framework for considering such logical or conceptual relationships generally, a framework to be filled in in more detail later by the synthetic/diaeretic determination of the more specific *eide*. Such a taxonomic structure would itself depend on the possibility of articulate connection, with differentiation, within the unity of a higher *genus* that appears to be crucial to the analogy or identity that Plato draws between the structure of ideas and numbers. Thus Klein, relying on Aristotle, is able to suggest near the conclusion of his discussion of Plato (p. 98) that "the doctrine of the *gene* as eidetic numbers must, finally, also furnish the foundation of an *eidetic logistic*" that articulates conceptual realtions "by means of *analogia*," or "proportion": this is, according to Klein, the structural basis for the discussion of the more articulate relationships between ideas such as that of *sophrosone* and *dikaiosone* in the *Republic*, or for the "*taxis* of elemental materials in the *Timeaus*". (p. 98)

Given the "special" *koinon* of number and its functioning to ensure a special kind of limited conceptual relationship among ideas and types, it is thus possible to relate the general idea of a generation of number from unity and the *aoristos duas* to the possibility of a specifically logical taxonomy of types or categories, presided over by the great *gene* articulated in the *Sophist*. Of course, there are problems with aligning this structure in detail with any suggested by Aristotle; for instance, Aristotle does not understand being itself as a most general type or category (but rather in terms of the enigmatic *pros hen*), and the role of difference in Aristotle's categorical structures is not that of a "great type" which would permeate all others. But in view of the deeper underlying structure that appears to be at the basis of number itself for Plato – that of the combination or application of the principles of Unity and the *aoristos duas* – it is worth asking whether a general and total structure of categories can indeed be founded in this way without involving or invoking, at the same time, an irreducible structure of paradox which subsequently characterizes the structure of generality involved in the application of any logical

structure of maximal generality at all to a world of beings in time. One may suspect not, indeed, given the way that the invocation of the great types in the Sophist also aims to respond to the *temporal* problem of thought and being also involves at a fundamental level the problem of given time and its relationship to the original structure of number.

In particular: is there, in fact, a specific *koinon* of the *arithmos* of the kind Klein suggests? This is in fact doubtful, in view of the radical nineteenth and twentieth-century development of the constitutive ideas of number, logical structure, and the infinite. In particular: the profound observation that Socrates makes in the *Hippias Major* of the possibility of a kind of predication that holds of a group of several individuals without holding of them individually is nothing other than one of the key observations on which Frege bases his argument, in the *Foundations of Arithmetic*, that a judgment of number is not *in any sense* a judgment of the properties of individuals, but rather a judgment about *a concept*. (see especially sections 45-46 of the *Foundations*). In the late (1919) text "Notes for Ludwig Darmstaedter", Frege himself cites what Plato recognizes as the peculiar character of number judgments in the *Hippias Major* as a basic determinant of his own thinking:

> I started out from mathematics. The most pressing need, it seemed to me, was to provide this science with a better foundation. I soon realized that number is not a heap, a series of things, nor a property of a heap either, but that in stating a number which we have arrived at as the result of counting we are making a statement about a concept. (Plato, *Hippias Major*.) (p. 362)[23]

It is a profound consequence of this recognition, as it is developed in the *Foundations,* that being "one" or "unity" is *not* a property or predicate of objects (sections 29-33). As a consequence, it is also not possible (section 45) to consider numbers to be composed of (a number of) pure and identical "units".[24]

Basing himself directly on the specific observation already made by Plato in the *Hippias Major*, Frege can thus argue that neither any particular number, nor the structure of numbers in general, is in any sense either a *collection* of individual objects or a property of objects so collected, *even* "in community." There is thus, according to Frege's argument, no *koinon* of number in general, and it is (accordingly) not possible to refer the "logical" structure relating *eide* and *gene* "in community" to such a structure, as Klein attempts to do.[25] Numbers are rather, on Frege's argument, individual and quite distinct objects of

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[23] I am indebted to John Bova for pointing out to me the reference, as well as for helpful discussions about the conceptual connections here.

[24] "If the things to be numbered are called units, then the unconditional assertion that units are identical [gleich] is false. That they are identical in certain respects is no doubt correct but worthless. The difference between the things to be numbered is actually necessary if the number is to be greater than 1." (p. 98)

[25] Of course, none of this establishes that Plato *himself,* either at the time of the *Sophist* or at any time, did not think of things along the lines that Klein suggests. Additionally, it should be noted that Klein is, throughout his analysis, at pains to distinguish the Greek conception of number and arithmetic from our modern one, and so would probably on those grounds resist the application of Fregean arguments here. Nevertheless, whatever Plato himself might have thought, there is a legitimate question about the real form of the basis of number and counting

thought: although the judgment of number is in each case the judgment of a feature of a concept, this does not mean that numbers are in any sense subjective or irreal. Rather, the possibility of judgments of number is given (in accordance with what has been called 'Hume's principle') along with the possibility of judgments of equinumerosity in general. And this possibility is not based on properties of any specific objects or of objects in general, but is rather co-given in an original and objective way along with the givenness of objects to thought itself.

It is therefore necessary, if we accept Frege's argument, to see number and the possibility of counting as *originally* based, not in a specific *koinon* (or any other) structure of ideas or particular logical relations, but in the overall character of the way that objects and phenomena are themselves and *in general* given to be thought. As we have already suggested (chapters 1 and 4 above), to see the structure of number in this way is not to see it as either the outcome or basis of a specific structure of relations among beings of *any* kind or type, no matter how "superior" or "universal", but rather as co-implying something like the character of "being itself" in the way that it determines the *possible* givenness of beings. As we have seen repeatedly (esp. chapters 1 and 4), this indication of the structure of possible givenness always unfolds in determining and determined relationship with the problematic constitutive dynamics of the ideas of unity, the finite, the infinite and the total. None of these ideas operate or can operate as predicates with respect to beings individually or collectively, but their dialectical relationships articulate the very underlying structure, indifferently "metalogical" or "ontological" that is indicated in the reflection that considers the being of beings in the sense of their *possible* givenness to thought.

As we have already seen (chapters 4 and 6), another set of consequences of Frege's understanding of number that is relevant to the shape of this overall structure is that involved in Russell's paradox and the other set-theoretical and semantic paradoxes of totality and reflexivity formally related to it. In particular, it is a consequence of Frege's view of number as initially developed that concepts must be able to determine their extensions in general; but this assumption cannot be maintained along with reference to the totality of all concepts while avoiding contradiction. The result figures, as well, in the ultimate consequences of Cantor's development of the determinate possibility of coherently thinking infinite totalities as such by means of set theory. The axiomatic structures that subsequently formulate set theory in such a way as to preclude the possibility of contradictions of this type do so by effectively prohibiting the possible formation of, or reference to, the *universe* as a whole: in this way they prohibit or preclude the traditional "One-All" of maximal infinite totality. But what can be glimpsed here, and is unfolded in determinate form in the constitutive metalogical problematics that transformed first set theory and then the theory of proof in the first decades of the twentieth century, is the insistence of the superior dialectic of metalogical ideas and the basic paradoxes they articulate in relation to the question of the possible thought of beings in general.

It is the inquiry into this structure that leads Frege to deny the suggestion of a distinct *koinon* of number in particular or in general as any sort of grouping of individuals into "ones". It is possible to see the late

that is posed here, and which respect to which it is possible to pursue an answer that would also reflect what we now know about the various problems and structural relationships of unity, number, and the infinite.

Plato, especially insofar as he ultimately adopts an accounting for the givenness of *all* beings (sensible ones as well as ideas) to thought in terms of the ultimate *principles* of unity and the *unlimited many*, as engaged in a structural similar inquiry, and indeed one with similarly aporeatic ultimate results. But to see his inquiry in this way, we must distinguish it from the Visitor's specific *solution* to the problems of becoming and falsehood that is offered in the *Sophist*. This is not only because we may suspect that Plato uses the Visistor as a mouthpiece for views that are not his own or not fully endorsed by him at the time, but also because (as Sayre also notes), the Visitor's account of the method of synthesis and diaeresis is not the same as the one that Socrates later endorses in the *Philebus*. Most obviously, it does not (or does not yet) involve the particular dynamics of the *apeiron* in relation to limit that is crucial to the structure of the "god-given" method there; with respect to this later development, both the method the Visitor recommends and the particular "solution" it yields must be considered, at best, only partially successful. In particular, as we have seen (chapter 1 above), the solution in terms of the *koinonia* of limited mixing between types presupposes the *simultaneously* logical, ontological, and psychological parallel givenness of a structure that it itself cannot ultimately explain. The *simultaneity* of the orders in which the properties of beings *and* their possible thinking – *including* the thought of their non-being – take place is here crucial, and its assumption (as we have seen in connection, also, with Aristotle), amounts to something like the assumption of a logical-ontic construal of thinkable being in the temporal form of the present as such. It is also to be noted here that nothing in the Visitor's official solution even so much as responds to the problems of the relationship of continuity and discontinuity, such as they are involved in the form of the moment or "now", as Plato's later development of the method in terms of the *apeiron* as the indistinct at least attempts to do. The Visitor's account of the co-existence of change and being, as well as his account of non-being and falsehood, must then be seen as essentially presupposing this ambiguously simultaneous logical, ontological, and psychological *koinonia* as a simply given ontic structure of co-presence, without actually penetrating to the deeper ontological ground of *its* possible givenness. This deeper ground must be the underlying structure of given time, as it is articulated and undermined in the constitutive dynamics linking the ideas of unity, number, and the infinite.

As we have seen (chapter 4), it is only this failure to pose and pursue the ultimately ontological (or, metalogical) questions here that allows the Visitor to portray non-being and the possibility of illusion in general as the result of the limited "mixing" of difference with other *eide* or *gene*, thus grounding it in what must then seem to be a logically *regulated* structure of combination. From the perspective of the later development of the specific problematic structure of the *apeiron* (which is, however, already fully visible in relation to the paradoxes of the one and the others in the *Parmenides*), this is visibly an attempt to limit or modify the capacity of difference to subvert and transform fixed identities, a capacity which is only fully brought out in the specifically "unlimited" structure of the *aoristos duas* itself. In chapter 4, above, we saw reason to suspect, on the basis of the development of the problems of the original structure of negation, non-being, and contradiction, that the specific structure of non-being is ultimately not to be referred to difference as a form or type, but rather to a prior differentiation that is anterior to all given beings and insists on the level of the possible givenness of the whole. Insisting in this way, it communicates irreduciblty with the constitutive ideas of finitude and the infinite as well. From this perspective, that neither the *aoristos duas* nor unity are, in Plato's most developed thought,

ideas, but rather superior principles of the genesis of ideas *and* sensory objects, both in their being *and* their becoming, means that the dialectic of the determination of the being of beings is here referred, finally, not to beings but to the superior principles that are, in governing their possible disclosure, also governing with respect to the givenness of numbers as such. But they do not do so without *also* witnessing the insistence of an original structure of paradox at the metalogical/ontological basis of this co-givenness itself, which is clarified and confirmed in our time by the train of implications following from Cantor's radical development of the constitutive ideas of the one, many, limit and unlimited.

If this is correct, then it also provides obvious grounds for questioning the ultimate groundedness of a taxonomic/categorical structure of being of the Aristotelian kind. The suggestion here is not that it is not possible to define particular regional ontologies or typologies of beings according to their specific properties, but rather that the development and imposition of any such structure depends upon a more basic structural dynamic of totality and identity which is both presupposed in any such taxonomy and shows that no such system can provide a non-contradictory and unique ordering of beings as a whole. Viewed another way, this is because the way that categories fix beings in their structure depends upon a basic disavowal of the problems of their *temporal* givenness to thought, the specific flattening or levelling of the underlying form of temporality that (Heidegger suggests) is also the disavowal of the temporally based *existentiell* structure at the actual basis of the constitution of all categories and of the "theoretical" attitude in which it takes place. We have witnessed, in the investigations of the last several chapters, how this original temporal structure can also be related to that of the possible disclosure of entities, the prior "ontology" of their possible truth. To grasp the way in which the problems of the structure of the infinite are here involved is to see, also, some of the constitutive structural moments of a "more original" temporality that precedes but also undermines the "logical" or taxonomic fixation of beings in the categories that relate and structure them as a whole.

It is also possible, with this in mind, to return to the specific question of the status of contradiction and the specific (regulative or constitutive) force of the "law of non-contradiction" itself. Notoriously, it is difficult to say what the law of non-contradiction is actually *about*: it can, and has, been characterized alternatively (among other things) as an ontic principle governing entities and their possible properties, as a psychological principle governing actual thought or the attribution of it, as a normative principle governing *possible* contents of thought, or as a "logical" principle governing inferential or deductive relations within a general formal logic. There is also, as we have seen (chapters 4 and 6 above) a very basic ambiguity about the relationship of the principle to time: is the principle to be formulated, as Aristotle does, in a way that specifies what it prohibits as a co-existence in time (i.e. that it is impossible for a thing to have a property and not to have it *at the same time*) or should it, as a supreme principle of *analytic* judgment, have no specific relationship to time, as Kant suggests? As we have seen, Aristotle's original development of the principle as one prohibiting the co-existence of opposed properties in time is structurally dependent upon the assumption or presupposed form of simultaneity in general, the undecidably spatial-temporal structure that is invoked and exploited as the pivot of Aristotle's account of time as the number of motion under the heading of the *hama*. Time is then itself logically structured by the prohibition of contradiction, or seen as the condition under which a contradiction can be

rendered non-contradictory by being distributed within it; the basis of this conception is the ambiguous and ultimately paradoxical inherence within it of the successive structure of discrete "nows".

On the other hand, the Kantian (or Fregean) intuition that makes the law of noncontradiction extra-temporally applicable to a realm of previously defined contents in general itself presupposes *their* simultaneity, a simultaneity that (as Heidegger points out) is all the more originally "temporally" determined in being determined as the co-presence of the *a priori*. From the perspective articulated by the more original structural dynamics we have suggested here, the law of contradiction, like the "phenomenon" of contradiction itself, is related to time in neither of these two ways – not as having either the "temporality" of the governance of intra-temporal objects and events *or* the regulation of "extra-temporal" relationships among contents – but rather as co-articulating the original *form* of time as given. Here, the "force" of the law of contradiction is not psychological, ontic, or "logical" but rather metalogical or (what is the same) ontological in pre-structuring and providing a basis for the specifically regulated relationship of what are subsequently conceived as beings in *any* of these domains. It also does not, thought originally and in the context of the metalogical problematics that it articulates, any longer itself have the force of governing or regulating any specific kind of beings or beings in general. It is rather to be illuminated in terms of the more original structure of the metalogical duality that links it irreducibly and undecidably to the structure of completeness, consigning thought in its relation to being to be either consistent and incomplete, or complete and inconsistent. These possibilities also then present themselves as original and undecidable possible forms of the temporality of objects and their givenness. In the first case (Aristotle's intuition) the guarantee or requirement of consistency ensures that objects and phenomena will only ever be given as incomplete, as given "up to" a finite limit or as constantly unfolding without end in what is then thought as the temporality of the dunamai on. In the second (the one developed by Plato in the *Parmenides*) the total givenness of the structure of time to thought, along with the givenness of the one, yields the original paradoxes of totality, temporality, and becoming that propose the ultimately aporeatic structure of the really inherent *now* as time's very form.

If the Visitor's attempted solution to the problems of the thinkability of becoming, change, and non-being in the *Sophist* in accordance with the method of synthesis and diaeresis invoked there can be considered only, at best, partially successful, does Plato's apparent later further development of this structure in terms of the *apeiron* and unity ultimately succeed in solving these problems in a complete and consistent way? In fact, it does not. As we have already seen, the metalogical (or ontological) problematic can here do no better than point to the originally *paradoxical* situation of the dialectic that links being and becoming, a paradoxical structure that is unfolded with the constitutive paradoxes of totality, reflexivity, givenness and time themselves. That Plato is eminently aware of these paradoxes is shown by their elaborate development in the *Parmenides*, and if he is ultimately thereby moved to refer to the more basic structure of the *apeiron* and the *one* in their problematic relation and to place this relation at the basis of the very possibility of the givenness of forms and of objects, he does not on this basis resolve these original problems themselves but rather only contributes to demonstrating their underlying structure. Even given all that Plato says, or what we can infer or guess from what he is reported to have said, about the role of the two principles of the unlimited dyad and the one in giving rise to numbers, forms, and the determinate nature of things in temporal flux, it remains possible to

pose the paradox of the thinkable being of the one as such, in terms of which it will always invoke "one more," unto the infinite, and the related paradox of the unlimited possibility of differentiation which will never settle upon a determinate identity for a singular something until it can be subject to an infinite *complete* process of maximal differentiation. Above all, there remains the originally paradoxical character of the presence of the instant, which seems to take place in no time at all and to be capable of having no determinate character, but rather to be in itself the medium of the inherence of all contradictions, of the contradictory as such. The "reappearing" Socrates of the *Philebus* presents the method that he recommends there in full and apparent awareness of these structural paradoxes, and does not so much suggest that the method itself can resolve them completely and finally as that it is itself structurally prescribed by them. The "god-given" method is, in any case, appropriate as a response to the more original ontological situation "passed down" from ancients who are themselves situated "closer" to the gods, and the basis for its specific availability as a techne is attributed mythologically or metaphorically, as in the *Phaedrus* (see above, chapter 4), to the problematic methodological gift of the god Theuth to men in granting the original possibility of letters and writing. If the dialectical method is thus presented as any kind of solution to the constitutive problems of totality, infinity, and temporal becoming, these are thus presented as ontologically given problems from which, literally, only a god can save us. It remains possible, before or beyond this mythological, theological, or onto-theological reference and whatever it might be thought to guarantee in Plato's text, to witness there the insistence of the underlying problematic dynamics of paradox that are themselves unfolded again in contemporary investigations into the metalogical structure of being and time.

According to this metalogical structure as I have tried to suggest it here, the paradoxes of the infinite inhere in the structure of given time in two senses: both cosmologically, in relation to time as a whole, and punctually, in relation to the structure of the instant or "now" that is always becoming-other and always destroying itself. If we can indeed see in Plato's text an original development of these problems, one which is, as I have suggested, subsequently covered up and put out of play by the Aristotelian conception of the *dunami on* which will regulate thought about the infinite up until Cantor, it is nevertheless possible, on the basis of contemporary metalogical as well as ontological investigations, to bring them out and clarify them today in a new and different light. Since such a clarification of the underlying problematic situation *also* has the effect of exposing to questioning, in its light, the original form in which the givenness of time is thought in the Western tradition, it also relates in a determinate way to the articulate closure of the metaphysical epoch of presence that Heidegger announces. It here becomes possible, in particular, to think the original problematic structure of given time on the basis of a dynamic of ideas that does not any longer presuppose the givenness of time in the privileged form of a (simultaneous) present, or at any rate provides basic terms for deconstructing and displacing this privilege on the basis of a more structurally basic thinking of the form of presence itself. That such a thinking becomes possible at a certain determined moment is one of the implications of what Heidegger calls *Ereignis*, and the specific historical and also metalogical conditions that make it possible *also* can suggest forms and means for a thinking of being and time that is no longer constrained within the presumptive structures of ontotheology as grounding and grounded from below and above. We turn to the more detailed consideration of the structure of this possible thinking, and what (in particular) it implies about the *contemporary* ontological situation, in the next chapter.

Gestell, Ereignis, and the Eternal Return

(Chapter 9 of Draft MS: *The Logic of Being: Heidegger, Truth, and Time*)

Over the last several chapters, we have attempted to demonstrate an original phenomenon of undecidability at the root of the givenness of sense and of number. This structural undecidability is formally indicated, as I have argued, through the actual hermeneutics of these factical phenomena, and thereby points, more deeply, to a structurally paradoxical "original" structure of given time. This underlying structure of real paradox internally complicates the ontological problematic of the truth of being, insofar as it also suggests a structurally undecidable logic at the basis of the historical determination of the several epochs of the understanding of being characteristic of the history of metaphysics. As we have seen, in particular, the development of these metaformal indications complicates both the structure of the ontological difference between being and beings and that of the "clearing", the topological or structural condition of the possibility of a disclosure of being. In indicating these features, the metaformal hermeneutic demonstratively articulates the problematic of thinking and being as it inherently involves the problematic of the givenness of time.

This is the problem that presented itself to Plato as among the deepest with which a dialectical understanding of what truly is would have to reckon; thereby it conditions, as well, the way in which the thinking of being subsequently unfolds as determined by the structure of *logic* that is thought as common to the jointly *ontological* and *theological* founding of the meaning of beings in their being. This unfolding itself reaches a certain kind of completion *and also overcoming*, as I have argued, with the development of modern forms of mathematical logic following Frege and in particular with the metaformal indicated problems of totality and reflexivity that directly follow from them. This overcoming is already suggested as a consequence of Frege's radical critique of subjectivist representationalism, which leads him to propose a virtual structure of "objective" sense, inherent in language as such as its real structure without being "actual" in the sense of effective. And it is confirmed subsequently in the metaformal results, from Russell's paradox to Godel's theorems in their extended implications, that point to the inherence of the real at the problematic point of the impasse of formal symbolizations, systems, and procedures.

In this final chapter, I consider the consequences of these meta-formal indications as they relate to the *contemporary* ontological situation. The distinctive problems of this situation, whether determined as political, sociological, ethical or ecological, are characterized by *totality*: they are problems about the constitution of wholes, negotiations of the boundaries of what is seen as all-inclusive, and border questions at the limits of the logic of total systems that claim and enforce global comprehensiveness. They are also, just as much, characterized by the presumed effectiveness and force of what is (ambiguously enough) called "technology," which I shall here understand in a sense that preserves the link of the term with the Greek *techne* as well as with the later-developed sense of "technique" or procedure. In the light of these problems and in view of the situational factors that determine them, the original question of the relationship of thought and being indeed does, as I shall argue here, also take on a distinctive shape, conditioned as much by the radical discoveries of meta-formal insight that

make the structure of the infinite available to mathematical thought, in our time, as by the specific technologies and material practices – in particular the technologies of computation and "information" -- that follow from them. The specific question of the relationship of the finite to the infinite here takes on, as we have already seen, a deepened significance, and is also transformed on meta-formal grounds. But these grounds are also nothing other than the ones on which we must in our time pose the question of the determined limits of our thought and practice, and of what insists or resists beyond them.

From this perspective, Heidegger's suggestion of a determined history of metaphysics, itself always characterized by its ways of onto-theologically determining the ontic totality of beings, that reaches its inherent culmination or exhaustion in the contemporary situation is an exemplary figure of the reflection on structures of closure and totality that must itself characterize any thinking that can adequately respond to these characteristic problems of our time. But as we have seen over the last several chapters, the formal-ontological provenance of these problems themselves demands a deepening of the ontological problematic on meta-formally indicated grounds.

This deepening and the indications it yields are already sufficient to articulate the relationship of the ontological question to the problems of the contemporary, and of what "beyond" it, is to come, in a different direction. Here, in particular, what is at issue with respect to the determined "history of metaphysics" is no longer the task of a deconstructive "retrieval" of what is thought at its origin and progressively concealed within it or that of safeguarding, during or after the period of its totality or its exhaustion, what within it is, as ultimately determining, anyway purported to be its greatest exigency. It is, rather, just a question of understanding how this relatively determined history can be seen to communicate formally, at a certain point, with its *own* broader structural and temporal conditions in the underlying problems to which it points, and thereby how, with its ontologically-formally determined closure, it also and in the same moment points to a broader "outside".[1] In fact, the suggestion of such a broader conditioning of the relatively determined "metaphysics of presence" is already essentially made as soon as the structure of the formal problematics of time and sense that we have pursued are indicated. These problematics themselves are configurations to which something like the thinking of "being as presence" must itself be originally responsive, and to which this thinking again opens up at the determined point of the closure or exhaustion of its determining rubrics. It is no accident from this perspective that, as I have argued, they also appear to indicate original formal-ontological problems that plausibly underlie the structure of "natural" time just as much as they do "historical" time, and so thereby articulate the formal and metaformal conditions ontologically characteristic of *thinkable* time, however further determined, and as such.

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[1] Cf. Jacques Derrida: "Perhaps we must attempt to think this unheard-of thought, this silent tracing: that the history of Being, whose thought engages the Greco-Western *logos* such as it is produced via the ontological difference, is but an epoch of the *diapherein*. "(p. 22)

I

Familiarly, in "The Question Concerning Technology" and elsewhere, Heidegger characterizes the contemporary age as determined by the predominance of what he describes as the "essence" of technology: *Gestell* or enframing. This essence is not, according to Heidegger, itself any technological thing; nor is it determined or determinable as an outcome simply of human activity. Unlike the various specific technological instruments and systems, we cannot understand the claim of modern technology itself as responsive to antecedently given human needs or desires; rather, understanding technology in its essence requires that we understand how it imposes upon *us*, "challenging" us to certain characteristic kinds of activity and production. Its determination of the contemporary condition results in a pre-determining of all beings as resources and the "setting-in-order" of all beings in advance as "standing-reserve" [*Bestand*] for production, manipulation, and exploitation. In the essence of modern technology, processes are active that pre-date any specifically modern activity of production and are linked to the original meaning of *techne*, which the Greeks experienced as an organic "bringing-forth" more closely connected to the arts and to the very meaning of truth than to any "production" in the modern sense. According to Heidegger, then, technology is best understood as a mode of revealing or bringing-forth; its "place" is that of truth conceived as "*aletheia*" or disclosure, the bringing-forth of entities from their hiddenness. However, with respect to specifically *modern* technology, this original revealing becomes a "challenging forth," an aggressive attitude toward things and resources which puts to the natural world the "unreasonable demand that it supply energy which can be extracted and stored as such." (p. 320). This challenging is a "setting-upon" nature which sets nature in a certain, imposed order only so that resources can be extracted and efficiency optimized. For instance, the modern hydroelectric plant set up on the Rhine completely transforms the character of this ancient river, transforming it into a neutral resource or "standing-reserve" to be drawn upon at our command and constantly challenged to deliver more and more energy resources.

In a related sense, the characteristic and dominant configuration of contemporary thought and practice is described, in a number of texts of the 1930s and 1940s, as a "machination" [Machenschaft] which (circularly) aims to order all beings with a view only to their ever-greater orderability. Heidegger understands the contemporary dominance of *Gestell* or (earlier) *Machenschaft* as itself the expression of the necessarily *final* epochal determination of the being of beings within the series of configurations that make up the history of metaphysics as a whole. With this dominance, the "possibilities" of metaphysics are in a certain way completed or exhausted; the exhaustion takes the form, in particular, of the completion of the progressive withdrawal of Being itself from thinkability that has characterized the development of metaphysics since its inception.

Gestell is thus the historically and structurally determined form of the culmination of a history of ever-greater obscurity and forgetting, whereby all the original possibilities of metaphysics are finally used up and the withdrawal of Being and truth is thought as complete. It is therefore striking that at various places in his late work, Heidegger gestures toward an enigmatic relationship, indicated as to be "looked into" or "looked forward to" in the further development of ontological thought or the thought that comes after it, but not significantly developed, between *Gestell* and *Ereignis* itself. One formulation of this is given in the Le Thor seminar of 1969:

> An excellent way of approaching *Ereignis* would be to look into the essence of enframing [*Gestell*] insofar as it is a passage from metaphysics to another thinking …for enframing is essentially ambiguous….Enframing is, as it were, the photographic negative of enowning.[2] (p. 60)

Or, in a partially similar formulation from "The Principle of Identity" (1957):

> Thus looking toward the present [*der Gegenwart entgegenblickend*], beyond the situation of man, thinking catches sight of [*erblickt*] the constellation of Being and man in terms of what joins the two to each other [*was beide einander eignet*], from out of the event [*aus dem Ereignis*].

> Assuming that the possibility awaited us [*die Möglichkeit warte uns entgegen*] that the frame [*Ge-stell*] – the mutual challenge of man and Being in the calculation of what is calculable – were to award itself to us as the event [*Ereignis*] which first surrenders man and Being to their own [*das Mensch und Sein erst in ihr Eigentliches enteignet*]; then a path would be open for man to experience beings in a more originary way – the totality [*das Ganze*] of the modern technological world, nature and history, and above all their Being.[3]

With these formulations, Heidegger appears also to indicate a curious relationship of the *totality* of the history of metaphysics – thought as its "culmination", or the "exhaustion" of its possibilities in the contemporary dominance of *Gestell*, with something outside or beyond it that also determines it. This is the *Ereignis* which grants or ontologically precedes each of the determinate configurations of metaphysics and the whole "epoch" of presence itself. The relationship suggested here between the final of these configurations and this opening is not assured or extant; it is, rather, to be glimpsed, anticipated or prepared, recommended as a *possible* path for thought to come or itself dependent ultimately on the granting that *Ereignis may* allow. Nevertheless, in that *Ereignis* is thought, from the *Beitraege zur Philosophie* to the end of Heidegger's career, as the very event of the happening of an "other" to the metaphysics of presence or the present itself, and thus (in other words) the event that determines the possibility of a *future* in general, these are determinate indications of the actual form of a thinkable relationship between all that is enclosed in this history and what insists beyond it as its condition and exterior. As such, and as, in particular, determinations of what is hidden or concealed, latent or implicit, in the total character of modern technology, they are indications of the *temporal* relationship of the determined history of metaphysics to what appears as its specifically "other" future.

The problem of this relationship is the problem of the "present" time of technology in relation to the time that, surrounding and determining it, also can (Heidegger suggests) perhaps be indicated on the basis of an ontological thinking of its underlying formal essence. This thinking would itself necessarily be, in a certain way, the repetition of a thinking of time or of the possibility of a future that is itself "determined" by what is called the essence of technology – and *in particular* is determined through and

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[2] "Seminar in Le Thor 1969", in *Four Seminars*, transl. Andrew Mitchell and Francois Raffoul. Bloomington, IN: Indiana U. Press, 2003, p. 60.
[3] "The Principle of Identity", p. 40 (translation slightly altered).

at the limits of calculation and calculability and the "configuration" or "constellation" in which it places man and Being. It is significant, in this connection, that in indicating the possible relationship between Gestell and Ereignis Heidegger himself uses, in the first quotation, a *technological* metaphor of picturing: that of the negative *photographic* image. In the second formulation, along similar lines, what is indicative of the relation, what gives it to be seen, is specifically determined by "calculation" and what is "calculable" and the particular relationship that exists between them. What is invoked here, in both cases, is not, then, a simple exteriority of "technological" thinking or "calculative" thought to the thought of Being as such, but rather a deep mutual imbrication, whereby the more or less determined forms of technology indicate or become, by means of a sudden reversal whose possibility is nevertheless deeply programmed in their essence, the thinking of or from Ereignis itself.

With this, Heidegger points to the forms in which our "technological" present will possibly or could conceivably communicate with the "beyond" to metaphysics that thereby takes on the sense of a possible future of it, or of a future, in general, beyond the forms of pre-determination that the metaphysically determined ontotheological thought of being will always have enforced. And indeed it would probably not go too far to say that the forms in which a "future" can today be envisaged, the forms in which our age knows itself in relation to what it thinks as its possible "beyond," are so many figures of this very relationship between a technologically determined thinking of time and the "event", envisioned in alternate forms of anxiety and celebration as the technologically inevitable moment of global catastrophe or as the equally determined "singularity" in which technological thinking finally overcomes itself and transforms itself, no longer needing the assistance of the organic "human" powers of thought, into something completely unforeseeable by means of them. According to Heidegger, however, the possibility of the thinking that goes to and from the event of the future to come is not to be seen except from within a thinking of the *history* of what, first giving us to think time at all, also withdraws progressively within this history. This withdrawal, familiarly, will have marked and programmed the history of metaphysics, and it is only with the *completion* of its itinerary that its *happening* can truly or actually appear.

How are thought and being related at the beginning of this history, and at its end? And to what kind of determination of time do they thereby point? In the Beitraege (1936-38), Heidegger gives another formulation of the peculiar relationship between the essence of technology (here named as "machination") and the event of Being, here thought as its truth:

> Machination as the essential occurrence [Wesung] of beingness [Seiendheit] gives a first hint [gibt einen ersten Wink] of the truth of Beyng itself. We know little enough of machination, although it dominates the being-history of the previous Western philosophy, from Plato to Nietzsche.[4]

Machination is here thought, not only as the latest and final configuration of the metaphysical thinking of being as "beingness" (Seiendheit), but as in fact "dominating" (durchherrscht) this history in its entirety. In thinking this domination as an "essential" occurrence, it is possible to gain a first glimpse or

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[4] Beitraege p. 127 (transl. slightly modified)

hint of the truth of Beyng itself – that is, when it is thought in itself outside just this determination as the "beingness" of beings.

In particular, the futural thinking toward or from Ereignis here takes the form of a grasping of the inner connection of what is, for Heidegger, deeply and decisively linked with machination – the dominance of "lived-experience" [Erlebnis] which develops an anthropologistic or subjectivist principle of the unified experienceability of all things, events, and phenomena. This connection is itself the indication of a particular non-simultaneity, one which opens and closes the history of metaphysics:

> If machination and experience are named together, that indicates an essential belonging of the two to each other but at the same moment [zugleich] an equally essential [gleichwesentliche] *non-simultaneity* [Ungleichzeitigkeit] within the "time" of the history of Beyng…

> The belonging of the two with and to each other [*Die Zusammengehorigkeit beider*] can be grasped only through a return to their most disparate non-simultaneity and through a dispelling of the appearance of their extreme oppositionality. If thoughtful meditation [Besinnung] (as questioning of the truth of beyng and only as this) achieves knowledge of such belonging, then at the same time the basic thrust [Grundzug] of the history of the first beginning (the history of Western metaphysics) is already grasped out of the knowledge of the other beginning. Machenschaft and Erlebnis is formally (formelhaft) the more original framing of the formula for the guiding question of Western thought: Beingness (Being) and thinking (as representational grasping).[5]

 The "non-simultaneity" to which Heidegger here points is the gap which opens up between thinking and being as such with what is here understood as the "first beginning" – the original thought of being as beingness in the Greeks – and closes in the contemporary configuration of the ever-more insistant dominance of machination and lived-experience. Between this opening and this closing, the whole history of metaphysics is comprehended, and the principle and formula of its communication *as a whole* ("within the 'time' of the history of beyng") with its broader exterior thereby indicated. What is the basis of this indication itself, which Heidegger here specifies as doubly formal, both in the sense of the "formula" for the history of metaphysics – Being and Thinking – and its *more* original formulation – machenschaft and Erlebnis? According to Heidegger's suggestion, metaphysics will have had a beginning and end in the thinking of presence, here understood as the dual form of the presence of being, determined as beingness, to thinking, determined as representation; and again, more basically, as that of the linked configuration of machination and lived experience as the redoubled general circulation of experienceable beings.

But how do the beginning, and the end, themselves "take place"? The question has to do with time, the time that Heidegger here indicates exactly as the "'time' of the history of beyng," *in* which the gap between the open and closing of metaphysics – the time *of* the history of metaphysics – itself takes place. How is this time to be thought? It is indicated, here, on the basis of nothing other than the character of a *machenschaft* whose basic form is calculation.

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[5] P. 128 (transl. slightly modified).

Over the last chapters, we have seen formal grounds for beginning to think an originally structure of paradox that is formally indicated, both as the infinite given time of the cosmos and as the paradoxical form of the instant, as the constitutive real-insistent infinite of the instant and the world, as soon as the availability in general of the actual infinite to thought is itself reflected in a thinking of time. WE have also had reason to see a specific link between this given form and the original givenness of number, at the basis of all counting and measuring and all possible calculation as such. If Heidegger does not follow out these connections in detail or by pursuing the analysis of the metaformal question of this givenness of number, he nevertheless repeatedly indicates a thinking of the original form of time that would be at or beyond the formally indicated specific limits of calculation and counting as such. This thinking, followed out (as we have attempted to do here) in terms of the original paradoxes structurally constitutive of time as it gives itself both cosmologically and instantaneously, structurally points to deeper problems of the structure of this more "general" time in which the history of metaphysics, stretched between its Greek inception and its contemporary closure, "takes place". In particular: does this broader time *itself* "happen" sometime? Does it, like the determined time of the "metaphysics of presence", open at some locatable time and close at another? And if so, how locatable, how calculable? (How to count what surrounds and conditions counting in general, the more general *conditions* for the possibility of countable order as such)? Or does it go on forever, without beginning or end, endlessly varying itself in configurations whose own rule and decidability would then be found in their constant novelty? Or is it neither of these: neither itself a finite configuration with beginning and end nor an openly infinite endless becoming whose principle is freedom, but rather a path determined both by the form of the unlimited and by the refusal of every such principle, of freedom and novelty as much as of determinacy and necessity: in short, does it *eternally return*?

II

The Nietzsche courses taught by Heidegger between 1936 and 1939 occupy a decisive position within the articulation of the project of the history of being that begins in the *Beitraege* and continues throughout the rest of Heidegger's career. In the courses, Heidegger develops the suggestion, already made there, that Nietzsche's thinking represents the *end* of the history of metaphysics that pursues the "guiding question" of the being of beings as opposed to the "grounding question" of being's truth.[6] In the lectures as a whole, Heidegger seeks an understanding of Nietzsche's "basic metaphysical position;" he finds the guideline for this understanding in two statements: first, that the "basic character of beings as such is 'will to power'" and second, that "Being is 'eternal recurrence of the same.'"[7] The implications

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[6] "Wird naeh dem Seienden als Seiendem gefragt (Bv Uov) und in *dieser* Ansetzung und Riehtung somit naeh dem Sein des Seienden, dann steht der Fragende im Bereieh *der* Frage, von der der Anfang der abendlandisehen Philosophie und deren Gesehichte bis zum Ende in Nietzsche geleitet war. Wir nennen deshalb *diese* Frage naeh dem Sein (des Seienden) die Leitfrage. Ihre allgemeinste Form hat bei Aristoteles die Pragung erhalten ..et 'to oV; was ist das Seiende, d. h. fur ihn, was ist Quota als die Seiendheit des Seienden? Sein meint hier *Seiendheit.* Darin driickt sieh zugleich aus, daB trotz Ablehnung des Gattungseharakters das Sein (als Seiendheit) immer und nur als das X.OLVOV, das Gemeinsame und so Gemeine fur jegliches Seiende, gemeint ist."

[7] Vol. 1, p. 25.

of these statements are then pursued through interpretations of Nietzsche's conceptions of art, knowledge, truth, and illusion, and situated as based in a particularly and conclusory configuration of the metaphysical interpretation of beings in terms of presence. In Heidegger's second course on Nietzsche, taught in the summer of 1937, in particular, Nietzsche's doctrine of eternal return is treated comprehensively as an assertion about "beings as a whole," understood as (in Nietzsche's own words from *Ecce Homo*) the doctrine of the "unconditioned and infinitely reiterated circulation of all things" [unbedingten und endlich wiederholten Kreislauf aller Dinge] (p. 926, GT sect. 3).[8]

Heidegger sees the announcement of the doctrine in the form of a "riddle" in Nietzsche's *Zarathustra*, book III, as a venturing [Wagen] of the "truth of beings as a whole"[9] [der Wahrheit des Seienden im Ganzen]. The doctrine is here presented by Zarathustra to a dwarf. Zarathustra indicates a gateway on which is inscribed the name "moment" [*Augenblick*]; from the gateway stretch two eternal paths, ahead and behind. Whatever *can* happen has already happened on the path behind, and will happen again on the path running forward.[10] All things are thus "bound together" [fest…verknotet] in such a way as to be drawn behind them by this gateway and must occur again; even the gateway itself must therefore occur once more. On Heidegger's interpretation of the passage, "time and eternity" are here viewed in an image oriented from the "moment" or "now". (p. 41) The image is not, though, directly to be understood as the final theory of Nietzsche, but rather just as the "riddle" that presents a question. The "doctrine", in particular, is first posed as a question to which the dwarf appears readily to have an answer: the dwarf himself asserts the circular form of "time itself" [die Zeit selbst]. However, the question is repeated later on in the passage, this time as the question whether *this* moment – the moment of Zarathustra and the dwarf and their questioning itself – must not be repeated eternally. And this time the dwarf has no answer: with this second formulation, Zarathustra himself becomes "afraid" of his own thoughts, and his vision of a young shepherd being bitten in the mouth by a snake, the head of which he must bite, occurs. The difference between the two formulations, according to Heidegger, lies in the fact that the second question is posed, not as a general question about the form of time itself,

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[8] P. 5 vol II
[9] P. 37 vol. II

[10] Siehe, sprach ich weiter, diesen Augenblick! Von diesem Thorwege Augenblick läuft eine lange ewige Gasse *rückwärts* hinter uns liegt eine Ewigkeit.

Muss nicht, was laufen *kann* von allen Dingen, schon einmal diese Gasse gelaufen sein? Muss nicht, was geschehn *kann* von allen Dingen, schon einmal geschehn, gethan, vorübergelaufen sein?

Und wenn Alles schon dagewesen ist: was hältst du Zwerg von diesem Augenblick? Muss auch dieser Thorweg nicht schon - dagewesen sein?

Und sind nicht solchermaassen fest alle Dinge verknotet, dass dieser Augenblick *alle* kommenden Dinge nach sich zieht? *Also* - - sich selber noch?

Denn, was laufen *kann* von allen Dingen: auch in dieser langen Gasse *hinaus* - *muss* es einmal noch laufen! -

but on the basis of the *moment*, as the question of the recurrence of *this* moment itself. With this particular kind of questioning, in particular, one is required to "adopt a stance of [one's] own within the "Moment" itself, that is, in time and its temporality." With this posing, according to Heidegger, Nietzsche is able to formulate his doctrine in a general way; put this way, it can be seen as an argument from particular assumptions about the finitude and infinitude of time and things:

> Nietzsche summarizes an essential thought concerning his doctrine so succinctly here, in the form of a question, that it is hardly comprehensible on its own, especially since the requisite presuppositions, although mentioned, do not really become visible. Those presuppositions are: first, the infinity of time in the directions of future and past; second, the actuality of time, which is not a "subjective" form of intuition; third, the finitude of things and of their courses. On the basis of these presuppositions, everything that can in any way be must, as a being, already have been. For in an infinite time the course of a finite world is necessarily already completed. (p. 43)

By formulating essentially this argument, Heidegger suggests, Nietzsche is able to propose the doctrine of eternal recurrence as a fundamental position relating beings as a whole to their temporal condition. But he is only able to do so by first placing *himself* in the "moment" in a decisive way. In the placing, the thinker of the thought of the eternal recurrence is "transposed to beings as a whole," (p. 62), or placed under the particular condition of the way in which beings as a whole appear in the "gateway" of the moment in which future and past meet. Through this placing under the condition of the moment, the doctrine of the eternal return is itself shown as a matter which calls for *decision*: "what recurs – if it is to recur – is decided by the Moment and by the force with which the Moment can cope with whatever in it is repelled by such striving." (p. 57)

According to its own proper content as well as the conditions for its being thought, the thought of the eternal recurrence is thus a *fundamental position* with respect to beings as a whole, grounded in the interpretation of the overall character of their being. According to Heidegger, Nietzsche's understanding of this overall character is based in a twofold way on the temporal doctrine of eternal return and on the idea of the will to power, to which it is essentially related. Together, the two ideas determine a *metaphysical* position: indeed, the last metaphysical position, which represents a "consummation" of the original possibilities of metaphysics themselves. This interpretation allows Heidegger, in the 1939 lecture course "The Will to Power as Knowledge," and especially in two lectures that were written in 1939 as a conclusion to the course (along with the two previous Nietzsche courses) but never delivered, to portray Nietzsche's position overall as an "inverted Platonism" in which is realized the final configuration of all those in the succession that Plato's own thought of being as beingness originally inaugurated. The history of the transformation of metaphysical positions from Plato's to Nietzsche's is the history of the withdrawal of being, a history marked by the greater and greater insistence of a nihilism which, according to Heidegger, already deeply characterized Plato's own position, although in a veiled way. With the completion of this withdrawal, the questioning that positively characterized metaphysics itself becomes impossible and thus the metaphysical tradition is at an end; in particular, this consummation, all possibility of posing the question of *truth* becomes "buried" and obscured within a conception of beings as a whole that sees in them their "actuality" [wirklichkeit] in the sense of their acting and effectiveness. It is such a conception that actually underlies, according

to Heidegger, the linked Nietzschean metaphysics of will to power and eternal return, and explains their basic metaphysical orientation. This orientation, the "essence" of the will to power, is the inversion of the Platonic hierarchical opposition of being and becoming into a position that seeks the unlimited "permanentizing" of becoming in presence. The idea of an *eternal* recurrence is that of a "securing" of the becoming of what becomes and a "permanantizing" of its "constancy in the direction of its circling back into itself and forward to itself." This is a thought of the "permanentizing of whatever becomes into the only kind of presence there is – the self-recapitulation of the identical." (pp. 164-165) Such a securing of becoming in the repeated form of the self-identical unfolds in particular as a "securing of beings in their perfectly accessible disposability". This is the position with respect to beings as a whole that is known, in its relation to Being, as "machination." In it, Heidegger says in the 1939 conclusion, "meaningless comes to power" and is self-organized as a "total mobilization … by and for the will to power". In this position, "calculability," "representation" and "production" are finally driven to an "extreme" point, "characteristic of mankind's unconditioned hegemony over all sources of power on the face of the earth, and indeed its dominion over the globe as such." (p. 175)

In this way, Heidegger's interpretation of the significance of the doctrine of eternal recurrence thus plays an essential role in connecting the narrative of the history of being as a whole with the more immediately obvious predominance of assumptions, practices, and modes of thought and action that are characterized by a certain kind of "totalization" of beings. In particular, this is the totalization that leads to their unlimited circulation, production, manipulation and exchange; the idea of the eternal recurrence – interpreted as Heidegger interprets it – both underlies and provides a privileged temporal figure for these practices and "activities" of the acting subject or agent of the "will to power" which is in fact, according to Heidegger, simply a redoubled will to will. Although every metaphysical orientation is, for Heidegger, *as such* marked by one or another distinctive attitude toward beings "as a whole and as such", the regime of technology that is thus characterized by Nietzsche's thought is additionally totalizing in a second and different sense: as the *final* orientation of metaphysics, it represents, according to Heidegger, the complete *exhaustion* of the "possibilities" original inherent in the metaphysical thinking of being as presence itself. In particular, this is the exhaustion of the possibilities of a *thinking*, *questioning*, or *disclosure* of being that would indeed have characterized the metaphysical tradition, not only at its first moments but throughout its itinerary, up to the present moment in which the questioning of being and its truth become completely obscured and basically impossible. It is at this determined point of extremity, and at it alone, that it may be possible, according to Heidegger, for thought to accomplish or experience suddenly a kind of radical reversal, whereby it suddenly frees itself, by means of an explicit retrieval of the very history whose possibilities are today at an end, of the final configuration of machination and representation and, with it, of the whole history it completes.

This reversal is thought by Heidegger, of course, as the thinking that is "to come," the thinking "from" Ereignis that once again allows the questioning of the truth of being (or beyng) to come into its own and thereby reclaim its more original relationship to the possibility of questioning in general and to our being (as "man") in particular. It cannot, according to Heidegger, be assured or predicted; what we can "do", at best, is prepare ourselves for its possibility, as we would prepare to receive a grant given from a place beyond our own powers of control and possible influence. In Heidegger's thought after the 1940s,

the thought of this preparation is marked by a waning of the rhetoric or figure of decision, and becomes largely characterized as the thought of "Gelassenheit," or of the peculiar "letting" beings be which is to allow once more the possibility of their *being* in an originally disclosive way. This is the thinking, at the most extreme possible distance from technology, enframing, and its characterization of beings in terms of acting and effectivity, of the "saving power" of the original unity of *techne* and *poeisis*, and of the "fourfold" in which the counter-play of earth and sky, man and gods, holds open the place of disclosure and granting as such. The suggestion of this attitude as the successor to a modern "enframing" attitude toward beings has been both endorsed on Heidegger's behalf and, elsewhere, criticized as fundamentally regressive and "nostalgic."[11]

Without disputing any of these terms in which Heidegger ventures to think or propose the possibility of what cannot yet, *strictu sensu*, even be thought (since its thinking would *already* accomplish it), it is possible and coherent to ask whether there are more specific terms to be found, within the concrete factical interpretation of the determined "present", for the indication or demonstration of what *surrounds* the metaphysical interpretation of being as presence as its prior condition and more general exterior itself. How, in particular, in the thought and reality of the "consummation of metaphysics", is a certain "outside" already indicated, or *readable* in determinate structural, temporal, or ontic-ontological forms? The question asks, with Heidegger, about what *in metaphysics* points to a certain "beyond" its own totality, but *also* about what points (formally or ontologically) to this beyond *in the idea of totality itself*, as this idea gives itself in the constitutive forms in which it regulates contemporary thought and practice. It is, in particular, to be asked how the thought or dominant practice of an "unlimited" effectivity that is marked and visible in the constitutive structure of material technologies, prevailing forms of social organization, ideological conditions of action and its self-rationalization, and "global capitalism" itself can be seen, on the basis of the ontological problematic, as communicating with what is assuredly real, and verifiable on formal grounds, but structurally *ineffective* in itself, though nevertheless inherent in these dominant patterns and assumptions of organized effectivity themselves.

And it is perhaps here that the character of what is called "information technology" is indicatively readable, as pointing toward certain elements that are already thought by Heidegger in the idea of machination and *Gestell*, but also as, in a peculiarly determined way, potentially pointing beyond this idea. Here, it is possible, in particular, to consider the possibility that it is specifically in *information* technology that the metaphysical tradition reaches its most definitive culmination and exhaustion. It is relevant here to consider, as well, the nature of the particular transformations or modifications that have characterized the further development and consolidation of technologically determined techniques and practices in general in the roughly 60 years since Heidegger's description of the essence of technology as *Gestell*. In particular, whereas the effects of the kinds of industrial and mechanical

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[11] It is not often noted that in discussing the "saving power," Heidegger actually *contrasts* the possibility of a recovery of poiesis with what he treats explicitly as the *distinct* possibility of a sudden transformation of Gestell into Ereignis: "Whether art may be granted this highest possibility of its essence in the midst of the extreme danger, no one can tell. Yet we can be astounded. Before what? Before this *other* possibility: that the frenziedness of technology may entrench itself everywhere to such an extent that someday, thoughout everything technological, the essence of technology may unfold essentially in the propriative event of truth." (p. 340; emphasis added).

technologies that Heidegger primarily considers in "The Question Concerning Technology" remain decisively important, these technologies are today supplanted and modified by the ever-more-pervasive technologies of information production, distribution, and exchange which today encircle the globe and affect practically every human life on the planet, through the possibilities of communication and economic transformation they facilitate. Since these technologies are defined, not by their capacities to shape and manipulate matter or natural forces, but rather by their relationship to the increasingly pervasive but elusive and ill-defined value of "information," they may point to a partially different or otherwise indicative significance of the regime of "total" calculability, representation, and circulation. It is here to be asked, in particular, whether the practices and patterns of thought and action that are increasingly determined by the quantification, exchange, and capitalization of information are really thinkable as simply further instances of the "enframing" of beings in Heidegger's original sense, or whether they also point to an internal complication of this structure that is itself more determinately indicative of at least one form of its thinkable "beyond."

In fact, Heidegger himself presciently anticipated the contemporary development of information technology in significant detail in the 1966 essay "The End of Philosophy and the Task of Thinking." Philosophy, he here declares, is today coming to an end because the historical tradition of metaphysics is coming to its completion in the development of the sciences and the cultural effects of the technologies spawned by them:

> It suffices to refer to the independence of psychology, sociology, anthropology as cultural anthropology, or to the role of logic as symbolic logic and semantics. Philosophy turns into the empirical science of man, of all that can become for man the experiential object of his technology, the technology by which he establishes himself in the world by working on it in the manifold modes of making and shaping. All of this happens everywhere on the basis of and according to the criterion of the scientific discovery of the individual areas of beings.

> No prophecy is necessary to recognize that the sciences now establishing themselves will soon be determined and regulated by the new fundamental science that is called cybernetics.

> This science corresponds to the determination of man as an acting social being. For it is the theory of the regulation of the possible planning and arrangement of human labor. Cybernetics transforms language into an exchange of news. The arts become regulated-regulating instruments of information.[12]

Heidegger's reference to "cybernetics" here – at that time, this was the dominant term for the project of a total informational theory of human and cultural as well as natural "systems" – comprehends not only "information science" in the narrow sense but the whole configuration of life determined by the technologies of information and their effects, including the "media" representation of global information as "news" and the both regulated and increasingly regulative (in the sense of uniform and determinative) information-mediated and popular-cultural fields of the arts and entertainment. This

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[12] "The End of Philosophy and the Task of Thinking" in D.F. Krell, ed., *Basic Writings* (revised and expanded edition). San Francisco: Harper, 1993, p. 434.

configuration of "modern" life (and here we may say "modern" in the sense of "contemporary") indeed witnesses, Heidegger suggests, one completion or culmination of metaphysics, as well as the whole historical regime governed by it. In this completion, philosophy comes to an end with the "triumph of the manipulable arrangement of a scientific-technological world and of the social order proper to this world." (p. 435). Yet there may remain, Heidegger cautiously suggests, the possibility of a different kind of culmination and end of the metaphysical tradition, one that, after the end of philosophy, nevertheless ventures a kind of "thinking" that surrenders the metaphysical tradition heretofore to what Heidegger calls the "matter for thinking," offering to restore our openness to the very place of the happening of unconcealment and truth.

In what specific ways may, then, the underlying structures of "information technology," which increasingly and ever more pervasively determine the organization of life around the globe today, themselves be formally and ontologically read? If is clear that these technologies differ, both in their specific constitution and in their ontological support, in important ways from the material and industrial technologies of the unlocking of power and the circulation of beings that Heidegger primarily has in mind in the "Question Concerning Technology" essay, they are no less indicative of, because fundamentally rooted in, what is for Heidegger an (perhaps the) *original* and determinative structure of metaphysics itself: namely, the structure of logic as a *technique*. In particular, the structural possibility and actual existence of *all* information technology as such, and thus of the total regime of thought and practice it today determines, is grounded in the radical development of Frege's logical methods, Cantorian set theory, and the closely related idea of formal procedures that developed alongside these in the project of formalism. These developments are in fact readable, as we have seen repeatedly, over the last several chapters, both as developments of the original conception of logic that underlies the onto-theological unity characteristic of metaphysics as such for Heidegger *and as* performing a radical displacement or transformation of that conception, in particular in the ways that they mobilize and unfold the idea of a specific availability of the *actual infinite* to thought.

Over the preceding chapters, we have seen some of the ways in which the ideas of contemporary mathematical logic and what is unfolded in them point to the consequences of this availability for the formally-ontologically characterized structures of sense, truth, and time. In particular, as we saw most directly in chapter 5, they point to the insistence of a certain structurally determined real at the very limits of effective procedures; and in so doing, they provide formally motivated grounds for interrogating and challenging every figure of the total determination of the thinkable as such by finitely specifiable rules, capacities or methods. The ontological situation that is thus indicated is one in which every claim of effective determinability, every attempt to trace the ontological "origin" of the experience of sense, truth, or time back to an effectively determining finitude, must ultimately fail. For every such attempt will ultimately run up against the more general and deeply rooted *ineffectivity* that must be seen as characterizing finite procedures as such, in light, in particular, of Godel and Turing's results. In thus verifying the structurally necessary insistence of a fixed point in the real for every finitely determined system of effective capacities, these results verify an ultimate *ineffectivity* that essentially surrounds and conditions the idea and technological practice of effectivity itself. The demonstration of this necessary ineffectivity then points in a significant and determining way to the underlying actual

"ontological" configuration that is determined by this idea and practice today, wherever it takes root and has effects.

In particular, both the way in which the constitutive ideas of logic, finitude, and infinitude, ground the real material existence of the total regime of information technology, *and* the inherent formaly indicated limit of the specific effectivity of the patterns, modes, and techniques that characterize it, are clearly in view in Alan Turing's remarkable 1936 paper, "On Computable Numbers, with an Application to the Entscheidungsproblem". In the paper, as is well known, Turing essentially created the logical structure of the modern electronic computer by developing the abstract architecture of what is now called a "Turing machine," and serves as the conceptual basis for all forms of digital computers and computer-based technologies.[13] The core of his demonstration is the rigorous conception of what has been called "effective" computability; that is, the capacity of a problem to be solved by means of an algorithm comprising only a finite number of determinate and explicitly stated rules. Given such a configuration of rules and algorithm, it is possible to treat its process as a purely "mechanical" computation, one that does not imply or demand any irreducible appeal to the role of human consciousness, intentionality, or meaning in the course of its operation. In this way the architecture of the digital symbolic computer (as composed of the various units of input/output, memory, and computational algorithms) was thereby born along with the specific conception of "effectivity" that underlies the functioning of digital computers and all of the informational and communicational technologies that are based upon, or derive from, them.

But it was Turing's more direct aim to prove, as a result of mathematical logic, that there are actually perfectly well-defined mathematical problems whose answers are *not* "effectively computable" in this precise sense, and he did in fact succeed in proving this in the paper. In particular, the "decision problem" – the question of whether a given machine halts when given a particular input or rather continues calculating forever -- is shown to be uncomputable, and as a consequence formal systems in general (of a certain degree of complexity) are shown to be undecidable in the sense that there is no finitely stateable procedure for determining whether a particular sentence is a theorem. Along with this, and as another consequence, Turing's result demonstrates the existence of (uncountably) *many* "uncomputable" real numbers: numbers whose decimal expansion cannot be determined by the reiterated application of *any* finitely stateable rule.[14] A further corollary (derivable by partial means of an auxiliary result)[15] is a form of Godel's first theorem itself: for any system of sufficient complexity to capture arithmetic, there will be an arithemetic sentence that it cannot prove or refute, provided the system itself is consistent.

If Turing's result shows in formal detail that any determination of regular effectivity – and also all that assures and guarantees it – communicates with a broader undecidability which is its general

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[13] Turing, A."On computable numbers, with an application to the Entscheidungsproblem." In *The Essential Turing*. Ed. B. J. Copeland. Oxford: Clarendon. (2004).

[14] This is as opposed both to rational numbers but also to real numbers such as pi, whose successive digits *can* be determined by successive applications of such a rule.

[15] In particular the recursive enumerability of theorems in a particular system.

surrounding, then it is apparently possible to apply this demonstration to the consideration of the most characteristic and general forms and practices of contemporary technological, social, and political life. In particular, it is here apparently possible to envision a formally based critique of these forms and practices that operates by problematizing and challenging the *claim* or *assumption* of general effectivity that underlies their application and force. Here, the formal indication that is apparently derivable from the actual metaformal results rejoins the Heideggerian ontological problematic at the point at which it, itself, seeks to provide terms to challenge and question the contemporary dominance of "machination" and the assumption of the total circular manipulability of beings that characterizes it. For as Heidegger points out, the basis of this assumption is just the claim of an unlimited calculability and circulability of beings, itself grounded in the totalization of their calculability and total availability to representation. If, then, there is a formally demonstrable incalculability inherent in the very constitutive ideas of number, mathematics, and the thought of procedures itself, then the general suggestion, already made in Heidegger's text, of a specifically determined "limit" and "outside" to the contemporary technological regime here receives significant confirmation and is put on a formally rigorous basis. Furthermore, the specific relationship indicated here between the assumed effectivity of broadly technological procedures and regular methods of handling and calculating with beings and the structurally inherent ineffectivity that appears to be its necessary correlate suggests sharpened terms in which the "ontological" critique of the contemporary regime can then be taken up.

Along these lines, I argued in *The Politics of Logic* that the inherent structural ineffectivity that appears necessarily to condition all determined procedures provides a basis for questioning the assumed force and legitimacy of the kinds of technical, administrative, procedural and organizational structures that are widely promulgated around the globe as the solutions to the problems of collective life. In particular, in the face of these structures, the formal results appear to demonstrate a prior insistence of problems that cannot be completely resolved by such "solutions" and structurally point to the more basic problematic configuration of the situations in which they take place. Most significantly and determinatively for "our" contemporary situation, the problems of the relationship of such determined solutions to the problems that they attempt to confront are characteristically problems of the totality or totalization of effectivity. That is, they are problems of the application or applicability of regularly determined systems and procedures across what is understood as the "global" situation of planetary life. Since procedures for determining and regulating this situation are also procedures for the in-principle unlimited manipulation and exchange of beings, the question that is here posed, in the light of the general dynamic of effectivity and ineffectivity witnessed in the metaformal results, also concerns the structural conditions of possibility of a relatively determined *economy*, whether of capital, goods, or information. It is about the conditions of a more or less determined and determining circulation (of capital, of goods, of information) in a more general structure that surrounds it and determines this possibility of circulation as a limited domain.

Here, the formally indicated terms of critique thus rejoin the late-Heideggerian ontological problematic, which sees the contemporary regime of technology as above all characterized by the assumption of the unlimited possibility of the circulation of actual-effective beings. But the specific critical suggestions that can be made in light of the deepened formal-ontological problematic are somewhat different than

those that are usually accorded to the "Heideggerian" critique itself. There is no suggestion here, for instance, of the usefulness or even possibility of a marginal withdrawal from the prevailing technological forms of organization and effective structure. What is indicated, instead, is a formal thought and a praxis, grounded within it, that *directly* confront the prevailing forms of technological organization and regular practice on the ground of their own constitutive claim to totality. There is also no need, within the deepened formal-ontological problematic, to have reference to the determined category of *poeisis* or art in general as a privileged region within which to base this critique. What the critique of "technological" thinking and practice, thus deepened, calls for is not any kind of escape into, or privileging of, particular kinds of beings or specialized practices of "skill" as a counter to *techne* or its contemporary development as global technology, but rather a direct formal confrontation, *on its own terms,* of the developed idea of technique that underlies it in all of its forms and ideological underpinnings. This prepares what is indeed a "confrontation" of ontological thought with the essence and structure of global technology. But its principle is not to be found either in a simple resistance to technology or in its acceleration to the point where, by means of an actual or fantasized necessity, it suddenly collapses or transforms itself into something different. It is rather, simply, the deeper thinking, in light of the mathematical and metalogical results on which it is genetically dependent, of what is structurally involved and inherent in the very possibility of its effectivity and thereby in the force of its global claim over life and practice.

This confrontation is prepared from a long way off, as we have seen, by the very thinking of *logos* that is itself determinative for the interpretation of being as presence from Plato on. This thinking of *logos*, from the beginning, is itself determined on the basis of a particular thinking of time, and thus communicates essentially with the broader problems of temporal becoming that continue to insist within it. If the distal consequences of this original logical conception of time today both program and structurally problematize the specific forms of economic and political organization that are today broadly characteristic of global life, we may come to see in it this ambiguous twofold situation the structural possibility of an actual overcoming of the contemporary total regime toward very different "possibilities" of collective life, thought, and practice. In grasping this possibility in its formal and ontological structural determinants, we would then see, in a more specific and articulated way, how the "final" configuration of *Gestell* can be taken to communicate structurally or actually point toward a more general "outside" that finally conditions it, along with the whole history of metaphysics that it completes, in the very structure of thinkable time as such.

III

There are various possible arguments from the three premises about time and phenomena that Heidegger attributes to Nietzsche to the claim of a circular eternal recurrence of events. The premises are that i) that time is infinite in the directions of past and future; ii) that time is not subjective or ideal but, rather, real; and iii) that things and "their courses" are necessarily finite. As is well known, after arriving at the doctrine in 1881, Nietzsche envisioned and attempted various kinds of "scientific" proofs of its truth as a cosmological claim about the totality of events in the physical universe. Some of these

were to be based on what he took to be established scientific claims, for example that of the finitude and conservation of force (energy) or matter and the determinism of physical laws. One version of the argument is that, given these premises, if any state of the universe recurs once, it must deterministically follow again an infinite number of times. But since (as Nietzsche may have supposed) if matter and forces are finite, any *possible* state must have *already* been reached within (infinite) past time, every such state must thus *already* have repeated itself an infinite number of times.

Even if the premises of determinism and finite energy and matter are granted, the argument does not succeed in this form. For it appears possible, even on these assumptions, that the states of the universe succeed one another in the manner of the succession of digits in the expansion of an irrational number (such as pi or √2): the succession of digits is determined by the successive application of a rule, but there is no cyclical repetition of a series of digits at any point. More generally, dynamic phenomena of continuous motion or change, even if governed by fully deterministic rules, need not exhibit fixed periodicity at any point in their (infinitely continued) progress. It is thus not possible to argue directly, as Nietzsche may have hoped to do, from cosmological premises about finitude and determinism to the claim of eternal recurrence by considering the universe to be a closed dynamical system unfolding in a time that is infinite in both directions.

Nevertheless, another, related argument that may have a better chance of success can be drawn from considerations that are already present in Kant's consideration of the four cosmological antinomies in the "Transcendental Dialectic" of the *Critique of Pure Reason*.[16] The antinomies are contradictions of reason with itself with respect to the idea of totality involved in its ongoing search for the conditions of phenomena. They concern, respectively, the completeness of the whole of all appearances in space and time, their spatial and temporal divisibility, the origination of phenomena by means of natural causality or spontaneity, and the conditioning of all phenomena by an absolutely necessary being. Although the topic of time appears officially only in the first antinomy, in parallel with the question of the boundedness of space, the question of time is in fact central to all four antinomies. For all four turn on the question of the totality of series of conditions, and this question in each case raises the issue of the structure of priority thought more or less explicitly in temporal terms, either on the side of the subject or the object or both. Thus, the second antinomy involves the question of the possibility of serially *carrying out* a division of the world into simples, the third turns on the question of the causality of appearances by means of nature or freedom, and the fourth concerns the necessary conditioning of any temporal series of appearances by its immediate temporal predecessor.[17] In each of these cases, the question of totality presents itself as the question of the boundedness or unboundedness of a temporal series, and thus as an instance of the more general problem of the *givenness of time* whereby any temporal ordering is possible.

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[16] In this paragraph and the next, I rely upon an argument sketched by Oskar Becker in his article "Nietzsche's Beweise für seine Lehre von der ewigen Wiederkehr".

[17] Thus, in the "proof" of the thesis of the fourth antinomy (i.e. of an absolutely necessary being): "The sensible world, as the sum-total of all appearances, contains a series of alterations. For without such a series even the representation of serial time, as a condition of the possibility of the sensible world, would not be given us. But every alteration stands under its condition, which precedes it in time and renders it necessary. " (A 453/B 481).

From this perspective, the decisive consideration appears at the beginning of the argument for the "thesis" of the first antinomy, which claims that the world has a beginning in time and is limited in space:

> If we assume that the world has no beginning in time, then up to every given moment an eternity has elapsed, and there has passed away in the world an infinite series of successive states of things. Now the infinity of a series consists in the fact that it can never be completed through successive synthesis. It thus follows that it is impossible for an infinite world-series to have passed away, and that a beginning of the world is therefore a necessary condition of the world's existence. (A 427/B 455)

If we assume an infinite past time as actual, Kant reasons, we must also assume that an infinite series of successive states has *actually* taken place. This would then mean that the series, though actually infinite, has at some point terminated. But since this supposition is impossible (it is not entirely clear why Kant thinks so), it must be the case that the world has a beginning at most finitely long ago, assuming the world exists at all. This last proviso points, of course, to Kant's unitary solution to all four antinomies, which is to be found in the transcendental idealist denial of the *existence* of the world as a whole. According to the solution, although the world is *never* given as a (finite or infinite) *totality* of appearances, it is nevertheless always possible for reason to pursue the series of conditions for any given conditioned one step further: looking backward, in particular, it is always possible to seek the prior condition for a given phenomenon. But through this "successive synthesis" one never attains a total or complete representation of the world as a whole.

This particular form of the solution depends not only on Kant's transcendental idealism, but also on the (Aristotelian) assumption that an infinite totality can be given only *potentially*, in an unlimited ongoing development. It is this latter assumption that leads Kant to identify the infinity o f a series with its "never" being able to be completed through successive synthesis, and thus to hold that reason's synthetic activity itself could never encompass a temporally infinite world as a whole. If we allow both assumptions to lapse, however, and conceive of world-time as *real* and of the actual infinite as thinkable, we are left with the necessity of supposing that, at any moment, an infinite number of successive events have in fact already occurred. If we, further, think of these successive events as determined, as a series, by a unitary rule, we must think that the infinite series determined by the rule has *already* concluded. There is something highly puzzling about this thought, although it is not actually obvious that it is simply incoherent.[18] At any rate, though, the problem can be avoided in just one way: by concluding that the infinite succession is in fact an infinitely repeated cycle of finitely many events. If, in particular, a law determines an cyclic repetition of finitely many elements, there is nothing incoherent (or even seemingly so) in supposing that the cycle has *always* been repeating itself and will always do so.

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[18] Wittgenstein is said (A.W. Moore (find reference)) to have asked his audience in a lecture to imagine finding a man who has been reading out the digits of pi, backwards, for all time: he has just said, "3! I'm finished". (compare Philosophical Remarks, page 166). What appears to be problematic here (or perhaps incoherent) is the idea of an actually infinite series *actually* being completed by means of the development of *all* of its individual members.

There is thus a route to be traced from the Kantian considerations about the determination of series of appearances to an actual and *actually thinkable* eternal recurrence of events. The argument, in this form, is motivated not only by realism about time but by the essentially Cantorian consideration that an actual infinite can be given to thought as such. Kant, of course, was kept from this consideration by the limitations of the conception of the infinite that he adopts from Aristotle, as well as those of the mathematics of his time. Nevertheless, what can be preserved from the Kantian setting of the problem in the antinomies is its essential relationship to the problem of the givenness of an (ordinal) series as determined by a rule. This question of the givenness of a serial order is, as we have seen, itself intimately connected to the problem of the givenness of number, and in particular of its givenness as i*nfinite* in two ways: both extensively, in the transfinite hierarchy, and intensively, in the determination of real numbers as infinite expansions. For the consideration that leads (under the condition of realism rather than idealism about time) from the Kantian antinomies to the eternal recurrence, what is actually decisive here is the implications of the second Cantorian "generation-principle," whereby it is apparently possible to pass in thought from the idea of a series, as given by its rule, to the "limit" collecting *all* of its elements, without supposing (or even being able to suppose) that each of these elements are individually given or produced in actuality. In passing to the first infinite "limit-ordinal," ω, one passes to an ordinal number which has no predecessor; this is apparently the reason why it appears incoherent (or nearly so) to suppose the end of an actually infinite (and nonrepeating) series to be arrived at in time *by* the successive givenness of its elements. One can nevertheless think of time itself as an infinite actual continuum, proceeding *from* the present both backwards and forward, provided only that it is thereby thought only as a kind of empty form and not, itself, as a determinate series of events. Within the ambit of these assumptions, then, the only way to preserve the actual regular thinkability of the series of events conceived as taking place *within* it is then, as we have seen, to conceive it as an eternally recurrent cycle.

This argumentation is a kind of derivation of the eternal cyclical recurrence of a *series* of events, under the condition of their regular thinkability in infinite actual time, from Cantor's demonstration of the thinkable coherence of the "first" infinite set, ω. What, though, if we consider the problem of the infinity of time from the broader perspective of the *further* extended developments that follow metalogically directly or indirectly from the Cantorian moment, including *both* the unlimited open development of the transfinite hierarchy in the light of Russell's paradoxes and the other constitutive paradoxes of the one-All, and *also* the further developments of Cantor's own thinking about continuity? Although, as we have seen, Kant's antinomies closely anticipate in certain ways the paradoxes of the One-All, Kant does not really consider the second sort of question (about continuity) in the antinomies, since what is at issue here is always just a determinate *series* of discrete events. On the other hand, as we saw in the last chapter, Aristotle's consideration of what are essentially the problems of continuity and discontinuity in book IV of the *Physics* leads him both to point to the inherently paradoxical form of the "now", as constantly becoming what it is not and not becoming what it is in the procession of its "constant" flowing, and to foreclose this paradox by considering the "now" to inhere in time only potentially, as the result of a *possible* measurement. If, however, by contrast with both Kant and Aristotle, we grasp the givenness of time as the index of a *realism par excellence*, we have to deal with it, as really given, *as infinite* both cosmologically (in the infinity of cosmic time preceding and following

the present moment) and in the *infinitely determined* (not simply determin*able*) structure of the "now" as such. To do so is to grasp a structural and real inherence of constitutive paradox in both cases, both "above" – in relation to the character of the *totality* of infinite time, which can only be given if there is *always* given "more", both before and after – and "below" – in relation to the punctual moment, which always threatens to undermine fixed identities with its continuous becoming. It was in this doubly paradoxical form that, as we saw in the last chapter, the original problem of becoming presented itself to Plato, both as the problem of the totality of time and as the problem of the form of becoming in the present, as the deepest possible challenge to the fixity of the idea and the structure of its *koinon*. And it is in this form that, as I have argued, it must be taken up again by the ontological problematic of being and time, in the light of the contemporary metalogical results that further unfold and articulate the mathematical structure of the infinite as it is given to thought.

If the actual-infinite is thought as really temporally inherent in this twofold way, then the structure that they point to must be seen as a *unitary* structural condition of both the form of time *and* determinate events 'within' it. This is because the underlying structural dynamics of the infinite and paradox are (meta)formally indicated aspects of the givenness of number, which precedes counting and measurement, both of events and of "time itself." Through this structure and by means of it, it becomes possible not only to "measure" time but also to consider events as continuously determined and determining with respect to what precedes and follows them; in this way it is possible to measure their (quantifiable) changes and motions *over* time. Here, the suggestion is not (as it was with Aristotle, for example) that the measurement of time is a special case of, or analogous structure to, the measurement of local motion. The suggestion is rather that both kinds of "measurement" have a *unitary and inherently paradoxical* real structural condition in the real inherence of the infinite, both in the cosmos and in the moment.

With this, the actual infinity of time is no longer conceived as given just to thought in a way that contrasts with its "taking place" in reality. Rather, both the abstract thinkability of infinite time *and* its "actuality" are given by means of the *same* unitary and paradoxical structural form. This form is conceived as real both with respect to thought *and* the being of what is; it is the form of temporal givenness as such, where this no longer contrasts with an imagined, hypothesized, or structurally implied givenness of phenomena from *outside* time. It is then no longer possible to oppose the thought of the infinite to its (presumed) always only finite *realization*. Neither the Aristotelian nor the Kantian forms of the distinction between what is only "potentially" infinite in temporal reality and the presumptively "finite" modes of its measurement can, any longer, be maintained. This distinction was, as we saw in chapter 8, already problematic in its original Aristotelian setting, since time was there seen as not only or simply ideal, but actually as real, and really infinite as given and not merely as thought. This is what led Aristotle to propose the conception of time as ambiguously both sensible and intellectual, as having an endogenous structural origin in the intellectual activity of the soul as well as an exogenous origin with respect to which it is receptive, a conception of time as the "non-sensuous sensuous" that is, as Derrida argues, essentially repeated in Kant and Hegel. With the conception of time as the structurally undecidable form of givenness, this ambiguity between passivity and receptivity is shown to have its own deeper condition in the undecdiability with which both time and events give

themselves in general. It is also no longer possible to maintain the exteriority of the empty form of time itself to what is seen as the necessarily finitely determined (because thinkable) succession of events *within* time that we witnessed in the partially Kantian, partially Cantorian argument considered above. For since time and events have, on this conception, a *unified* structural condition in the *actual inherence of the infinite* in the structure of their givenness, both their thought and their reality must be considered, in both cases, actually infinite in both the cosmological and the instantaneous senses.

If the real structure of time and events, in its structurally inherent infinity, is thought as doubly paradoxical in this way, does this mean that time and real becoming are revealed as simply *indeterminate* or *indeterminable*? Not at all. Rather, as we have witnessed over the last several chapters, the idea of the infinite, as it is developed in the train of consequences that follow from Cantor's set-theoretical treatment of the actual infinite, is in a peculiar and specific relationship to the structural idea of determinability by means of a rule. This idea underlies not only the possibility of the passage to the infinite limit as it is specified by Cantor but also, more broadly and generally, the idea of a formal system as a finitely specifiable system of axioms and rules. But the development of the metalogical problems of totality and infinity after Cantor demonstrate how this idea itself implies a broader *undecidability* shown in two ways: both as the "unpredictable" character of the extended development of the transfinite hierarchy and, more basically, as the essential existence of problems that are undecidable for any given axiomatic system. These two aspects of undecidability have as consequencs both the impossibility of presenting the totality of "all" numbers without contradiction and the existence of (uncountably many) *uncomputable* real numbers, numbers whose decimal expansion cannot be determined by *any* finitely stateable iterated rule or procedure.

If the structure of given time is thought as undecidable in both of these ways, it is not thought as *indeterminate* with respect to specific procedures of determination, but rather as determinate in the superior sense that its determinacy provably outstrips all finitely determined decision procedures. With respect to any such procedure, this not indeterminacy but a kind of super-determinacy or hyper-determinacy, pointing to the inherent existence of problems and truths indeterminable by any finite system, but nevertheless structurally demonstrable by means of reflexive thought. This superior determinacy is nothing other than what Godel understood as the "inexhaustibility" of mathematics that is verified by his own incompleteness results. If time is thought as characterized by it, then the moment as the determined limit of the measurement of a span, or the specifiably determinate *caesura* between "before" and "after", is visible as a kind of systematic fixed point at which this superior determinacy is indicated or shown. Neither the punctual moment, as a specific and unique real-valued point, nor the infinite totality of *all* moments is determinable *in general* by means of any finitely specified procedure, although both may be determined in specific cases. For example, a discrete moment, in a particular case, *may* be determined by a whole or rational number, or again by an irrational number corresponding to a (computable) procedure. Or the infinity of temporal events *may* be thought as determined in a regular way by a single general form of constant presence or regular repetition. But in both cases, what is or can be determined by a rule is in fact the (infinitely rare) exception with respect to the really inherent superior determinacy of the infinite-given structure of time in itself, which outstrips all rules and all regular determinations. Here, the "general" case of the moment is not the computable number

but the uncomputable one, not the determination of the eternal in the form of some standing or constant determining presence functioning as a measure, but rather the inherence of the infinite-undecidable, which is structural immeasurable in its totality by any finite system without contradiction.

The structure of time, thought this way, is not indeterminacy or randomness; but neither is it the "free" unfolding by means of successive spontaneous choices which is thought in the intuitionist idea of the "free choice sequence." For if a finite procedures, in determining a moment, can also point to its broader and superior surrounding in a determinate reality that surrounds and outstrips what can be determined in just such a procedure, it does so only by means of its own contact with the structurally insistent Real that surrounds and preconditions it. The relationship of any particular procedure with this Real is not that of "freely" determining it but rather of showing how it is determined at certain points and under certain conditions while also verifying that it, itself, cannot *completely* determine this Real without contradiction: the insistence of this larger determinate Real is then visible under the two metalogical headings of incompleteness (if consistency is maintained) and inconsistency (if a single determinate procedure is applied to *all* cases). The assumption and maintenance of consistency within a particular system, as of regular procedures of measurement and calculation in general, is then visible as only a locally determined possibility, in each case capable of opening to discovery what must be only a limited range of truths, and also in general incapable of securing itself by means of an internal consistency proof. But the dynamics of consistency and completeness that are thereby shown also bear witness to the superior structure of undecidability that must surround any such system of local, consistent determination.

If time, in its original givenness, is thought of as having the structure of the undecidable in this way, it is thereby thought as "eternal" in two ways: both as infinite in the directions of the past and the future, and as capable of infinitely many *total* determinations of its character "at all times". Is undecidability, thought this way as the unitary condition of the determinacy of time and events, then, also, a figure of eternal *recurrence*? If so, it is not the eternal recurrence of a fixed and limited cycle of ontic happenings *within* a general empty form of time that is infinite in both directions. For as we saw above, such an ontic cycle reflects only the character that events must be seen to have, given the premises of the infinity and reality of time, *if* they are also seen as univocally determined by a specific thinkable rule that must itself be applied serially. But the time of the cosmos and of the moment are to be thought in the form of the superior undecidability contemplated here, then such a determination is always (even if it is seen as determining the form of events *for all time*) only a relatively local determination and can never determine *all* the truths about either. What is witnessed here in the broader phenomenon of undecidability in itself is not, then, the recurrence of a specific subset of events, but rather a kind of structurally inherent *a priori* which precedes the time involved in any regular procedure but in which "everything" has *always* "already happened."

The happening of a determinate event or the measurement of a determinate time is then thinkable as recurrence with respect to *this* a priori structure. But the *a priori*, thought in this sense, is no longer simply opposed to time and temporal becoming; nor is it thought as determined by the character of fixity, stability, or regularity in itself. It is rather implied in the very structural form of temporal givenness, which is common real structure underlying the measurement of moments *and* events. On

the one hand, the "now" is repeated infinitely, before and after, as the empty form of time stretching backward and forward from the empty gateway that it itself opens up. On the other, events are repeated infinitely in the form of their sense, and the interpretation and transformation of their sense repeats them infinitely again. But the two repetitions are no longer opposed to one another as the actual (or sensible) to the thinkable (or possible); rather, they are seen as having a common underlying structure in the undecidable form of given time. The happening of what happens is no longer the "actualization" of the "potential" or possible, nor is it determined in the general form of *dunamis* or effectiveness. It is rather determined by, and determinate in, the virtual and ineffective but fully real structure of the undecidable as such which is the form of given time. In this form, which is itself just the moment, as gateway, from which an infinite path stretches backward and another stretches forward, everything that "can" happen has happened, and everything that does happen will happen an infinite number of time again – including this moment, as gateway, itself. And what "can" happen is not, itself, "pre"-determined as a fixed order of possibilities, but rather (since the distinction between possibility and actuality is itself no longer in effect) as, exactly, what does happen and will happen. As such, the form of the "now" is the real and given form of what gives itself as the original structure of its repeatability, as well as the intelligible structure, inherent in each "now" as its own infinite depth, of the unlimited becoming of the world.

IV

If there is a doctrine of the eternal return that can be derived from the original undecidability of given time, it is not the one that Heidegger ascribes to Nietzsche in his lectures. In particular, it is not, as Heidegger says, doctrine of a "permanentizing of whatever becomes into … the self-recapitulation of the identical," for two reasons. First it is not a "permanentizing", since undecidable givenness precedes and provides the determinate underlying basis for *any* subsequent determination of anything as permanent *or* impermanent; second, it is not a doctrine of the repetition of the identical, since its determines the self-identical as repeatable only *as* a local determination of what is originally the undecidable form of time and sense, which is always becoming other and different. If, indeed, it is true, as Heidegger says, that such a repetition of the identical is "the only kind of presence there is," then what we witness here is a thought of time, in developing the paradoxical structure of the "now" and of the infinity of given time, is no longer determined in the medium of the present or as the thought of its consistent, indefinite repetition. Thus we see here a certain structural "other" to the "metaphysics of presence" itself and as a whole, which appears both to condition it as its underlying more general structure and also to become thinkable at a certain determinate moment of its internal development.

More specifically: the structure of an originally undecidable given time is the specific limit and also overcoming of the structure of onto-theology which recurrently organizes, within metaphysics, the interpretation of the being of beings. As we have seen since chapter 1, onto-theology grounds both "from above" and "from below": both by selecting a superior ontic referent which sets a standard for the intelligibility of beings *as a whole* and by selecting a correspondent ontic principle for the constitution of beings *as such*. Both aspects of grounding together determine, in each case, the form in

which beings are understood and experienced, and both have a more basic original temporal determination in the form of the present. If, on the other hand, the original structure of given time is thought as paradoxical and undecidable in the twofold way I have suggested, both with respect to the moment and with respect to the totality, then *both aspects of onto-theological grounding are overcome in favor of their more original infinite-temporal conditions*. In particular: there will henceforth be no theological grounding of beings "from above", since the whole is not given from the perspective of the theological elevation of a supreme being as a consistent principle of the whole, but rather as the infinite and paradoxical extent of undecidable cosmic time, infinite in both directions. And there will be no ontological grounding "from below", since the infinitely deep paradoxical form of the "now" underlies the intelligible being of any being as given.

Henceforth, it will no longer be possible to stabilize beings or their becoming by means of ontic referents: in the condition of ontological anarchy (cf. chapter 6) that results, the destitution of all such referents is formally indicated in the infinite-undecidable structure of given time itself. But in pointing to this larger inherence of undecidability in which the specific conditions for onto-theological grounding are themselves situated, the indication of the infinite which here insists both above and below also points to the more original conditions under which it is *possible* to pursue a solution to the original problem of time, though, and becoming by *logical* means. These are the conditions which, we have seen reason to think, presented themselves to Plato, and determined the form of the solution presented by the Visitor in the *Sophist* in terms of the *koinonia* of the great types. The solution, in the categorical form in which it was later further consolidated by Aristotle, persists and continues to determine the tradition's thinking about logic and presence until the moment when the metalogical problematic brings out, on the basis of the consequences of the thought of the actual infinite, the necessary communication of logical structures of categories and regular procedures with the broader infinite-undecidable temporal structure in which they inhere.

In a number of texts, Gilles Deleuze has suggested that Nietzsche's occasional descriptions of the eternal return as the cyclic return of the same or identical are simply the exoteric face or manifest form of a deeper and more esoteric true content of the doctrine on which *only* difference returns.[19] Nietzsche, on this reading, will have proposed the doctrine in such a superficial and exoteric form only as the exterior face of a doctrine whose actual truth presupposes the disruption of all fixed identities and the destitution of the form and force of all unitary laws. On this interpretation, is returning indeed the returning of identity, but identity returns "as a secondary power" (p. 41), not the repetition of what is in itself identical or similar, but the *production* of the similar and identical *from* difference and its repetition. Also and for this reason, the eternal return is understood as a doctrine of *selection*: with respect to difference, the eternal return selects certain "extreme forms" and only these return. These are not fixed identities or constituted things, but that in things which acts as "mobile individuating factors unwilling to allow themselves to be contained within the factitious limits of this or that individual, this or that Self." (p. 41) It is as selective in this sense that the eternal return, according to Deleuze, is *affirmative* and is an endless affirmation of difference; in particular, it selects "all the procedures opposed to selection;" what is excluded and made not to return is just whatever

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[19] D&R, Pp. 41-42., Logic of Sense pp. 263-64.

"presupposes the Same and the Similar." (Lof S, p. 265). As such an affirmation, the eternal return is akin to the reality of an "Ideal game" which affirms chance without first subjecting it to distribution by means of fixed rules and assigned identities. Deleuze develops the structure of this affirmation as an original temporal structure, that of the "Aion" which cuts into chronological time with an infinitely straight and infinite line at every point, determining the progressive order of chronological time as divisible *ad infinitum* and always really cut by the infinite repetition of difference.[20]

With these formulations, Deleuze presents the eternal return as an original form of difference in its repetition which, as pure paradoxical becoming, underlies and surrounds the determinate constitution of categorical and logical identities in the (actually produced) form of the identical. The conception affirms, then, an original becoming of the simulacrum at the real basis of the representational repetition of the identical and similar; the affirmation of such a prior condition of the image or copy in the simulacrum is Deleuze's development of the project of "overturning Platonism" announced by Nietzsche. And indeed, there is every reason to think that Nietzsche recurrently presents the doctrine of eternal return as one whose explicit or exoteric content (namely that "time itself" is circular, or that a fixed finite totality of events that cyclically repeats itself) masks a deeper truth that is more problematic to master and express. For example, as both Deleuze and Heidegger note, versions of the doctrine are presented several times in *Zarathustra*: when the doctrine is first presented to the dwarf in "The Vision and the Riddle," he repeats it, murmuring, as the doctrine that "time itself is a circle." Later, Zarathustra's animals present a version of the doctrine that time is circular, and Zarathustra complains that they have made of his doctrine a tired refrain. In both cases, the exoteric presentation is contrasted with a more esoteric realization which Zarathustra himself struggles to attain and which is not directly expressed. Furthermore, Nietzsche himself would have known well (as both Deleuze and Heidegger also point out) the many precedents in ancient thought, including in Plato and Aristotle, for the idea of a simple ontic circulation of beings; this could hardly have been the doctrine that he intended with the idea of eternal recurrence, given the degree of importance and novelty he himself ascribed to it.

For all of these reasons, Deleuze's suggestion of a more original content of the doctrine of the eternal recurrence, to be found in the affirmation and repetition of difference which produces identity rather than the repetition of what is basically the same or identical, appears motivated. At any rate, I shall not dispute this suggestion here, but simply try to verify its connection to both the metalogically indicated structure of originally undecidable time, on the one hand, and to the "Heideggerian" ontological problematic and history of being, on the other. We have already seen reason to suspect that it is in the form of the problem of the original undecidability of time that the question of thinkable being and becoming presented itself to Plato, and that it was to this problem, thus understood more or less

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[20] Deleuze quotes Nietzsche from *Zarathustra*: " 'O sky above me, you pure, lofty sky! This is now your purity to me … that you are to me a gods' table for divine chances, that you are to me a gods' table for divine dice and dicers!' To which the reply on the other table: 'If ever I have played dice with gods at their table, the earth, so that the earth trembled and broke open and streams of fire snorted forth: for the earth is a table of the gods, and trembling with creative new words and the dice throws of the gods …' Both together, however, the fractured sky and the broken earth, do not support the negative but vomit it out through that which fractures or breaks them; they expel all the false forms of negation, including precisely those which represent the false game…" (p. 284)

explicitly, that he presented both the "logical" *koinon* of the *Sophist* and his own more developed view of the dialectic of the indefinite dyad and the one as solutions. But the first solution presupposes and requires the fixed forms of the identity of the great types (including that of "difference") and their logical, psychological and ontological simultaneity; whereas the second, with its appeal to the approximative method of fixing limits by means of iterated division, can only, at best, dissimulate what is now visible as the actual underlying numerical structure of undecidability, in which points determinable by any finite procedure are fleetingly rare and exceptional. If one can see in Nietzsche's doctrine, as part of its esoteric or latent content, a conception of the undecidable structure of given time in which the *apeiron* is insistent in an even more exigent and overwhelming sense than in Plato's late conception, this raises in a different light the question of what in Nietzsche's thought of the eternal return may be seen as simply an "inverted" Platonism (with Heidegger) or what, by contrast, must be seen (with Deleuze) as its actual overcoming. At any rate, if the structure of undecidable given time can be shown both to condition and undermine the specifically logical thought of being inaugurated by Plato on its own underlying temporal ground, it points to the positive and formally indicated broader structure of temporality in which anything like Platonism – or the "history of being" as the metaphysics of presence – itself takes place.[21]

If time, in the form of the moment and its given infinity in the directions of its "before" and "after", is originally given as undecidable, then the affirmation of its original paradoxical structure is indeed something which appears, from the perspective of determinate decision procedures, as the affirmation of chance. For if the determination of temporal becoming cannot be decided by a determinate procedure of decision or measurement, it will indeed appear to be aleatory with respect to that procedure. But undecidability is not randomness; as we have seen, it is a more original structure of determinacy, even excessively so. The structure of the undecidable, rather, points to the way that something like pure difference might be seen as pre-existing, and as determinative with respect to the subsequent possibility that identities are determined by means of fixed procedures of measurement and decision. Relatedly, if it is finite procedures and criteria that determine identities, the prior structure of the undecidable must be seen as the original structure of difference and paradox which conditions all such determination and decision. This original structure, as we have seen, is itself determined as the realized form of the paradoxes of becoming and of infinite differentiation, whereby what becomes some way is always becoming a bit more, and what goes from being something to being something else must pass through a pure infinitesimal point at which it is neither. To affirm the structure of original decidability is to see in the structural form of the moment (or "now" as such) the unresolved depth and positive reality of these paradoxes, as prior and problematic conditions, prior to any possible (consistent) schema or positive image, for the self-identity of anything that changes or the becoming-different of anything that is the same.

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[21] In the description or formal indication of this structure, it is relatively immaterial whether one considers oneself to be overcoming (something called) "metaphysics" as such in favor of a kind of thinking that is not or is no longer metaphysical, as Heidegger does, or whether the indicated thought of difference, beyond presence and identity, remains (as with Deleuze) "metaphysics", even in a "pure" sense.

Furthermore, if the eternal return is seen in this way, its internal relation to the *ontological* problematic can readily be verified. In particular, if it is not simply the repetition of a fixed sequence of (ontic) events in an empty form of time, but rather the paradoxical structure of the infinite which expresses difference and preserves the paradoxes of unlimited becoming, it is thereby in a direct relationship with the reflexive structure of time's own self-givenness and thereby with the ontological structure of unconcealment — or truth — as such. The nature of this connection resolves what otherwise presents itself as a puzzling aspect of Nietzsche's presentation of the eternal return — that although it is on the one hand certainly intended as a *cosmological* doctrine that is seen as true, it is also, just as importantly, *to be affirmed* as the *affirmation* of *amor fati*. As we shall see, it would be as incorrect to see the first aspect of the doctrine as entering a simply empirical claim about the factual circulation of events as it would be to understand the second as a merely psychological imperative. The two aspects can be seen together, however, if the relationship of both to the ontological difference, and thereby being itself, is clearly grasped.

In his 1969 *Nietzsche and the Vicious Circle*, Pierre Klossowski considers the "experience" of the eternal return, arguing that the discovery of the doctrine entails a peculiar kind of *anamnesis* and, with it, a necessary disruption of the identity of the one who discovers it. For in the discovery, I am conscious of myself as having discovered the recurrence of all things and *with this* it must also be granted that the discovery itself has been made innumerable times before. If *I*, then, have learned the truth an infinite number of times before, I must also have forgotten it infinitely many times before; the current *anamnesis* is possible only on the basis of this infinite prior forgetting. But the revelation, as that of the return of all things, is also the discovery that the revelation itself could have happened at any moment in the cycle, or to anyone in general, and has indeed happened innumerable times before. If, then, I will its repetition, I do not will the repetition of myself as I am now (having discovered the eternal recurrence) or as I was before discovering it. Rather, I will myself "as a fortuitous moment whose very fortuity implies the necessity of the integral return of the whole series" (p. 58), a series which must thus traverse "the successive realizations of all possible identities". (p. 57). For this reason, at the moment I discover the eternal return:

> I cease to be myself *hic et nunc* and am susceptible to becoming innumerable others, knowing that I shall forget this revelation once I am outside the memory of myself; this forgetting forms the object of my present willing; for such a forgetting would amount to a memory outside my own limits: and my present consciousness will be established only in the forgetting of my other possible identities. (p. 58)

It is in this way that the circle becomes, according to Klossowski, "a sign for everything that has happened, for everything that is happening, and for everything that will ever happen in the world." (p. 58)

With the discovery of the return, I discover what is on the one hand a general form of time and events, but what on the other implicates me, and the moment of discovery itself, as the outcome of the infinite sequence that also begins at this very moment. The particular moment of discovery is not itself unique; the discovery can happen at any time, and must indeed have happened an infinite number of times

before. Accordingly, the possibility of self-disclosure that occurs in it – whereby *I*, in this moment, discover myself as the outcome of an infinite series of events that also begins in it – must be structurally characteristic of *every* moment as such. Every moment as such structurally includes the possibility of a revelation of the whole circular course, and also the necessity of a correlative forgetting. This possibility is not, moreover, simply *my* possibility; in the revelation, I also understand that is the possibility of anyone at any time. It must rather be seen as structurally implied in the form of the moment itself. Through this structure, every moment in itself communicates with the *whole* totality of infinitely recurrent time. The possibility of the revelation of this whole – the revelation of the eternal return – along with its correlative forgetting – must then be given in the very form in which the moment gives itself. To determine my will in accordance with this form is then nothing other than to will the whole of everything that has happened, is happening, and will happen. This is to will in accordance with *amor fati.*

It is here that contact can be re-established with the ontological problematic, in particular in that it construes the form of given time as a reflexive self-giving that discloses and conceals. *One* form of this self-giving is, as we have seen, the specific structure of Dasein as clearing and concealing, the structure that originally relates it to truth as *aletheia*. This is the structure in which, according to *Being and Time*, temporality temporalizes itself through the temporal ecstases and in which Dasein is 'its' time; behind it lies the reflexive structure of paradoxical auto-affection, or self-giving time, that Heidegger discovers through his reading of Kant in *Kant and the Problem of Metaphysics*. In this paradoxical structure, as we saw in chapter 6 above, the idea of transcendence is ultimately overcome in favor of the more ontologically basic clearing that precedes the attained Dasein itself and in favor of the epochal historical granting of being's truth as ground and abyss. But it remains that the specific structural condition for the revealing and concealing of beings and for granting of Being's truth is to be seen in what, giving itself, gives time. [22]

Aside from this, there is good independent reason to think that the structure of Dasein's reflexivity and its relationship to the self-giving of time are linked in decisive ways to the specific structures of the infinite and the undecidable. With Becker's analysis in *Mathematische Existenz*, for example, we have seen how Dasein's structural capacity for reflection, including the reflection on the unlimited iterability of reflection that Becker identifies with Cantor's "passage to the limit", may be seen as already implying the whole open development of the transfinite hierarchy. Along with it, as we saw, it appears also to imply a characteristic "openness" or "freedom" in the development, whereby it continually outstrips determinate decision procedures and fixed criteria. We have also seen how the aporeatic structure of the "now" in itself, whereby it indicates the paradoxes of original becoming, appears to underlie in its foreclosure – already in Aristotle – every subsequent metaphysical attempt to resolve the problem of being and becoming in categorical or logical form. This aporeatic structure itself, if brought out and

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[22] Cf. "On Time and Being": "In the sending of the destiny of Being, in the extending of time, there becomes manifest a dedication, a delivering over into what is their own, namely of Being as presence and of time as the realm of the open. What determines both, time and Being, in their own, that is, in their belonging together, we shall call: *Ereignis*, the event of Appropriation. *Ereignis* will be translated as Appropriation or event of Appropriation. One should bear in mind, however, that "event" is not simply an occurrence, but that which makes any occurrence possible." (p. 19)

clarified in view of the contemporary mathematics that reveal it, implies a real undecidability as inherent in the structure of the moment as such. If the givenness of the moment itself involves a self-givenness of original time, whether as the temporalization of temporality in the ecstases or as the paradoxical reflexivity of an auto-affective structure that is both giving and given, it must apparently itself entail this structural undecidability.

Although he treats Nietzsche's doctrine of the eternal recurrence as the attainment of a "basic metaphysical position," and although he indeed, several times, refers to its discovery as an *Ereignis*, Heidegger does not, in the Nietzsche lectures, discuss this connection between the reflexive form of the self-givenness of time and the specific structure of truth. Heidegger does, as we have seen, say that Nietzsche is able to attain the insight into the eternal recurrence only by placing himself "in the moment" decisively, in such a way that he himself is "transposed to beings as a whole." (p. 62). He thereby recognizes that the form of the discovery of the eternal recurrence is itself decisive for the content of its doctrine, and even that it indicates a structure of the moment as such whereby it demonstrates the more general structure of given time. But what he does not consider in any detail are the extended implications of the thought that time as given in the discovery of the eternal return must be infinite, and must therefore bear in its structure the specific consequences and structural complications of the infinite as such. As we have seen, these consequences include an unlimitedness of difference in becoming, a paradoxical undermining of all fixed forms of identity, and a constitutive undecidability characteristic of the form of the moment and of infinite given time as a whole.

None of these consequences are thinkable under the headings of "stability", "permanentizing", and the identity of the same, with which Heidegger goes on to characterize Nietzsche's doctrine as the final position of metaphysical thinking in the lectures. Together, though, they indicate a more complex and problematic relationship of the thought of the eternal recurrence, if construed in terms of them, to the determined history of metaphysics as a whole. In particular, they appear to bear to this history, as we have seen, the relationship that a general or dialectical problem bears to *one* of its more or less determined solutions. As such, they indicate the more original structure of time as given that pre-exists the "metaphysics of presence" as such, and also pre-determines its *possible* configurations up to their end.

What, though, is that which, in granting the form of time and events, pre-determines the happening of whatever can happen in the determined history of metaphysics as the metaphysics of presence, indeed by pre-determining the form of presencing and the present themselves? It is indicated by a name or descriptor which, as is well known, combines in the later Heidegger's thought the priority of the punctual origin of this history with the thought of the "outside" of what is other to it in general. The name is *Ereignis*. And with the specific thought of these consequences of the eternal recurrence, thought in terms of the specific structures of the infinite indicated in the contemporary mathematical and metalogical texts, it thus apparently becomes possible to think that *the eternal recurrence is itself* one *form or structure of Ereignis*. In thinking this (apparently) un-Heideggerian thought, we will have also thought the possibility, at a certain determined point of its discovery or revelation, of the appearance of Ereignis *itself* in or as the infinite temporal form of the eternal recurrence. But inasmuch as the eternal recurrence is itself the metaphysical picture correspondent, according to Heidegger

himself, to the contemporary regime of the dominance of machination or Gestell, to see things this way would simply be to see Ereignis *in* Gestell as its other face or initially hidden form. And with his repeated statements about the peculiar relationship of Gestell and Ereignis, Heidegger himself will, of course, have said nothing else.

In particular: as we have seen, if we apply the constitutive ideas of the infinite, which appear to be implied in it, explicitly to the structure of the eternal recurrence, we see in it the peculiar structure of the constitutive *undecidable* which insists at the levels of the moment and the totality, determining the general problematic surrounding within which it is then possible for metaphysics, as ontotheology, to seek particular principles of grounding from above and from below. *With the imposition of such particular principles*, beings and their temporal truth are rendered decidable and the original structure of undecidability is concealed. The concealment takes particular successive forms until, finally, there is nothing anymore to serve as a principial standard except becoming itself: here, energeia or actuality is no longer measured or balanced by a dunamis that precedes and regulates it, but rather both are converted into one another as the unlimited form of the pure will to will. This is the configuration that appears as the "final" metaphysical one, in which the eternal return appears *in one of its aspects* as the unlimited circulation of beings determined only by the will to their unlimited ordering. Here, and in relation to the determined standards and procedures which attempt to secure and verify the unlimited continuance of this setting-into-order, the eternal return is indeed the "securing of becoming" into permanence. But the specification of any such procedures stands in an internal and necessary relationship to the insistence of the actual undecidable which surrounds and conditions them on every side. This real-undecidable form of temporality as such, verified in the very metalogical discoveries that themselves make possible the development of "information technology" and computation as an apparently unlimited pursuit of the calculation of the calculable, by contrast proposes an alternative critical politics and another kind of reaction to the ontologically determined "present" on the ground of what it shows about the underlying form of time itself.

How does it come about, from this perspective, that the metaphysics of presence is able to determine the being of beings, from above and below, by means of specific ontic standards, and how does the affirmation of the eternal return overcome this thought? In his 1965 *Nietzsche*, Deleuze considers the successive stages of the "triumph of nihilism" in terms of the play of active and reactive forces that each involve . The third and most dangerous of these is that of the ascetic ideal:

> *The ascetic ideal:* The moment of sublimation. What the weak or reactive life ultimately wants is the negation of life. *Its* will to power is a will to nothingness, as a condition of its triumph. Conversely, the will to nothingness can only tolerate a life that is weak, mutilated, reactive – states close to nothing. Then is formed the disturbing alliance. Life is judged according to values that are said to be superior to life: these pious values are opposed to life, condemn it, lead it to nothingness: they promise salvation only to the most reactive, the weakest, the sickest forms of life." (p. 78)

On the condition of the reactive, which is itself a kind of reflexive form of redoubling, life is judged according to values that are "said to be superior" to it; the world as a whole takes on a determinate

meaning as what is to be seen as overcome or able to be overcome it in thought. It is in this development that Deleuze reads Nietzsche as proposing the "genesis of the great categories of our thought: the Self, the World, God, causality, finality, and so on." (p. 79). More specifically and in the 'ontological' idiom: with the specific redoubling accomplished by the reactive, the particular conditions are attained for the institution of metaphysics as onto-theology along with the basic sense of all transcendence as such. The world is determined by values and principles that are said to be outside it and superior to it; these principles aim to stabilize temporal becoming by means of something determinable from a simple "outside" position as extra-temporal or as stably fixed in general. For this operation, it is essential that a specific sense of the whole be attained, and also that it be able to be organized onto-theologically by one or another ontic referent. The affirmation of the active, by contrast, affirms life from within and overcomes the specific conditions of this onto-theological determination of categories. It points to the insistence of active becoming, before and behind the fixed values that are posited in the reactive attitudes as superior to the world and made to seem so. In this, as I have suggested, it affirms the original inherence within becoming of the infinite, and the undecidability that it brings with it as its intrinsically indicated form.

If this is correct, then what is revealed in the revelation of the eternal return is ultimately not either the determinacy of a particular standard for the being of beings or the complete arbitrariness of their utter and final removal from all standards in the generalization of a redoubled will to will. What is shown is rather the broader structure of the real-undecidable which surrounds and conditions any and all determinate procedures of decision. The affirmation of the eternal return is, then, the affirmation of this real-undecidable, and of the open and unlimited return of difference within it. This unlimited return of difference is the insistence of the paradoxes of becoming-unlimited, which cannot be solved or resolved, but only foreclosed, by any kind of determinate decision procedure. The insistence of this structure of paradox in the very form of the moment itself verifies that the moment is not the occasion for a decision or for a privileged gathering into presence but rather an opportunity for indicating the undecidability that inheres within it. On this basis it would apparently be possible – though I do not do so here – to re-read all that links the structure of the moment to the resolute and decisive in Heidegger, including also the connection he sometimes sees between it and a specially indicated structural opening, the structure of the present as *kairos*. Here, "the moment" is seen as the site of a gathering of authenticity and resoluteness, or as calling for a decision in a most original sense. But if, by contrast, the paradoxical structure of the eternal return is seen here, there is no occasion for decision and no demand for the resolute. All moments are equal as they equally bear the structure of the undecidable within themselves: the center is everywhere, and only difference returns. It is in this way that the moment can become, not an occasion for decision, but the object of an affirmation, an affirmation which goes all the further in implying its own infinite becoming. It is in this affirmation that time and being show themselves in a more original sense.

Heidegger himself may have suspected it. In the 1953 lecture "Who is Nietzsche's Zarathustra," Heidegger suggests a different way of understanding the significance of the eternal recurrence, not simply as the fixing of becoming in permanence, but rather in relation to what Nietzsche presents as Zarathustra's highest hope: the deliverance of man from revenge. "Revenge" itself, Heidegger notes, is

further understood by Zarathustra as "the will's aversion to time and its 'it was'". If there is a deliverance from this to be taught, it will thus involve a particular relation to time itself, or to its own structural character. In particular, the "it was" is here "identifies the foundation of time in its entire and intrinsic time-essence." The will's aversion, in revenge, is not just to one aspect or character of time but to time itself. In particular, Heidegger suggests, it is *transience* from which, here, the will suffers." In its attitude of revenge, this suffering will wills its own cessation and disappearance in general. The transient, and the earthly, are also "degraded" and "eternal Ideas" are posited. It is as a response to this, Heidegger suggests, that Nietzsche's thought of deliverance intervenes. It responds to the "No" of the spirit of revenge with an affirmative "yes"; but this "yes" is, according to Heidegger, nevertheless still the affirmation of a metaphysical conception. It is, in particular, the metaphysical conception of a recurrence that can be "abiding" only if it is "eternal." With this conception, Nietzsche thinks becoming as the stable condition of beings and thereby thinks once more what is always thought, according to Heidegger, in metaphysics: namely the belonging of the predicate "eternal" to the being of beings.

Nevertheless, in a brief "note on the eternal recurrence of the same" appended to the lecture, Heidegger recognizes the doctrine of recurrence as an "enigma" that today still gives itself to be thought. In particular, it is to be thought in the course of a thinking that tries to "bring the *essence* of modern technology to light". Here, the eternal recurrence as a figure of technology is just *one* of its faces or aspects; beyond this there is something else, mysterious, still to be understood:

> What is the essence of the modern dynamo other than one expression of the eternal recurrence of the same? But the essence of that machine is not anything machine-like or even mechanical.

> Just as little may Nietzsche's thought of the eternal recurrence of the same be interpreted in a mechanical sense.

> That Nietzsche experienced and expounded his most abysmal thought from the Dionysian standpoint, only suggests that he was still compelled to think it metaphysically, and only metaphysically.

> But it does not preclude that this most abysmal thought conceals something unthought, which also is impenetrable to metaphysical thinking.

V

I have argued that if the specific inclusion, within the structure of the thought of eternal recurrence, of the content of the constitutive ideas and problems of the infinite is grasped in the light of contemporary mathematical and metalogical thought, this provides an alternative conception of its structure that exposes its structural connection or substantial sameness with what Heidegger thinks as *Ereignis*, the condition of both historical metaphysics and its overcoming at its end. This provides grounds for resisting Heidegger's reading of the stabilized circulation of beings in Gestell as the *only* form or structure of the eternal recurrence, and also gives content to Heidegger's own avowals of the actual

internal relationship between Gestell and Ereignis, in which he places the hope for a contemporary thinking or realization of the latter. In this final section, I shall argue that it also provides the basis for an "ontological" critical politics, at some distance from what are usually seen as the political implications of Heidegger's own work, but nevertheless situationally appropriate to the structural problems and characteristic antinomies of the organization of global life today.

The key to this politics is the demonstration and awareness of the actual ineffectivity that surrounds and conditions the pursuit of all "effective" measures and solutions as a matter of their own inherent *logical* structure. For if systems of capital, structures of organization, global "planning" and the institutionalized and capitalized pursuit of technological "solutions" all operate on the assumption of the unquestioned legitimacy of effective procedures, the metalogical results demonstrate their inherent limit with respect to the total situation of global life to which they address themselves. They show, on the one hand, that effective solutions will never succeed in resolving the structural antagonisms and underlying contradictions that actually structure this situation itself, and on the other that the various determined forms of procedural solution in which the contemporary forms of global governance and capital pursue their resolution can only succeed in reduplicating them. In this way, the demonstration and awareness of generalized ineffectivity provides rigorous grounds for the radical critique of all that is involved in the pursuit and maintenance of effectivity and thereby of the underlying assumptions and enforced practice of the regulated functioning of global life. The enforcement of this regular functioning is as much in force, today, in the seemingly decentered flows of global capital thought according to the ideological figure of the "free" market and the regulating exchange and commodification of "information" as it was earlier, in the time of the planned economies and centralized solutions of the twentieth century. The thought and reality of ineffectivity, which is shown by means of the contemporary metalogical results to be actually structurally inherent in the structure of the pursuit of effective solutions itself, marks the limit of this force and the possibility of its specific overcoming in contemporary thought and action.

This makes for what is, with respect to the globally normative standards and contemporary assumptions of the organization of collective life, on the one hand a rigorous and "ruthless critique of everything existing" and, on the other, an *affirmative* doctrine of the thought and practice of a life no longer determined by the pursuit of effectivity in any of its forms. One temporal figure of such a life is, as I have suggested, the eternal return. But as we have seen, this is no longer the regulated and regulating return of goods, information, or (more basically) capital as its form and determination. It is rather the ontologically conceived and metalogically demonstrated return of all that insists, beyond regular procedures and their effectiveness, at the very basis of their possible institution, maintenance, and force.

What is at stake in the question, temporal in an exemplary fashion, of the relationship of the two figures of the "eternal" return, the one the stabilizing into constancy of the procedural decidability of the effectiveness of identical beings, and the other the irregular return of the undecidable whose infinite form is not stability or permanence but difference itself? It is a question of *circulation*, and of the relationship of its meaning to the thought and structural reality of the infinite that would have insisted

within it since its first specific thought in the history of the West.[23] If contemporary global life and practice indeed determines the form of life and exchange as a securing and ever-increasing expansion of the circulation of goods, information, and capital, the relationship of circulation to the infinite is thought quite differently in the actual ontological content of the eternal recurrence. Here, circulation is no longer the circulation of goods and capital but the return of "all that has happened, is happening, or ever will happen". And it is not determined by the "eternal" as the stabilization of circulation into the constancy of becoming, but as the recurrence of infinite difference which outstrips every finite form of stabilization and presence.

If, as I have argued, the eternal return can be ontologically thought, in its determination of the very form of the happening of what happens, as "the same as" *Ereignis*, it is possible to think *Ereignis* itself differently than Heidegger himself (at least sometimes) does. In particular, what is at issue here is the evident ambiguity of Heidegger's own thought of *Ereignis* as the *futural* event of being's own appropriation to itself, of its ultimate return to itself in the sphere of its own propriety or proper belonging, outside and beyond the withdrawal and obscuration within the history of metaphysics that is also, according to Heidegger, proper to it. The ambiguity of Heidegger's thought of this futural "to come" is the ambiguity of the figures in which the thought of Ereignis would, on the one hand, precede its "actuality" or "realization" as its "preparation" or hearkening, but on the other seem to bring it about, all at once, by means of a kind of sudden transformation of vision or insight. In thinking this ambiguity, Heidegger oscillates problematically between the rhetoric of decision and passivity, between the awaiting of a thinking that already knows the truth of Ereignis and the impulsive insistence of a practice of thought (and also of action?) that would seem to see at a determined "historical" moment the real possibility of bringing it about.[24] If Ereignis is instead thought as (one form of) the eternal recurrence in the way I have suggested, its thinking is not structurally "beyond", because it is the same as, the thinking of what is involved in our present, or of the general form of the present itself. According

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[23] In the 1946 lecture "Anaximander's Saying," Heidegger reads what is "considered to be the oldest saying of Western thinking" as a discourse of the circulation of presence and absence, as the arrival and departure of what comes, whiles, and goes: "Usage hands over what is present to its presencing; to, that is, its while. Usage imparts to it the portion of its while. The while, apportioned in each case to what stayes, rests in the jointure which disposes what presences in the passage between the two absences (arrival and departure)." He barely mentions, though, the declaration that is reputed to proceed in Anaximander the specific text considered here, that of the *apeiron* as the *arche* of all beings. (p. 278, top: "According to the tradition reported in Simplicius' commentary on Aristotle's *Physics*, Anaximander is supposed to have said that that which presences without bounds: *arche ton onton to apeiron*. What is without bounds is not disposed by order and reck. It is not one of the things that are present but rather *to khreon*."). If, however, as we have suggested, the specific sense of the *apeiron* is already involved in the thought of this circulation and in the thought of presence as such that (as Heidegger will suggest) is originally thought here, then it must also essentially articulate what Heidegger later articulates, in the essay, as the "concealed richness of the unifying One, the *en* which is, in his own way, is thought by every thinker" and in which is to be found, Heidegger suggests, the underlying sameness of being thought as *energeia, idea, eon, and logos*). (p. 280). (There is a somewhat more developed discussion of the *apeiron* in Anaximander at the end of *Basic Concepts* where, nevertheless, its significance in Anaximander's thought is again treated just as that of the "refusal of every boundary").

[24] It *might* be possible – but only with an adequate and rigorous awareness of all the overdetermined dangers and problems that also are involved here – to begin (but only begin) here a reading of the significance of what have been called the "events" of 1933. I do not intend or presume such a reading, or its outcome, here.

to this general form, the structure of this present is not the determination of a specific form of presencing or even the stabilization of all becoming into infinite persistence. It is rather the insistence of infinite difference which, differentiating itself, provides for the undecidable coming of whatever is to come. What structurally insists in this coming cannot be pictured in any image of the world, or determined according to any specified or specifiable procedure. But the development of the idea of the infinite in our time points to the fact that there is nevertheless a way for this insistence to be rigorously demonstrated, and, with this, that the very difference of being can be positively indicated and thought.

What, then, of the "event"ality of the event, of the thought or possibility of the determinate moment of the break with all that has come before, or of the overcoming of the specific conditions of a longstanding historical or temporal determination of the sense of beings at a *particular* determined point? If it can be said of the distinctive forms of temporal thought and political organization of the twentieth century that the characteristically pursue a kind of sudden and radical breakthrough to the real at the punctual limit of the purification of forms, then this pursuit recurrently invokes and turns on the rhetoric and figure of the peculiar configuration of crisis, decision, and act. According to this rhetoric, the finally redemptive passage to the new is to be found only by means of a sudden completion of all that has come before whose very structure is that of the decisive "passage to the act." With this passage, the meaning of history is consummated or reversed, attained or nullified in the gesture that finally delimits it and thereby founds the possibility of another beginning. The rhetoric of this "passion of the real" still persists, today, in the militancy of the politics of the new that invoke the decisive activity of the subject as the basis for a possible transformation or reconfiguration of existing situations at the point of what is there figured as the progressive exigency of truths. But the rhetoric of crisis and its overcoming by means of action is also deployed and pursued by the thought and practice of the regulation of global capital, which recurrently and effectively turns it to its own ends of the insurance of structural functioning and the securing of systems.

By contrast with this, the deadlock which links the thinking of the determined forms of capitalist technological crisis to the idea of the general crisis of the end of history (whether thought in catastrophic or triumphalist forms) is already overcome by the thought of the temporal form of the eternal recurrence as the circulation of the undecidable. Here, "ontological" thought is no longer responsive to an anxiety of the possible loss of what insists within history or the exigency of its futural recovery on other terms or in terms of the "other." Rather, what is inherent and determinative in the events of history is thought in terms of its own specific structural and temporal relationship to what returns in it, and what thereby structurally implies its communication with all that happens, can happen, or will happen. With this thought of the infinite circulation of the undecidable, there is no longer anything to decide. There is no need, and no exigency, of its preservation, maintenance or salvation of the event or its destiny, since this destiny also destines everything and everything returns. But there remains the possibility of an affirmation that determines the world and the will under its sign, thereby indicating the inherent temporal ground of the pursuit of a clarified life to come.

The thought of the eternal recurrence, thus understood, has its fixed points in the moments of discovery or revelation at which it is illuminated or pursued, or where it becomes the principle of a life and action that is no longer determined by the effective pursuit of beings. But these fixed points are not

themselves unique or privilege; they are simply indicative of the structure that is thereby seen to inhere in the form of time itself, in the moment as such. This points to what is, within them, a very different relationship to history and its becoming than that which is contemplated in the rhetoric of crisis and overcoming which capitalist-technological praxis and decisionist political thought essentially share.

In particular, if Nietzsche, with the revelation of the eternal return, could consider himself in possession of a thought that would or could "break the history of the world in two", it is because it is part of the structural content of this thought that this specifically determined history is, as such and at each of its moments, *already in communication* with the temporality of what is not history or is other to it, what cannot simply be determined as what happens according to its determinate principle or determining standard. Here there is indicated, in particular, not only the "other" beginning of another history, but other and different histories in general, and also the world-temporality of what is *not* history but is rather thought as the time of "nature" that precedes and envelops it. With this thought of the communication, in the paradoxical form of the moment, of history with its more general temporal condition, history is *already* and as such "broken" with respect to its temporally determining condition with which it is related in the circulation of the eternal return. It is this circulation of historical and natural temporalities, *in the plural*, and their communication within the paradoxical and infinite form of the now, that the eternal return teaches. The broken condition of history is the object of its affirmation, and the indicated site of what "we" must apparently learn to inhabit. In learning to take up this inhabitance, it is not to be doubted that the ontic forms of circulation and of the expansion of its claims can and will continue, even for a long time.

Here, it is possible to suspect or discern the specific structural limit of the great Heideggerian dramatics of being's concealment and revealing, and in particular of the massive narrative of being's progressive withdrawal in the forms of its determination as beingness. In the thought of the eternal return, by contrast, "nothing is hidden" and there is no withdrawal, unless it be the forgetting of what can and must always be remembered again, the circulation of what will always come back. The result is that the thought that indicates and affirms the image of this circulation is no longer one that attempts to supply another or superior sense of being with respect to the sense of the circulation itself. The anxiety of nihilism or its completion in the substitution of ontic for ontological measures is no longer threatening within an awareness that sees that, within the structural indication of the recurrence of all that happens, there is never too little meaning but always too much.[25] Under the sign of the eternal recurrence, that is, there is always *more* sense than can be grasped by means of finite procedures, always *more* truth than can be captured by resemblance or representation, always *more* time than is counted by the empirical clock.

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[25] Cf. Deleuze: "Structure is in fact a machine for the production of incorporeal sense (skindapsos). But when structuralism shows in this manner that sense is produced by nonsense and its perpetual displacement, and that it is born of the respective position of elements which are not by themselves 'signifying', we should not at all compare it with what was called the philosophy of the absurd: Carroll, yes; Camus, no. This is so because, for the philosophy of the absurd, nonsense is what is opposed to sense in a simple relation with it, so that the absurd is always defined by a deficiency of sense and a lack (there is not enough of it …). From the point of view of structure, on the contrary, there is always too much sense: an excess produced and over-produced by nonsense as a lack of itself." (p. 71)

Under this sign of the eternal recurrence, ontological thought thus indicates the principle of a circulation of the infinite, an unlimited becoming of sense and things at the structural basis of all principles of fixity and determinate orders of equivalent exchange. What kind of response is invoked here *on the level of action* to the characteristic problems of our time, which present themselves as the problems of the *totalization* of the world, the total pursuit of total enframing or the absolutization of the claim of technological means and practices over the circulation of life on the earth? Here we should think not only of the narrowly specified, though very real, problems of the exhaustion of resources and the verified and increasingly urgent disharmony of the global climate which push to crisis, but also of the internal "problems" of what Marx already discussed as the ongoing and ever more total circulation of life and energy in the planet's metabolism under the condition of capitalism, which could, for all we know, go on for a very long time to come.

As we have seen, the ontological thinking of the temporal significance of the eternal recurrence, along with the specific structure of the undecidable infinite that is thereby indicated within it, points to the affirmation of this unlimited becoming. The point here is not the restoration of a "natural" balance or a local or global modification of practices, still determined within the overarching form of capital and technological/effective solutions, which allow species and natural habitats to be maintained a bit longer. With respect to the totalization of the world which these solutions will always themselves have both presupposed and promulgated, the affirmation of the eternal return is the affirmation a circulation that can never be total at all, at least not within any form of consistency: it is this circulation which then provides the indication, and principle, of the affirmed possibility of an education in a planetary life to come. The sense of this education is the clarified life that no longer destroys the earth or saves it, but is finally able to live on it.

In the temporal indication that ontological thought gives with the idea of the eternal recurrence, there is, as we have already seen, nothing any longer to decide. There is no closing or opening here, no demand to open a world or pursue its sense in the cultural decisions of peoples or the institution of their differences. This means also that here world is no longer here opposed, or opposable, to earth in the exigency of their mutual strife; rather, it may first be possible, with and in the specific thought of the structure of the temporal infinite as implied in the eternal return, to see the earth itself under the aspect of the infinite flows of sense and cosmic becoming that inhere in it and circulate around and through it. Here might be indicated the specific sense of what the ontological/temporal problematic gives to be thought in our time, as well as the contemporary implication of a discourse that, in addition to the eternal return, once sought to teach us, who have never known it, the meaning of the earth. The pursuit of the indication as the intimation of what today gives itself to thought in the circulation of life and its communication with the infinite cosmic flows that precede, traverse and animate it would apparently involve, among other things, a determinate rereading of the texts of philosophy, not this time as metaphysics or as the unfolding of presence but under the different conception or sign of the recurrence of all that it thinks. Such a *scholium* could draw resources from the essential forms in which the limited and limiting configuration of the logical thought of being as the thinkable gathering of the *koinon* were first defined and announced as the specific meaning of time. It here becomes possible to think of reading, in particular, the limited and limiting circulation permitted by the *logos* and the specific

adventure of its history differently, in the broader context of the finite and infinite flows of sense and becoming that surround and envelop it at every side, wherein it is just *one* history and one adventure, among many others. The trace of such an alternative determination might still be available, and give itself in the texts of the "tradition" to be read and thought as an indication of the life of the earth and its communication with the cosmic surrounding that precedes and envelops it. Such an indication would be the indication of a meaning of circulation that is not confined to these limited and limiting forms, but is rather the meaning of the circulation of the infinite in the life of the earth as such. It is pointed to in a specifically mythical discourse, in which the dying Socrates evokes or invokes the transit of the soul and the inherence of the thinkable, of the forgetting of what was once known and its eventual recovery, in the figure of its circulation around and through the earth, which still (and still today) does not give itself to be known. For:

> There are many strange places upon the earth, and the earth itself is not such as those who are used to discourse upon it believe it to be in nature or size, as someone has convinced me. (Plato, *Phaedo*, 108c)

And:

> Further, the earth is very large, and we live around the sea in a small portion of it between Phasis and the pillars of Heracles, like ants or frogs around a swamp; many other peoples live in many such parts of it. Everywhere about the earth there are numerous hollows of many kinds and shapes and sizes into which the water and the mist and the air have gathered. The earth itself is pure and lies in the pure sky where the stars are situated, which the majority of those who discourse on these subjects call the ether. The water and mist and air are the sediment of the ether and they always flow into the hollows of the earth. (109a-c)