

7. Resultatives, identity and transformation

This chapter contains additional analyses of situation types and constructions that have been discussed in the literature and pose challenges to the three-dimensional analysis and the principles formulated therein. These analyses will be developed more systematically in the final version of this book.

7.1. Resultatives

Much has been written on resultatives. This section, however, will only address the analysis of English resultatives by Levin & Rappaport Hovav (Levin & Rappaport Hovav 1999; Rappaport Hovav & Levin MS).

Rappaport Hovav & Levin argue that there in fact two basic semantic types of resultatives in English. The two types are found in the resultative constructions given in 1 and 2 respectively (Rappaport Hovav & Levin MS; examples 1a and 2b-c are attested from written English, and example 1e is taken from Wechsler 1997:313):

- (1)
 - a. *This time the curtain rolled open on the court of the Caesars.*
 - b. *The elevator creaked to the ground floor.*
 - c. *Jack painted the barn red.*
 - d. *We all pulled the crate out of the water.*
 - e. *He followed Lassie free of his captors.*

- (2)
 - a. *Clara rocked the baby to sleep.*
 - b. *...she started to run the hangover out of her system.*
 - c. *Walk yourself into a coma and see what your subconscious comes up with.*

Examples 1a-c are all examples of the Bare XP Resultative construction, as Rappaport Hovav & Levin call it. Examples 2a-c all require an Object which may be subcategorized (2a), nonsubcategorized (2b), or reflexive (2c; all of these labels are Rappaport Hovav & Levin's).

Rappaport Hovav & Levin note that the relationship between the causing event and the resultative's denotation in 1a-c is much tighter than that between the causing event and the resultative's denotation in 2a-c. In 1a, 1d and 1e, for instance, the movement along a path described by the resultative phrase is temporally coextensive with the activity described by the main verb (creaking, pulling, following; Levin & Rappaport Hovav 1999:214). Rappaport Hovav & Levin call this semantic property **temporal dependency**. Rappaport Hovav & Levin argue that in fact there is only one event unfolding over time, and the main verb and the resultative phrase simultaneously describe that one event. They call this type of resultative construction an expression of **event coidentification**.

Examples 2a-c, on the other hand, do involve two separate events, according to Rappaport Hovav & Levin. In all cases, the resultative phrase is directly predicated of the Object referent, no matter what type it is. The resultative phrase describes a change of state that is not temporally coextensive with the event denoted by the main verb. Instead, the resultative phrase describes a directed achievement that occurs at the end of the undirected activity denoted by the main clause verb. Rappaport Hovav & Levin call this type of resultative construction an expression of a **complex event**.

I believe that Rappaport Hovav & Levin's analysis is essentially correct (the reader is referred to their papers for more detailed argumentation). Although their analysis was developed independently of the three-dimensional analysis proposed here, it is easily represented in the three-dimensional model.

Event coidentification is precisely that: a single aspectual contour is described by two different predicates. The aspectual contour in question is the contour of the holistic theme, the participant associated with the verbal scale. The resultative predicate generally describes the resulting state, as in 1a and 1c, illustrated in Figures 1-2:

Figure 1. Event coidentification, intransitive change of state verb

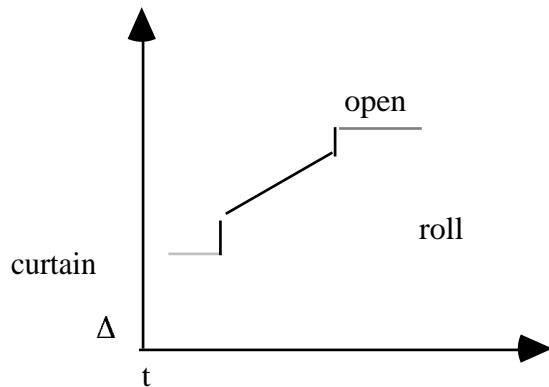
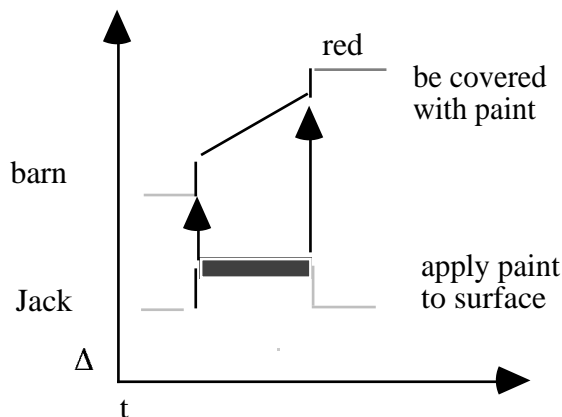


Figure 2. Event coidentification, transitive change of state verb



A technical representation problem arises when the resulting state is described by a path expression, as with directed motion verbs. The description of the path describes the path as the event unfolds, especially in an example such as 3 (= example 7 from §4.1):

- (3) *We walked from the station past the post office to the school.*

The resulting state is of course a location resulting from traveling from the station, past the post office, to the school. But the description of the “result state” is actually a description of parts of the path traversed, not just the resulting location of the figure. I believe that the best solution is to allow the resultative phrase to describe any part of the aspectual contour that includes at least the first time point of the resulting state. This will allow the representation of the path as in the figures for motion expressions in chapter 4.

A further qualification must also be made for path expressions. The noncausal relation between the path and the ground object is profiled by the path expression, but the resultative

phrase itself denotes the path that is represented in the holistic theme's profile. That is, the preposition *out of*, found in the representation of example 1b in Figure 3, has the independent representation in Figure 4.

Figure 3. Directed motion with path result expression.

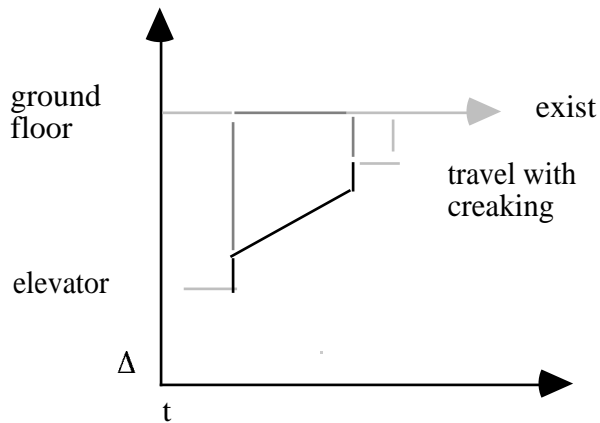
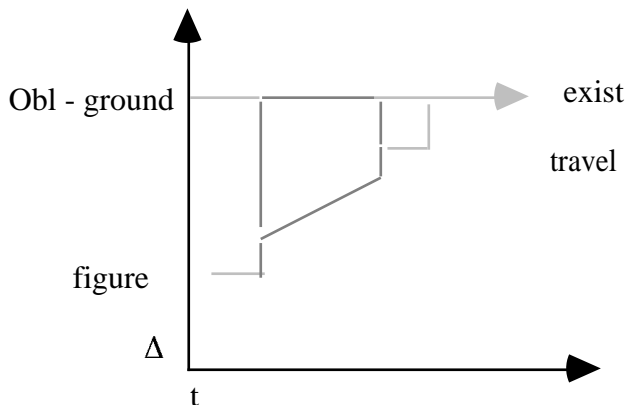


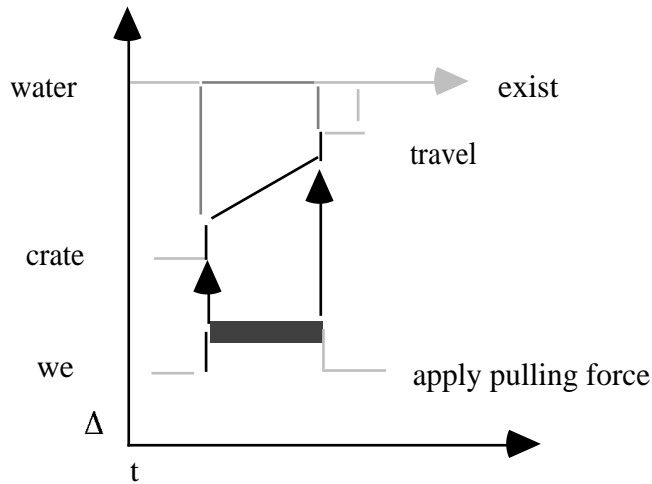
Figure 4. Directed motion path preposition.



This should not be taken as a violation of the event coidentification analysis, because the profile of the figure is coidentified with the holistic theme profile of the event denoted by the verb.

One advantage of the analysis of event coidentification in the three-dimensional analysis is that it allows us to represent event coidentification in complex events such as pulling in 1d, represented in Figure 5 (see also §4.4):

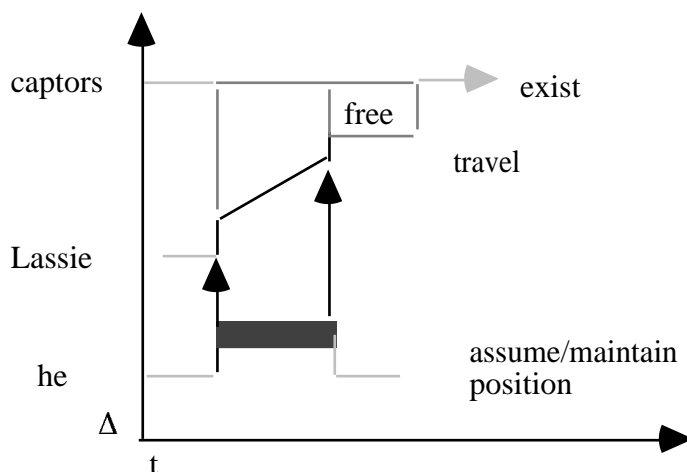
Figure 5. Extended caused directed motion and coidentification



Rappaport Hovav & Levin (MS) have difficulties in representing event coidentification with transitive events, because they do not allow for event decomposition in event coidentification. In the three-dimensional model, event coidentification is associated with only the holistic theme aspectual contour, and the presence of other subevents as in 1d is not problematic.

Correlated motion is also a case of event coidentification, as illustrated in 1d. Following the analysis in §4.4, I analyzed correlated motion as motion of the figure, with the parallel motion of the correlated figure as an entailment of the subevents and causal relations between the figure and the correlated figure. Example 1e is therefore represented as in Figure 6:

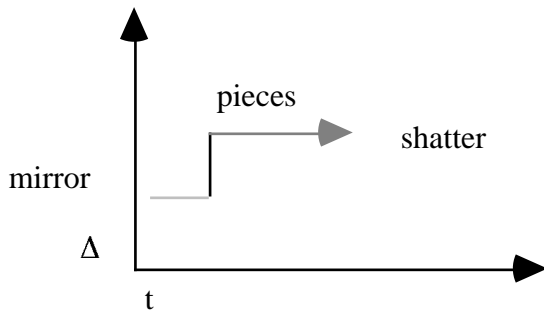
Figure 6. Event coidentification, correlated motion verb



The three-dimensional model also allows us to represent event coidentification with punctual events, as in example 3, represented in Figure 7:

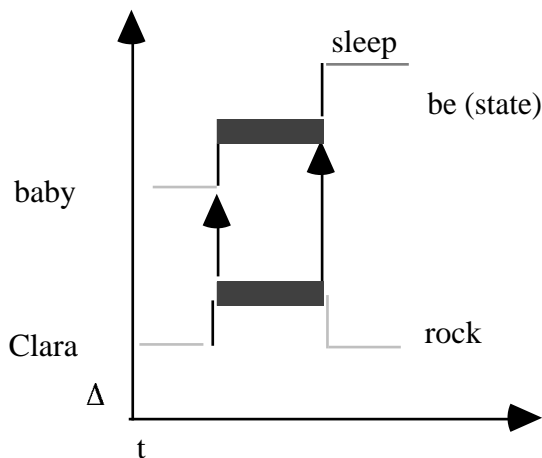
(3) *The mirror shattered to pieces.*

Figure 7. Event coidentification, punctual event



Complex events, on the other hand, are situations in which the resultative phrase describes a different aspectual contour from that denoted by the main verb. All of the complex event examples are transitive because the subevents are construed as two distinct aspectual contours. The most straightforward example is when the second argument of the transitive verb is the “normal” (Subcategorized) second participant in the situation, as in example 2a, represented in Figure 8:

Figure 8. Complex event, subcategorized Object referent



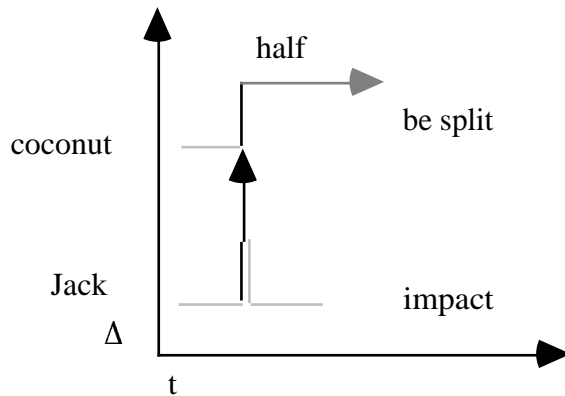
The rocking subevent is an extended activity, while the falling asleep subevent is a runup directed achievement. The lack of temporal dependency is in the relationship between the u-process phase and the final d-transition: the final d-transition occurs only at the end of the u-process.³⁰ The aspectual type of the whole situation is a runup achievement.

³⁰Rappaport Hovav & Levin argue that the final d-transition (in our terms) can occur at some arbitrary time interval after the end of the u-process. I am inclined to believe that the d-transition is construed as occurring at the end of the u-process, and that the relevant participant is undergoing something up to the point of the d-transition. Even with this assumption, the three-dimensional model clearly differentiates event coidentification and complex events, in terms of the distinct aspectual contours and the final d-transition.

A transitive complex event resultative is also found with punctual transitive situations, as in example 4, represented in Figure 9:

(4) *Jack split the coconut in half.*

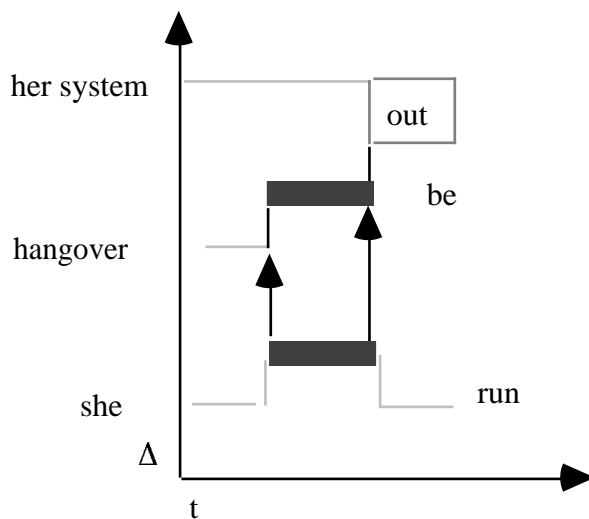
Figure 9. Complex event, subcategorized Object referent, punctual situation



The usual construal of the lexical causative in 4 in the Past is as an achievement, which might give the illusion of temporal dependency between the two subevents. However, an alternative construal of 4 is as a runup achievement: *It took Jack five minutes to split the coconut.* However, the runup process is only the (iterated) impact subevent on the part of Jack, not the d-transition subevent of the coconut. In other words, the representation of the runup construal of example 4 would be the same as Figure 8, *mutatis mutandis*. Hence, example 4 is an example of a complex event, not event coidentification.

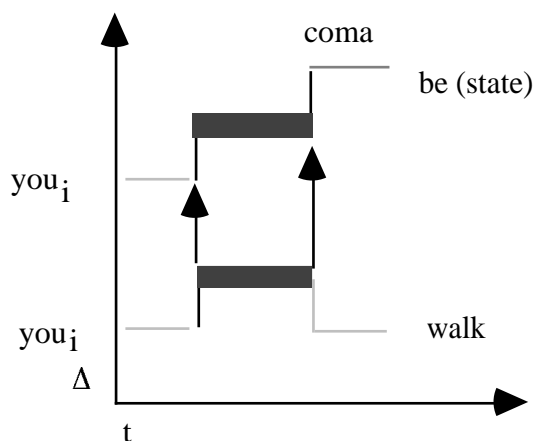
English also allows caused subevents in the resultative construction with intransitive (one-participant) situations, as in 2b. The analysis into a complex situation with two subevents is also straightforward:

Figure 10. Complex event with intransitive situation



English also has the Reflexive Resultative construction, as in 2c, to describe situations in which there are two subevents, but the same participant is involved in both subevents (compare the representation of ordinary Reflexive sentences in §3.5.3). Example 2c is then represented as in Figure 11 (I have analyzed *a coma* as coidentification of the state of the person; see §7.2).

Figure 11. Complex event, intransitive situation, one participant



Again, it is clear in this example that there is no temporal dependency between the two subevents.

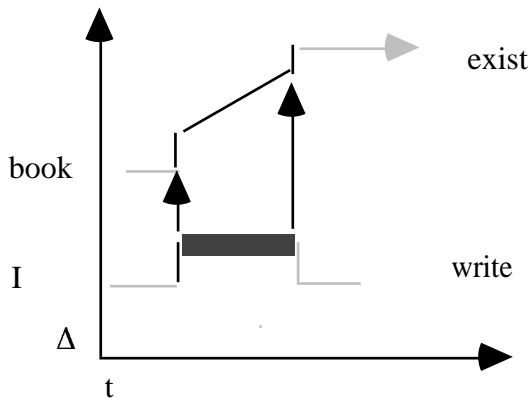
The analysis of resultatives in this section is a very natural representation of Rappaport Hovav & Levin's distinction of two semantic types of resultatives: one where the resultative phrase describes an aspectual contour that is part of the verbal profile and one where the resultative phrase describes an aspectual contour separate from the verbal profile.

7.2. Creation, identity and transformation

One force-dynamically unusual category of participant is that of **effected objects**, that is, objects created by the process denoted by the verb. In this case, the change of state is their very coming into existence, as illustrated in 5 and represented in Figure 12:

- (5) *I wrote a book last spring.*

Figure 12. Creation



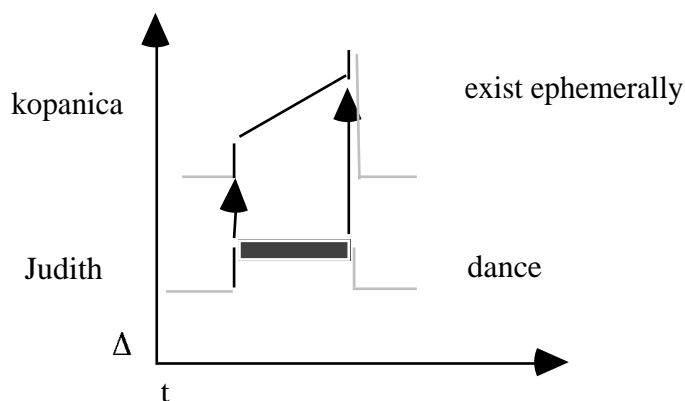
The book in 5 is the holistic theme, that is, the verbal scale is defined by measuring out how much of the book is written.

It is also possible to create an ephemeral object, such as a dance or song that is created in performance:

(6) *Judith danced a kopanica.*

In 6, *dance* is not an undirected activity but a bounded creation verb with an ephemeral created object, namely the dance performance. As noted in §1.2.5, 6 is an example of a cyclic accomplishment, because the dance ends its existence as soon as it is over. Example 6 is represented as in Figure 13:

Figure 13. Ephemeral creation

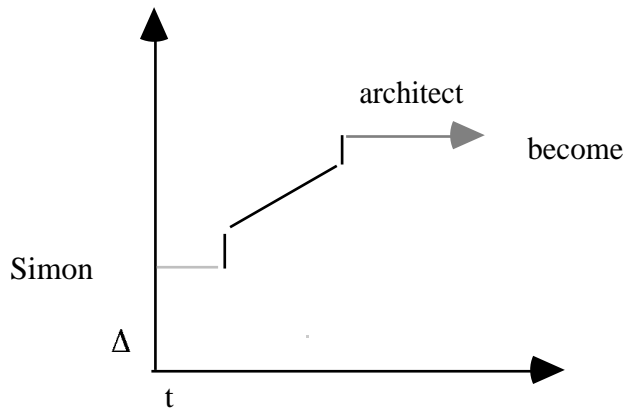


Another means by which an entity can come to exist is through transformation. Transformation involves a change or acquisition of a new identity, as in 7:

(7) *Simon became an architect in six years.*

Verbs of becoming take a predicative complement, which is represented by event coidentification of the predicative complement and the process leading to the acquisition of that identity. Example 7 is represented in Figure 14:

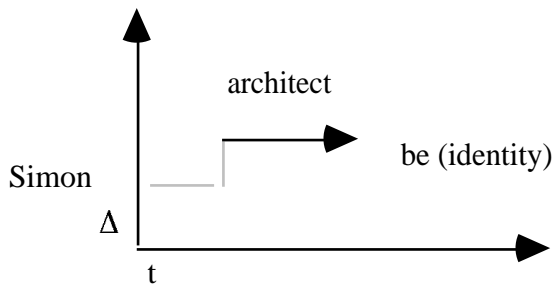
Figure 14. Change of identity/acquisition of new identity



In this analysis, the *be* of identity in a sentence like 8 is represented as in Figure 15:

(8) *Simon is an architect.*

Figure 15. Change of identity (acquisition of new identity)

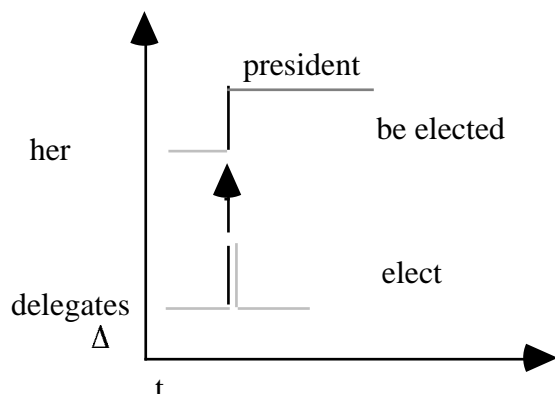


A new identity may be brought about by an external agent, as in 9:

(9) *The delegates elected her president.*

This is another example of a complex situation with event coidentification, represented in Figure 16:

Figure 16. Caused change of identity



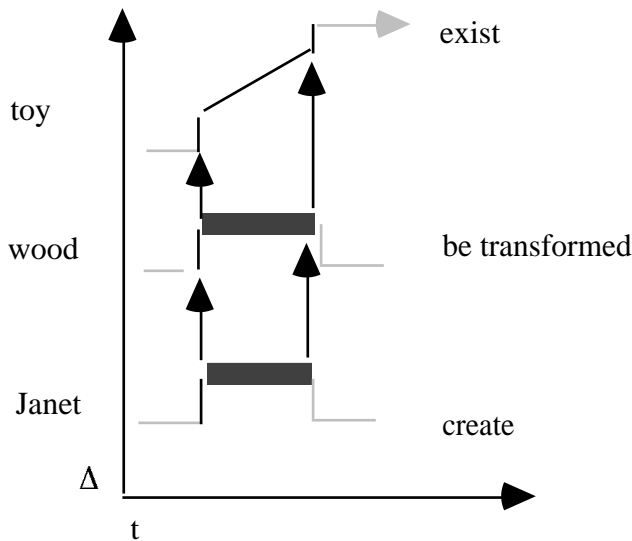
Physical transformation verbs describe the creation of an object from material or parts, as in 10:

- (10) a. *Janet carved a toy out of the block of wood.*
 b. *Janet carved the block of wood into a toy.*

Dowty suggests that transformation verbs, such as those in 10a-b, may have two incremental themes/verbal scales: ‘ “both” arguments (rather, the “same” object under two descriptions) qualify as Incremental Themes—a change in one in fact literally is a change in the “other” ’ (Dowty 1991:598). If Dowty’s analysis is correct, then transformation verbs would require the abandonment of the Unique Verbal Scale hypothesis that there is only one verbal scale per situation (see §3.4), or at least its weakening to allow for alternative descriptions of the “same” object.

In fact, Dowty’s characterization of the relationship between the two relevant “participants” overlooks an important difference. Although a change in one is a change in the “other”, the measurement of the completed process differs in both cases. In 10a, the process is complete when the toy is finished, not when the block of wood is completely transformed: there may be some of the block of wood left over. In other words, the Object referent is the holistic theme, that is, the argument most intimately associated with the verbal scale, as in Figure 17:

Figure 17. Transformation as creation

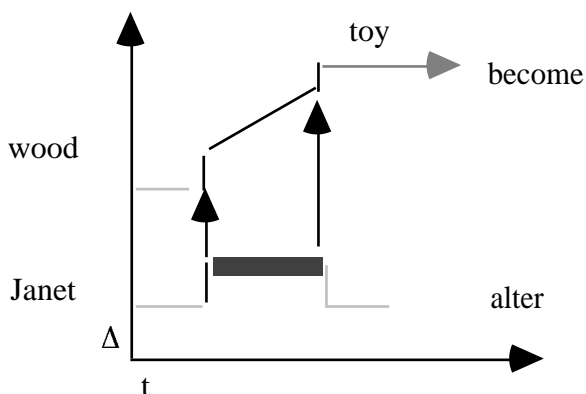


In fact, one can describe 10a as essentially an accomplishment creation verb (compare 11) with the material “means” being additionally specified in 10a.

(11) *Janet carved a toy in a hour.*

In example 10b, on the other hand, the event is taken to be completed when the whole block of wood is used up. It is also true in 10b that the toy is finished when the event is over. Hence it appears that both the material and the (created) object are holistic themes. But (as Dowty notes) there is a single process of transformation taking place, and it is only the identity of the entity that has changed. The single process of alteration of identity is the verbal scale, as in Figure 18:

Figure 18. Transformation as alteration of identity



Alteration by itself is construed as an undirected activity (compare 12); the Oblique complement in 10b describes the resulting state (identity) of the entity altered.

(12) *Janet carved a block of wood for an hour/*in an hour.*

I have represented new entity as coidentified with the transformed entity in Figure 18. The phrase *into X* is in fact used in English for transformation of identity, as in 13:

(13) *The caterpillar turned into a butterfly.*

Figure 18 is contrary to the usual representation of subsequent oblique prepositional phrases as independent subevents subsequent to the situation profiled by the main verb. However, there are many “prepositional phrases” in English that have become grammaticalized as describing resulting states of an object, rather than describing independent “objects” in their own right. Some of these phrases are given in 14:

(14) a. *The mirror shattered to pieces.* [= 3]
 b. *Jack split the coconut in half.* [= 4]
 c. *They blasted the hut to smithereens.*

One indicator of the degree of grammaticalization of the phrases in 14a-c is the fact that they lack articles. It must be the case that at some point in the historical development of these phrases, they have been reconstrued as coidentified resulting states of the transformed entity’s aspectual contour, and are no longer independent aspectual contours in their own right. Instead, they should be analyzed as having the structure in Figure 16; and in fact I analyzed 14a-b in §7.1 in just that way (see Figures 7 and 9).

I have analyzed example 10b as a coidentified resulting object. It is worth noting however that 10b is less grammaticalized than 14a-c. On the other hand, *into a coma* in example 2c, repeated below as 15, is better represented as coidentification, as I have done in §7.1 (see Figure 11):

(15) *Walk yourself into a coma and see what your subconscious comes up with.*

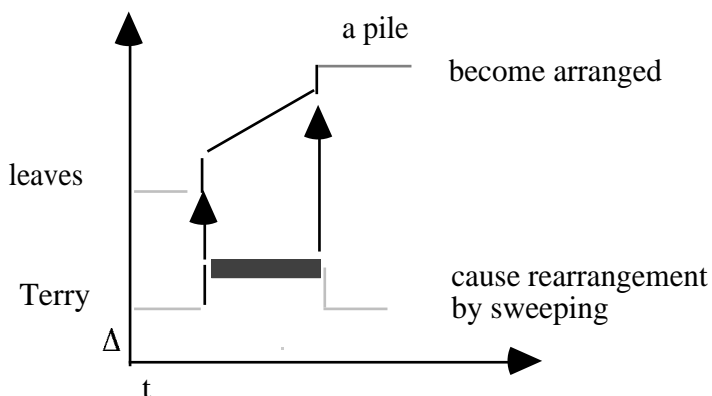
The phrase *into a coma* is relatively invariant (you can be in only one coma at a time) and is thus more grammaticalized than an ordinary prepositional phrase.

Other verbs indicating manner of alteration also allow for a result complement indicating change of identity, as Rappaport Hovav & Levin note (Rappaport Hovav & Levin 1998:103):

(16) *Terry swept the leaves into a pile.*

Example 16 is represented in Figure 19:

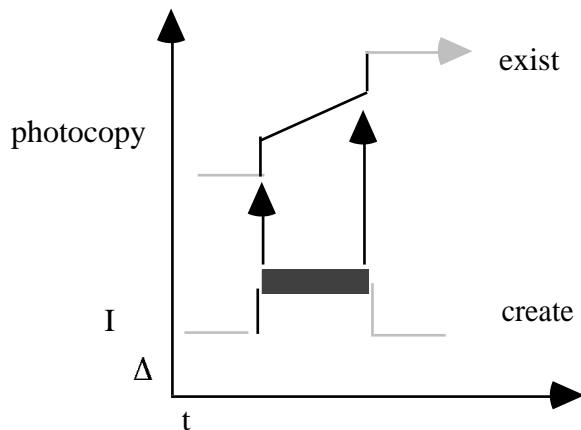
Figure 19. Transformation as rearrangement



Dowty discusses another type of effected object, that created by replication of the structure of some original object (Dowty 1991:569, 597). Dowty argues that sentences such as 16 are straightforward examples of a creation situation, which can be represented as in Figure 20:

(17) *I made a photocopy of the book.*

Figure 20. Creation of a representation



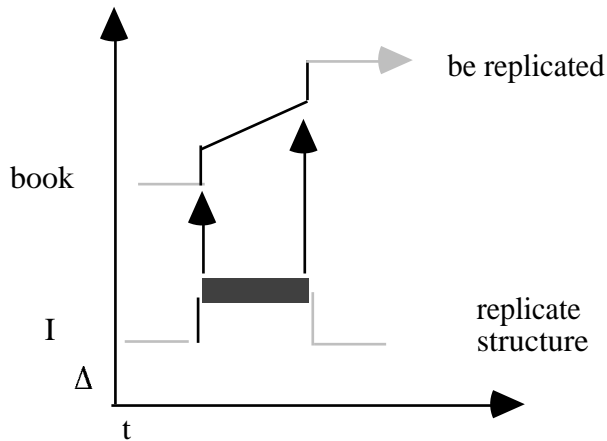
The object in example 18, on the other hand, is not a true effected object:

(18) *I photocopied the book.*

Dowty argues that the true effected object, and hence the “incremental theme” in his terms, is the structure of the original that is replicated; the original object does not undergo any transformation. However, since the structure is part of the original object, the progress of the event may be measured by examining the structure of the original. Dowty calls the original a **representation-source theme** (Dowty 1991:569-570). The representation-source theme is thus the participant associated with the verbal scale of verbs of copying.

Verbs of copying are represented as in Figure 21:

Figure 21. Copying

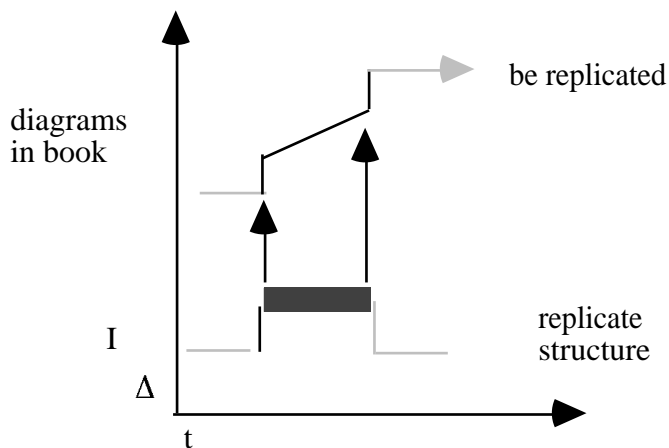


In some English constructions, the replicated structure, that is, the entity that is actually measured, is expressed as an argument (compare *swim the Channel* and *run a mile*, referred to in §1.2.5 and §2.5.4 respectively; see also §4.1). One example of this construction is found in 19:

(19) *I photocopied the diagrams in the book.*

In such constructions, the structure measured is the holistic theme, and is represented with its own aspectual contour, as in Figure 22:

Figure 22. Copying with overtly expressed structure



The representational-source theme may also appear with a complement indicating the location where the copy resides, as in 20:

(20) *I copied the file onto the disk.*

Dowty argues that examples like 20 should be analyzed as instances of the Directed Motion construction (see §4.1), in which the information/structure of the file is

metaphorically “moved” to the new location (Dowty 1991:597). In this case, the analysis is very much like other transformation predicates; see Figure 23 (compare Dowty 1991: 598, and §4.1, Figure 3):

Figure 23. Copying as replicating structure

