

Typology Problems

for use with *Typology and Universals, second edition* (Cambridge University Press, 2003)

William Croft

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Introduction

These problems are to be used with William Croft, *Typology and universals, second edition* (Cambridge University Press, 2003).

Problems are organized in alphabetical order by language name. There are often multiple problems associated with each language, numbered in the list below. The problems are indexed by problem type and difficulty below. All examples are from reference grammars. Abbreviations follow those described in *Typology and universals*, pp. xix-xxiii; other abbreviations are given in the problems.

Word and Affix Order

Easy: Fante 1-2; Maung 1; Minor Mlabri 2; Southwestern Ojibwe 1-3; Waskia 1; Zayse 1, 2

Hard: Akɔɔse 1; Coast Tsimshian 1-2; Dumi 1; Kisi 1; Kuku Yalanji 1-3; Maung 2; Mingrelian 1; Minor Mlabri 1-2; Osage 1; Southeastern Tepehuan 2; Southwestern Ojibwe 4; Sunwar 1; Ts'amakko 1-2; Yagua 1-2

Typological Markedness, including Hierarchies and Correlations

Easy: Aghem 1; Barasano 1; Finnish 1; Hua 1; Kharia 1; Kisi 2; Lummi 1; Mangap-Mbula 1; Maybrat 1; Mosestén 1; Musqueam 1; Semelai 1; Southeastern Tepehuan 1

Hard: Fante 3; Hopi 1; Kisi 3; Lenakel 1, 2; Kharia 1; Kisi 3; Limbu 1-2; Lushootseed 1; Mali 1-2; Mam 1; Maung 2; Miya 1; Mosestén 3-4; Mupun 1; Sougb (Manikion) 1; Ts'amakko 3; Upriver Halkomelem 1, 2; Waskia 2, 3; Yapese 1, 2; Yurok 3; Zayse 3

Very Hard: Jamsai 1; Mundari 1; Yagaria 1

Semantic maps

Easy: Bashkir 1

Prototypes, including Parts of Speech

Easy: Finnish 2; Guaraní 1; Limbu 3; Mosestén 5; Musqueam 2; Tswana 1; Yurok 1

Hard: Cavineña 1-3; Jamsay 2; Kharia 2; Kryz 1; Mangap-Mbula 2; Mangap-Mbula 3-5; Mina 1-3; Yagaria 2; Yurok 2-3

Very, Very Hard: Fante 5-6

Iconicity

Easy: Lushootseed 3; Mosetén 2

Hard: Cavineña 4; Paamese 1; Southeastern Tepehuan 2; Yoruba/Igbo/Akan 1

Grammaticalization

Easy: Big Nambas 1; Epena Pedee 1,2; Kanuri 1; Kisi 4; Lushootseed 2; Ngalakan 1, 2; Yoruba 1

Hard: Bashkir 2; Epena Pedee 3; Fante 4; Lango 1; Mam 2; Mangap-Mbula 2; Mavea 1; Vai 1

Very Hard: Cavineña 5; K'iche' 1; Tauya 1

Aghem

Aghem is a Grassfields Bantu language spoken by about 14,000 people in northwest Cameroon.

Typological markedness of focus and aspect

In Aghem, there are completive and incompletive aspects (among others). One can focus (emphasize) the aspect. In this case the focused aspect particle is fronted and combines with the tense forms. Only the completive aspect is found in the focused forms. In the non-focused forms, both aspects occur, completive $-\emptyset$ and incompletive $-a$ (which assimilates to the final vowel of the verb; there are also complicated tonal rules which we will ignore). Some examples:

Non-focused incompletive (INCMPL), hodiernal (today) past:

- (i) ò m̀ bò -ó fì-ghám
 he HOD.PST hit -INCMPL mat
 ‘He was hitting the mat [today].’

Non-focused completive, hodiernal past:

- (ii) ò m̀ bò fì-ghám
 he HOD.PST hit mat
 ‘He hit the mat [today].’

Focused completive, hodiernal past [note but ignore the postposed class prefix for the object noun]:

- (iii) ò máà bó ghâm-f̀
 he HOD.PST.CMPL hit mat
 ‘He *did* hit the mat [today].’

- (1) **a.** Is there evidence for a typological markedness asymmetry between focused or non-focused? Between completive or incompletive? What kind of typological markedness evidence is present for each?
 b. In the future indicative, only the incompletive is found, not the completive, in the hodiernal past. How does that clash with your answer for a? Do you have explanation for the anomaly?

Akɔɔse

Akɔɔse is a northwest Bantu language spoken by the Bakossi people, numbering around ten thousand, in southwest Cameroon. The following examples give the basic word and affix order for various constructions in Akɔɔse (all nouns and modifiers belong to noun classes; ↓ is tone downstep, : means affix is fused with stem):

- (i) enén kúb kúb ʔnén
 CL9:this CL9:hen CL9:hen CL9:this
 ‘this hen’ ‘this hen’
- (ii) ndáb ekóólé
 CL9:house CL9:new
 ‘a new house’
- (iii) echém nyaŋ awé a- chyáá me
 CL9:my CL9:mother CL1.REL CL1- bear.PERF me
 ‘my mother who bore me’
- (iv) e’ked e’bɛ
 CL8:riddle CL8:two
 ‘two riddles’
- (v) ábé bad bé- límé e’chog ne ngíne echâb ésyāāl
 CL2:those CL2:people CL2-dig.PERF CL8:hole with CL9:power CL9:their CL9:all
 ‘Those people dug the holes with all their strength.’
- (vi) e’mii ábe kém
 CL14:finger CL14:POSS CL9:monkey
 ‘the monkey’s fingers’
- (1) Describe the word order or affix order of the following elements. Give ALL applicable motivations for the occurring order, following the Greenberg model for competing motivations in word order and the model in the handout for competing motivations in affix order.
- a. subject and verb
 - b. object and verb
 - c. subject and object
 - d. adjective and noun
 - e. numeral and noun
 - f. demonstrative and noun
 - g. relative clause and noun
 - h. adposition and noun
 - i. genitive and noun
 - j. subject indexation

Barasano

Barasano is an Eastern Tucanoan language spoken in Colombia.

Typological markedness of pronominal inflectional categories

The Barasano independent pronouns are given in the following table:

	<i>Singular</i>	<i>Plural</i>
<i>1st (excl)</i>	yɯ	yɯ-a
<i>(incl)</i>	–	bãdi
<i>2nd</i>	bũ	bũ-a
<i>3rd (masc)</i>	ĩ	ĩ-dã
<i>(fem)</i>	so	ĩ-dã
<i>(inan)</i>	ti	ĩ-dã

- (1) **a.** State what typological markedness asymmetry (if any) is supported by the Barasano data for the categories of number, gender and person. Give your reasoning and describe what type of evidence you used (structural or behavioral).
- b.** The first person inclusive form is the “odd one out” among the plural forms. How?

Bashkir

Bashkir is a Northwest (Kipchak) Turkic language spoken in the Bashkir Autonomous Region in the former USSR by around one million people.

Semantic maps

In Bashkir, direct objects come in two different forms, a zero ‘basic’ form and a nonzero ‘accusative’ form that is distinct from other oblique case forms. The zero form is found with indefinite object phrases, as in (i):

- (i) *ayastar hari yapraq töšöröp allı*
trees yellow leaves shedding AUX
‘The trees are shedding yellow leaves.’

The overt accusative is found with definite object noun phrases (ii), personal pronouns (iii), proper names (iv), and participial complements (v):

- (ii) *min bil kitap -tı uqımanım*
I this book -ACC I.have.not.read
‘I have not read this book.’

- (iii) *ul minə kürðə*
he me:ACC he.saw
‘He saw me.’

- (iv) *heð Maxmüt -tö tanıyiyiðmi*
you.PL Mahmut -ACC do.you.know
‘Do you know Mahmut?’

- (v) *hin to yroloq -to äytän -dä yaratmayhıñ*
you.SG truth -ACC having.spoken -ACC you.do.not.like
‘You do not like when truth is spoken [lit. having spoken the truth]’

(1a) Draw a semantic map of the uses of the Bashkir overt accusative in (i)-(iv) on the conceptual space in Figure 6.1, with suitable additions. Does the pattern of uses conform with the typological universals of the coding of direct objects? Why or why not?

(1b) Why do you think the overt accusative is used in (v)?

Grammaticalization of adpositions

Bashkir has a range of forms used for various spatial and nonspatial participant roles. I have divided them into categories. NB: the examples given below are the complete examples provided by the grammar; take the semantics of the examples as representative.

A. Here is a list of the members of this category:

<i>myənän</i>	‘with, together with, by means of’
<i>ösön</i>	‘because of, for the reason of, for the sake of’
<i>kəwək</i>	‘like’
<i>hımaq</i>	‘like’
<i>saqlı</i>	‘like, the size of [e.g. ‘a rock the size of a clenched fist’]’
<i>tıklə</i>	‘the size of’
<i>şikəllə</i>	‘like, the size of’
<i>buyınsa</i>	‘according to’
<i>arqala</i>	‘because of, thanks to’
<i>ayqanlı</i>	‘for the reason of, in view of’

These words do not undergo vowel harmony with the preceding noun, hence they are analyzed as separate words. If there is a noun or a plural demonstrative pronoun encoding the participant, it is in the basic form:

(vi) *balta myənän*
axe with
‘with an axe’

(vii) *ošo -lar myənän*
this -PL with
‘with these’

If there is a personal pronoun (singular or plural) or a singular demonstrative pronoun encoding the participant, it is in the genitive form:

(viii) *minəŋ myənän*
1SG:GEN with
‘with me’

(ix) *ošoŋoŋ myənän*
this:GEN with
‘with this’

B. The form takes the 3rd singular possessive suffixes and the locative case suffix, not unlike nouns in Bashkir. If there is a noun encoding the participant, it is in the basic form (zero, as above):

- (x) *öθäl öθt -ön -dä*
table top -3SG -LOC
'on the top of the table'
- (xi) *öθäl aθt -in -dä*
table lower.part -3SG -LOC
'under the table'

If there is a personal pronoun encoding the participant, it is in the genitive form:

- (xii) *minəŋ yanim -da*
1SG:GEN side:1SG -LOC
'by my side'

The only examples given in the grammar are the above three.

C. This category is expressed by suffixes with the following grammatical meanings (sets of meanings). The capital letters indicate phonemes that undergo word-internal consonant alternations and vowel harmony:

- NĖŋ* Genitive
- GÄ* Dative
- NĖ* Accusative
- NÄn* Ablative
- LÄ* Locative

Examples of their use are given below:

- (xiii) *hiw -ya bara*
water -DAT he.goes
'He goes after water.'
- (xiv) *qala -niN baqsa -hi*
city -GEN garden -3SG
'the garden of the city'

D. Here is a list of the members of this category:

- tikləm, xätla, saqli* 'up to, until, till'
- kürä* 'according to, judging by'
- taba* 'in the direction of, towards'
- qurši* 'against'
- başqa* 'besides, except for'
- ələk* 'before, prior to'

alda 'before'

These words do not undergo vowel harmony with the preceding noun, hence they are analyzed as separate words. If there is a noun or a plural demonstrative pronoun encoding the participant, it is in an oblique case (dative for the first group, ablative for the second; see the example below):

(xii) *kis -kä taba*
evening -DAT towards
'towards the evening'

(2) Rank the sets of words by degree of grammaticalization. Justify your ranking.

Big Nambas

Big Nambas is a Melanesian language spoken on (where else?) Big Nambas Island.

Grammaticalization of indexation

In Big Nambas, there are affixes to indicate both subject and object on the verb. The subject affixes come in two sets: one for realis modality and one for irrealis modality:

(i) i- lav' -i
3SG.SBJ.RL- take -3SG.OBJ
'He took it.'

(ii) ipa- rp -i
3SG.SBJ.IRR- kill -3SG.OBJ
'He will kill him.'

If there is a noun phrase subject, the subject marker appears on the verb:

(iii) pət -n i- m'iel
head -its 3SG.RL- be.red
'Its head is red.'

The object marker is not combined with any modality marker. If there is a noun phrase object, the object marker does not occur:

(iv) ip- an si stu a təv'al -n
3SG.IRR- make thing bad to brother -his
'He will do bad things to his brother.'

(1) Which marker is more grammaticalized, subject prefix or object suffix? Why?

Cavineña

Cavineña is a Tacanan language spoken by around 1200 people in northwest Bolivia.

Parts of speech

Cavineña has a wide range of categories to express various concepts in reference, predication and modification. This description attempts to summarize some of the concept classes according to their grammatical realization in Cavineña, as best as possible.

Class A. Semantically, these words express concepts in the semantic classes of dimension, age/value, color and physical properties. This class consists of 16 words maximum:

<i>baru</i>	'tall'	<i>jawa</i>	'yellow'
<i>ebari</i>	'big'	<i>paja</i>	'white, clear'
<i>kaka</i>	'small and round'	<i>pude</i>	'red/brown'
<i>wiri</i>	'tiny'	<i>sawa</i>	'green/blue'
<i>nana</i>	'young, new, baby'	<i>sewe</i>	'black'
<i>siri</i>	'old'	<i>baba</i>	'big and unique'
		<i>jika</i>	'lush, luxuriant'
		<i>midi</i>	'tight'
		<i>uke</i>	'hot'
		<i>turu</i>	'big male'

The words above are used exclusively in modification. In modification, they occur without any additional morphemes, immediately following the head:

- (i) e- marikaka ebari =kwana
NPF- cooking.pot big =PL
'big cooking pot'

They do not take any inflections.

In predication, a different set of words is used. For this problem, treat them as the "same", i.e. recall that the functional-typological theory of parts of speech has to do with conceptual categories (semantic classes), not words. In almost all cases, the concepts expressed by the attributive Class A words are expressed in predication by words which require the suffix *-da* (glossed ASF) and a sometimes optional inflected form glossed 'be':

- (ii) ari -da ju -kware aja
big -ASF be -REMPST capuchin.monkey
'The capuchin monkey was big.'

In reference, some class A predicative words can be used without overt coding to refer to the property (e.g. *ari* 'size'), while others refer to objects (no examples).

Class B. Semantically, these words mostly express concepts in the semantic classes of physical property, human propensity and quantification, though a couple of dimension and age/value terms are included (ignore those that correspond to Class A concepts). There are at least 40-50 Class B concepts/words, but it is an open class.

In modification, Class B concepts are expressed by the same word form as in predication, and are accompanied optionally (not often) by inflected 'be' and obligatory by an enclitic =ke glossed as LIG (ligature); no examples are given.

In predication, Class B concepts do not occur with *-da* but require inflected 'be' (the pronoun is a 2nd position enclitic, not a Class B inflection):

- (iii) pureama =ekwana ju -kware
happy =1PL be -REMPST
'We were happy.'

No information is given about how Class B concepts are used in reference.

Class C. Semantically, these words express actions of various types. There are around 350 Class C words and it is a closed class.

In predication, Class C concept words take tense/aspect inflections directly, and are compatible with second position enclitics such as the object clitic below or some epistemic/evidential/discourse clitics:

- (iv) iba =ra =tu iye -chine takure
jaguar =ERG=3SG(-FM) kill -RECPST chicken
'The jaguar killed the chicken.'

In modification, Class C concept words take tense/aspect inflections, but the second position clitics are prohibited, and =ke is required:

- (v) bina i -ke susu -ti -ya =ke
bat 1SG -FM suck -GO.TEMP -IMPF =LIG
'a (vampire) bat that was going to suck me (in my sleep)'

In reference, some Class C concept words can be used without change to refer to the action (*betsa* 'to swim, swimming'), while others shift meaning to refer to an object created by the action (*jeru* to 'sing, prayer').

Class D. Semantically, these words express actions of various types. There are a large number of Class D words and borrowed action words are placed in Class D.

In predication, Class D concept words do not take tense/aspect inflections directly; they must be accompanied by *ju* ‘be’ (intransitive) or *a* ‘do, affect’ (transitive), which do inflect for tense/aspect; the sentence does take second-position clitics:

- (vi) e -ra =mi kwatsabiji a -ya antuku...
 1SG -ERG =2SG tell.story.to do -IMPF Antuku
 ‘I will tell you a story, Antuku...’

In modification, Class D concept words take tense/aspect inflections, but the second position clitics are prohibited, and =*ke* is required (no example).

In reference, some Class D concept words can be used without change to refer to the action (*babi* ‘to hunt, hunting’), while others do not, or are arguable (i.e. a “performance” or “event” like *chine* ‘to have a fiesta, fiesta’).

Class E. Semantically, Class E words express mostly physical properties, human propensity, and sometimes speed/difficulty (*bida-* ‘fast’, *masa-* ‘hard’) and quantification (*uma-* ‘many’). It is a closed class.

In predication, Class E concept words require *da* and optionally the inflected form *ju*:

- (vii) dyake iwi -da =kwita =tu chapa maju -chine =ke
 very smelly -ASF =RESTR =3SG dog die -RECPST =LIG
 ‘The dog that died (some days ago) is very smelly.’

In modification, Class E concept words require *da* and =*ke*, and optionally (but rarely) *ju*:

- (viii) ekwita beru ujeje -da ju -kware =ke
 person before sick -ASF be -REMPST =LIG
 ‘someone (= [a] person) who had been sick for a long time’

In reference, some Class E concept words can be used without change to refer to the property (*kasa* ‘strong, strength’), while others shift meaning to refer to an object (*waja* ‘sweet, honey’).

- (1) Which class is the most prototypical verb in typological-universal terms? Justify your answer.
- (2) Which class is the most prototypical adjective? Justify your answer.
- (3) Rank the five classes in the scale from prototypical verb to prototypical adjective. Justify your answer.

Iconicity in subordination

Cavineña has several different types of subordinate clauses. Several of them are described below:

Same-subject (SS) temporal clauses. These subordinate clauses take the suffix *-(a)tsu* (glossed SS). In these subordinate clauses, the verb is not inflected for tense/aspect, unlike main clauses. The subject (A+S) of the subordinate clause is obligatorily coreferential with the subject (A+S) of the main clause. Semantically, the relation between the two clauses is temporal sequence. In the example, the subordinate clause is marked off by brackets []:

- (ix) tsa -ya ekana [i -ke jadya ba -tsa -tsu]
laugh -IMPF 3PL 1SG -FM thus see -come -SS]
'Seeing me like that (wet and covered with dirt), they laughed.'

Different-subject (DS) temporal clauses. These subordinate clauses take the suffix *-ju* (glossed DS). In these subordinate clauses, the verb is inflected for a limited number of tense/aspect markings: just imperfective *-ya*, perfect *-wa* and potential *e-...-u*. The subject of the subordinate clause must NOT be coreferential with the subject of the main clause. Semantically, the relation between the two clauses is temporal sequence.

- (x) [Rarara -wa -ju] =tuna tucha-kware.
dry -PF -DS =3PL.ERG burn -REMPST
'When it (the garden) had dried, they burned (it).'

Reason clauses. These subordinate clauses are marked by *=tibu* (glossed RSN). In these subordinate clauses, the verb inflects for all tense/aspect forms. The subject of the subordinate clause does not have to be coreferential (or not) with the subject of the main clause. (If it is, it is usually dropped, but that is true of all pragmatically accessible argument phrases in Cavineña.) Example (RPRT = reportative evidential for the main clause, a second position clitic):

- (xi) [barepa kayuamati -wa =tibu] =pa ijete aputa -wa
sky deteriorate -PF =RSN =RPRT sun disappear -PF
'Because the weather (sky) had turned bad, the sun had disappeared.'

General purpose clauses. These subordinate clauses are marked by *=ishu* (glossed PURP.GNL). In these subordinate clauses, the verb does not inflect for tense/aspect. The subject of the subordinate clause does not have to be coreferential with the subject of the main clause. If the subject is different, and overtly expressed, and an A argument, then it is in the genitive case rather than the ergative. (If is an S argument, it remains in the zero-coded absolutive case.) An example (BM = boundary marker):

- (xii) tuekedy a=tu be -nuka -kware jae amena
then =3SG.ERG bring -REITR -REMPST fish BM

[yatse -ja are =ishu]
1DL -GEN eat =PURP.GNL

‘Then, she brought more fish, (this time) for us (dual) to eat there.’

Motion purpose clauses. These subordinate clauses are marked by =*ra* (glossed PURP.MOT). In these subordinate clauses, the verb does not inflect for tense/aspect. The subject of the subordinate clause is obligatorily coreferential with the subject of the main clause, which must be a motion verb. If the subordinate clause verb requires an auxiliary, the auxiliary is dropped:

- (xiii) kwa -kwere i -ke bei =ju [wikamutya =ra]
go -REMPST 1SG -FM lake =LOC fish.with.hook =PURP.MOT
‘I went to the lake to fish.’ (*wikamutya* requires auxiliary *ju*)

Conditional clauses. These subordinate clauses are marked by =*ke* (glossed LIG) and the particle *juatsu* (glossed COND). In these subordinate clauses, the verb takes tense/aspect inflections (it is not reported whether they take all; assume that they do). The subject of the subordinate clause need not be coreferential with the subject of the main clause. If it is not, and it is an A, assume that it would be ergative (no examples are given). An example:

- (xiv) [kastere -wa =ke juatsu] jara -kwe =jari!
become.tired -PF =LIG COND lie -IMPER =still
‘If you are tired, rest for a while!’

Knowledge complements. Cavineña expresses the equivalent of complements of knowledge clauses uses a similarity subordinate clause, as in ‘I wanted to grab it (piranha) with my hand, as if I did not know that piranhas are very dangerous’. The similarity subordinate clause is marked with =*bucha* (glossed SIMLR). In such a subordinate clause, the verb takes tense/aspect inflection (presumably any, though this is not reported; assume that it does). The subject of the subordinate clause need not be coreferential (or not) with the main clause. If an A argument appears, it is ergative:

- (xv) [ai =ra =kwana ara -ya =bucha] =datse ba -kware
INDEF =ERG=UNCERT eat -IMPF =SIMLR =FRUST see -REMPST
‘I thought that something (I don’t know what) was eating them (hunting dogs).’
Lit.: ‘I see/feel them (hunting dogs) as if something (unknown) was eating them.’

Note also that unlike any of the other subordinate clauses described here, the knowledge complement also takes a second position clitic, here indicating uncertainty modality, just as main clauses do.

(4) Analyze the subordinate clause types in terms of iconicity:

- a. (i) Rank the subordinate clause types by degree of deranking. (ii) Justify your ranking.
- b. Compare the following pairs/sets of subordinate clause types and describe whether the differences in their grammatical structure are iconically motivated: (i) same-subject vs. different-subject temporal clauses; (ii) general purpose vs. motion purpose clauses; (iii) reason and conditional vs. knowledge complements.

Grammaticalization of adpositions

Cavineña has a variety of adpositions/case markers. They are listed below, with their semantics and grammatical behavior (= means clitic):

N=ra: ergative. Used for A arguments. Obligatorily cliticized to a noun phrase.

N=tsewe: associative. Used for comitative and instrumental. Obligatorily cliticized to a noun phrase.

N=ja: dative/genitive. Used for possessor, benefactive, experiencer. Obligatorily cliticized to a noun phrase.

N jiteke: ‘(looking) for’. Used to refer to something one is looking for, e.g. *e-na jiteke kwa-ay* ‘I’m looking for water’. Obligatorily postposed to a noun phrase.

N=ju: “precise” locative. Used to describe precise location/destination. Obligatorily cliticized to a noun phrase.

N=keja: “general” locative. Used to describe approximate location/destination. Obligatorily cliticized to a noun phrase.

N=eke: perlativ. Used to mean ‘through’, also ‘by [vehicle]’. Obligatorily cliticized to a noun phrase.

N=tupu: ‘up to’. Used to refer to point reached in space or time. Obligatorily cliticized to a noun phrase.

(*N*) *tsekwe*: ‘outside’. Does not require a preceding noun phrase (i.e. it is used like an adverb, like English *She went outside*). If there is no noun phrase, it requires prefix *e-*, like an inalienable noun, and must be combined with *=ju*, *=keja* or *=eke* (see above). Also means ‘a cleared space around a house.’

(*N*)=*duku*: ‘inside’. Does not require a preceding noun phrase; if absent, *e-* is required. No known source meaning, and must be combined with *=ju*, *=keja* or *=eke*.

(*N*) *jiruru*: ‘at edge of’. Does not require a preceding noun phrase; if absent, *e-* is required. Also means ‘edge, bank (of a river)’. Can be combined with *=ju*, *=keja* or *=eke*, but does not have to be.

(*N*) *peke*: ‘at side of’. Does not require a preceding noun phrase; if absent, *e-* is not added. It comes from the verb ‘carry on side’.

(*N*) *tsuku*: ‘at the corner of’. Does not require a preceding noun phrase; if absent, *e-* is not added, and appears to be found with *=keja* or *=eke*, but not *=ju*. Also means ‘hip’ (of body).

(*N*) *emake*: ‘under’. Does not require a preceding noun phrase; if absent, *e-* is not added. (Actually, it could be that the initial segment of the postposition was once that *e-*.) Does not have to be combined with *=ju*; no information is given about possible occurrence with *=keja*, *=eke*. No known source meaning.

(*N*) *tibene*: ‘behind’. Does not require a preceding noun phrase. If absent, *e-* is not added, and appears to be found with *=keja* or *=eke*, but not *=ju*. Might be related to ‘back’.

(*N*) *yuketibene*: ‘farther behind’. Does not require a preceding noun phrase; if absent, *e-* is not added. It comes from ‘over.there-perlativ-behind’.

(*N*) *pjidyane*: ‘close to’. Does not require a preceding noun phrase; if absent, *e-* is not added. It comes from a combination of the diminutive and the approximative morphemes.

(*N*) *japadama*: ‘close to’. Does not require a preceding noun phrase; if absent, *e-* is not added. It comes from a combination of the adjective ‘far’ + negative morpheme.

- (5) Rank the forms by their degree of grammaticalization (NB: some may be at the same degree of grammaticalization and therefore can be grouped together). Justify your answer. This is best done by listing the phonological, morphosyntactic and functional properties in columns parallel to the position of the form in your ranking like this:

<i>Form</i>	<i>Phonological</i>	<i>Morphosyntactic</i>	<i>Functional</i>
most gr.	reasons	reasons	reasons [etc.]
....			
least gr.			

and supplemented by a discussion of the properties, particularly if there are conflicts in the ranking.

Coast Tsimshian

Coast Tsimshian is spoken at the southern end of the Alaskan panhandle and in British Columbia; there were 1435 speakers of all Tsimshian dialects in Canada in 1981, middle-aged or older.

Word order

Here are a few Coast Tsimshian sentences and phrases:

- | | | | |
|-------|--|------|--|
| (i) | gu'pl uwalp
two.GEN house.PL
'two houses' | (ii) | waaba gwasga
house that
'that house [over there]' |
| (iii) | siipgm haasa gwa'a
sick.SG dog.SG this
'this sick dog' | (iv) | gyigyeda huwaap
color house
'the color of the house' |
| (v) | yagwa-t niis -da ts'uu'ts -a laalt
PRS see -ERG bird -ABS worm
'The bird sees the worm.' | | |

(Note the ergative and absolutive particles cliticize to the word preceding the word they actually govern.)

- (1) First, consider the synchronic word orders represented. Assume the ergative and absolutive particles are adpositions, and the tense marker is an auxiliary. (There are no alternative orders.) Explain which of the competing motivations for word order motivates each order.
- (2) Now, look at the state of affairs diachronically. If the word orders of the language were completely harmonic with each other at a prior stage, which harmonic pattern do you think the language had most recently? Which word orders have shifted since then? What motivated those word orders to shift? Which order do you think shifted first? Why?

Dumi

Dumi is a member of the Kiranti subgroup of the Sino-Tibetan family; it is a moribund language spoken near Mt. Everest in Nepal.

Word and affix order

Representative examples of Dumi basic word order patterns are given below:

- (i) yakkam kho: -bi
 that pot -LOC
 ‘that pot (over there)’

- (ii) sakpu mitsim
 two women
 ‘two women’

- (iii) golpi sa:ʔli
 large jungle
 ‘large jungle’

- (iv) i- me:ʔe -ʔa tsuʔu wa:d -i
 his- wife -ERG child bear -3SG.PST
 ‘His wife has borne a child.’

- (v) ki:m -po ga:ro
 house -GEN wall
 ‘the wall of the house’

Dumi has a complex verbal inflectional system. Subject and object indexation are usually expressed by a single (portmanteau) suffix, e.g. *lum-ti* ‘you and I look for you/him/her/them’ (suffix = ‘1st person dual inclusive acting on 2nd or 3rd person’).

The negative is indicated by a suffix *-nə*, but the preterite negative is indicated by both the suffix *-nə* and the prefix *mə-*, e.g. *mədze:ŋənə* ‘I didn’t talk’. Aspect is expressed by suffixes. In nominal inflections, number is expressed by a suffix, e.g. *tsuʔu-ni* ‘the two children’ (dual suffix *-ni*). Case marking is also indicated by a suffix, e.g. *poʔo-mil-ʔa* ‘the pigs’ (plural suffix *-mil* followed by ergative case suffix *-ʔa*).

- (1) (a) Explain how the word orders in Dumi are (or are not) motivated by the competing motivations model presented in the textbook. (Assume that the semantics of the words in Dumi are an accurate guide to the relevant syntactic categories for the word order patterns.)

(b) It appears that Dumi does not have adpositions; most of the semantic functions of adpositions in a language like English are taken by the case suffixes, or by adverbial particles. If Dumi has adpositions, would you expect them to be prepositions or postpositions? Why?

(c) Do Dumi's affix order patterns conform to the generalizations about word order described in the textbook? Why or why not?

Epena Pedee

Epena Pedee is a Chocó language spoken on the west coast of Colombia.

Grammaticalization of dative markers

Epena Pedee has three ways to form the dative:

(i) a suffix *-a*:

i-č̣i soo-a [his-ART whip-DAT] ‘(he spoke the magic word) to his whip’

(ii) a suffix *-V*, i.e. a vowel that has the same quality as the final vowel of the stem:

juancito-o ‘to Juancito’

(iii) the locative suffix *-ma* plus the aforementioned suffix *-a*:

č̣i nawe-ma-a [ART mother-LOC-DAT] ‘to his mother’

This last form is also used for the goal of a verb of movement, that is, for actual spatial motion in addition to the nonspatial dative function of recipient:

- (i) *josé wã -hi wāraa hermanaa -rã -ma -a*
 José go -PST upstream sister -PL -LOC -DAT
 ‘José went upstream to the nuns’ place.’

- (1) Rank the dative forms by degree of grammaticalization. Which form is newer, *-ma-a* or *-a*? Which form is newer, *-a* or *-V*? Justify your answers.

Grammaticalization of plural markers

Epena Pedee has a plural morpheme *-rã*. This plural morpheme is found as an enclitic on noun phrases referring to human beings. It lengthens the vowel in the word to which it is attached, e.g. *eperãã-rã-pa* [person-PL-ERG] ‘Epena people’. It is also found on the second and third person pronouns; however the stem to which the plural morpheme is attached is different from the singular pronoun forms:

	<i>singular</i>	<i>plural</i>
<i>1st</i>	<i>mĩ</i>	<i>tai</i>
<i>2nd</i>	<i>pĩ</i>	<i>pãrã</i>
<i>3rd</i>	<i>ĩru</i>	<i>ãrã</i>

The plural morpheme is also found on words other than nouns, in which case it nominalizes the word/phrase as well as pluralizing it: *ta-č̣i ek^hariĩ-rã* [we-ART under-PL] ‘we (people) from below’; *p^huuru-de-pemaa-rã* [village-LOC-ORIGIN-PL] ‘villagers’. Note the lengthened vowels just before the plural.

In addition, there is a pair of morphemes *-rã-ra* which mean ‘many’; *-rã* is used for animates and *-ra* is used for inanimates. They are also enclitics, and also occur before the ergative case enclitic: *usa phaima-rã-pa* [dog black-MANY-ERG] ‘several black dogs’. This morpheme may cooccur with the plural morpheme, in which case it occurs after the plural morpheme: *warra-rã-rã* [son-PL-MANY] ‘many children’ (*warra* ‘son’ is one of the few words that does not undergo vowel lengthening before the plural morpheme).

- (2) Which plural is more grammaticalized, *-rã* ‘plural’ or *-rã/-ra* ‘many’? Which is newer? Justify your answer.

Grammaticalization of demonstratives

Epena Pedee has a variety of demonstrative pronoun forms:

(i) There is a set of demonstrative pronouns with a three-way distinction: *na* ‘this [proximal]’/*hã* ‘that [distal]’/*ma* ‘that [invisible]’. These demonstratives can be used anaphorically as well as deictically. Example: *na-pa* ‘this one (magic donkey) [ERG]’.

(ii) There is another set of demonstrative pronouns which consists of set (i) plus the suffix *-gĩ*. This set also has a three-way distinction. Semantically, it is used make reference more specific, in particular in a context where there are contrasting possibilities (‘this man’ vs. ‘that man’). Example: from a story which began ‘in the old days there lived an old man and his wife’, the next sentence begins *ma-gĩ-pa* [that.INVS-SPEC-ERG] ‘that one (the man)...’

(iii) There is a single form *čĩ* which is glossed ‘referential’ and has a variety of functions. It is used anaphorically, that is, it requires prior mention of the referent. It is equivalent to the English pronoun *one*: Examples: *čĩ phaima* ‘the black ones [beads]’; *čĩ thẽẽ če-ru* [ART after come-PRES] ‘the one that comes after’.

(iv) There are purely deictic, i.e. spatial pronouns *ača* ‘this one (here)’ and *aču* ‘that one (there)’. They are only used for spatial reference and are usually accompanied by gestures. (This is presumably why there is no invisible counterpart.)

- (3) Rank the demonstrative/article sets (i)-(iv) by degree of grammaticalization. Justify your answer.

Fante

Fante (Akan, Twi) is widely spoken in Ghana in West Africa.

Word order

The following examples illustrate the basic order(s) for clauses, and for various modifiers of nouns:

- | | | | |
|-------|--|------|--|
| (i) | Kofi fow dua dem
Kofi climb.PRS tree thus
'Kofi climbs a tree like this.' | (iv) | n- kokɔ baawɔtwe
PL- fowl eight
'eight fowl' |
| (ii) | dan a ɔ- bui no
house REL 3SG- fall.PST the
'the house that fell' | (v) | nyimpa tsentsen
person tall
'a tall person' |
| (iii) | a- pon no
PL- table that
'those tables' | (vi) | Ata fie
Ata home
'Ata's home' |

Adpositions are more complex. Some precede the noun, others follow:

- | | | | |
|-------|--|--------|---|
| (vii) | wɔ nkran
in Accra
'at/in Accra [a city in Ghana].' | (viii) | pon ase
table under
'under a table' |
|-------|--|--------|---|

The adpositions that precede the noun, such *wɔ*, are derived historically from verbs (e.g. *wɔ* 'to be [in a location]'), whereas the adpositions that follow the noun—*ase* and others like it—are derived from nouns (e.g. *ase* 'base/lower part of an object'). There are also circumfixes, as in adpositions indicating motion (ADPOS = adposition):

- (ix) baa me nkyen
ADPOS me ADPOS
'towards me'

The first part *baa* comes from the verb 'come' and the second part *nkyen* comes from the noun 'side'.

- (1) What word orders does Fante have for subject/object/verb, demonstrative/noun, numeral/noun, adjective/noun, genitive/noun? Explain how each word order is (or is not) motivated by the competing motivations model of word order presented in the textbook.
- (2) How would you account for the fact that Fante has both prepositions and postpositions?

Typological markedness of pronominal inflectional categories

The personal pronouns of Fante, in their subject and object form, are:

<i>Subject:</i>		<i>Object:</i>	
<i>1sg</i> me	<i>1pl</i> yɛ	<i>1sg</i> me	<i>1pl</i> yɛn
<i>2sg</i> e	<i>2pl</i> hom	<i>2sg</i> wo	<i>2pl</i> hom
<i>3sg</i> ɔ	<i>3pl</i> wɔ	<i>3sg</i> no	<i>3pl</i> wɔn

- (3) Describe the positive evidence, if any, for the relative typological markedness of number (singular/plural), case (subject/object), and person (1st/2nd/3rd) in the pronouns of Fante.

Grammaticalization of verbal inflectional forms

The tense-aspect-mood (TAM)/auxiliary system of Akan is quite varied. Present and past are indicated by tone changes on the verb (in the example, the prefix *me-* indicates 1sg):

<i>Present:</i>	méhòr	‘I wash’
<i>Past:</i>	méhôr	‘I washed’

Other TAM forms are prefixes that occur between the subject prefix and the verb root (the elision of the vowel of the subject prefix before vowels such as the Perfect *-a-* should be ignored for this problem):

<i>Future:</i>	me-ba-frɛ	‘I shall call’
<i>Perfect:</i>	m’-a-frɛ	‘I have called’
<i>Progressive:</i>	me-ri-hwɛ	‘I am looking’

The vowel of the future *-ba-* undergoes vowel harmony, changing in conformity with the verb root vowel as follows:

me-bɔ-tɔ	‘I shall buy’
me-be-tsie	‘I shall obey’
me-bo-tu	‘I shall pluck up’

The vowel of the perfect *-a-* changes only to *-e-* before verb roots with tense vowels:

m’-e-tu ‘I have plucked up’

The vowel of the progressive *-rɪ-* does not change.

There are ingressive forms that involve the verbs *kɔ* ‘go’ and *ba* ‘come’. These occur in combination with the subject prefixes. Then the ingressive (motion) verb is also prefixed to the

main verb, changing its vowel in accordance with the vowel harmony rules, like the future prefix *ba-*. The tense prefixes are attached to the ingressive verb, not the main verb, which takes an “infinitive” prefix *a-* (glossed as INF-):

(x) ɔ- kɔ ka- pra
 3SG- go go- sweep
 ‘He goes to sweep.’

(xi) ɔ- bɔ- kɔ a- ka- pra
 3SG- fut- go INF- go- sweep
 ‘He will go to sweep.’

The abilitative modal ‘to be able to’ is expressed by an auxiliary verb *nyim*. This verb does not inflect tonally, in fact, it does not inflect for any of the above tenses. If you want to express ability in any tense other than the present, you must use the otherwise standard verb *hũ*. (the following verb occurs with the prefix *a-*)

(xii) me- bo- hũ a- kyerɛw
 1SG- FUT- be.able.to INF- write
 ‘I shall be able to write.’

Nonverbal predication uses auxiliaries. The verb *yɛ* ‘to be’ does not inflect tonally for tense, but takes subject prefixes:

(xiii) wɔ- yɛ enyansafo
 3PL- be friend.PL
 ‘They are friends.’

However, *yɛ* does inflect for the future and the perfect. However, the verb *wɔ* ‘to be located’ that we saw takes the subject prefixes but inflects for nothing else.

There is also an invariant particle *a* which follows the nonverbal predicate, and can only be used for 3SG:

(xiv) kɛse a
 great it.is
 ‘It is great.’

(4) Rank the various tense-aspect-mood/auxiliary forms by degree of grammaticalization, from least to most grammaticalized: present, past, future, perfect, progressive, ingressive forms, abilitative forms, nonverbal predicating forms. Justify your ranking. (Remember that some forms may be at the same degree of grammaticalization.)

Parts of speech

The following is a fairly detailed description of some major syntactic classes of Fante-Akan.

Action words. Action words inflect for person (prefixes) and “tense”, including *ba* Future, *a* Perfect, and *re* Progressive. An example of a future conjugation for *frɛ* ‘call’ is given below:

	<i>Singular</i>	<i>Plural</i>
<i>1st</i>	mebafɛ	yɛbafɛ
<i>2nd</i>	ebafɛ	hombafɛ
<i>3rd</i>	ɔbafɛ	wɔbafɛ

As modifiers, they require the relativizing particle *a*:

- (xv) odui a obui
tree REL 3SG:fell
‘a tree which fell’

Stative words. These words differ from action words in that they do not take any prefix to indicate the future, perfect or progressive. Even in the present tense, they do not take the present tense tone but instead a low level tone. A list of the more important ones follows (note that some are not obviously stative in meaning, but they behave the same):

dze	‘have in the hand, hold, use’
nam	‘move in any way, e.g. walk, fly, swim’
nyim	‘have knowledge, be able to’
nye	‘be (identity)’
so	‘wear, carry’
tse	‘be/exist at some location’
wɔ	‘be at/in location, have (possession)’

- (xvi) ɔ- wɔ sika
3SG- have money
‘S/he has money.’

Property words. Property words differ in their behavior, and can be divided into several classes.

Property Class 1. These have suppletive pairs, one used for modification, the other for predication.

<i>Modification</i>		<i>Predication</i>	
beree	‘ripe’	ber	‘be ripe’
memene	‘red’	ber	‘be red’
tuntum	‘black’	bir	‘be black, dark in color’
dɔnkuron	‘deep’	dɔ	‘be deep’
fufuw	‘white’	hoa	‘be white’

<i>Modification</i>		<i>Predication</i>	
ekyew	‘crooked’	kyea	‘be crooked’
pitsiw	‘thick’	piw	‘be thick’
kakraka	‘great’	sũ	‘be great’
kakraba	‘small’	sua	‘be small’
teter	‘broad’	terɛ, trɛ	‘be broad’
tsentsen	‘long’	war	‘be long, tall’
pa, papa	‘good’	ye	‘be good’
bɔn	‘bad’	muõ	‘be bad’

The predicating forms can be predicated without a copula but, like the stative words, do not inflect for future, perfect or progressive, and have a level tone in the present:

- (xvii) ne nua war
his brother be.tall
‘His brother is tall.’

The modifying forms do not use the relativizer *a*:

- (xviii) abofra bɔn
child bad
‘a bad child’

Most of the modifier forms are also listed as indexing number, that is, as having plural as well as singular forms, when modifiers:

	<i>singular</i>	<i>plural</i>
‘old’	dadaa, dadaw	adadaa, adadaw
‘new’	fofor	afofor
‘white’	fufuw	efufuw
‘small’	kakraba	nkakraba
‘very large’	kakraka	akakraba
‘great, large’	kɛse	akɛse
‘red’	memen	amemen
‘good’	papa	apapa

Despite what I have just said about the forms alternating, some of the modifying forms can appear as predicates, but only when accompanied by a noun—they can never occur by themselves but must always modify a noun. The three forms mentioned in the grammar are *beree* ‘ripe’, *bɔn* ‘bad’ and *pa* ‘good’:

- (xix) ekutu no ye ekutu bɔn
orange this COP orange bad
‘This orange is bad [lit. this orange is a bad orange]’

Likewise, the predicating forms can occur as modifiers; they require the relativizer *a*:

- (xx) pon a ne nan a- kyea
 table REL its leg 3SG- be.crooked
 ‘a table whose leg is crooked’

For question (5) however, treat the pairs in the table above (xix) as suppletive, and ignore their “unexpected” uses.

Property Class 2. Property Class 2 also has two forms, one for modification and one for predication. But they are not suppletive: the modifying form is a reduplicated form of the predicating form. The modifying form does not index the number of its head, apparently.

	<i>Modification</i>	<i>Predication</i>
‘sweet’	dɛɛdɛ	dɛ
‘sweet’	dɛɛdew	dɛw
‘heavy’	durdur	dur
‘hard’	dzendzen	dzen
‘beautiful’	fɛɛfew	few
‘light (weight)’	harhar	har
‘sharp’	ndamndam	ndam
‘ugly’	tantan	tan
‘short’	tsiatsiaba	tsia

The predicating forms require the copula *yɛ*.

Property Class 2a. In this class, the predicating forms can also be used as modifiers, without the relativizer:

	<i>Modification</i>	<i>Predication</i>
‘hot’	hyeehyew	hyew
‘cold’	wɔɔwɔw	wɔw

Examples include:

- (xxi) nkwan hyew
 soup hot
 ‘hot soup’
- (xxii) nsu wɔw
 water cold
 ‘cold water’

Again, the modifying forms presumably do not index the number of their head referents .

Property Class 3. There is no difference between predicating and modifying forms. (In some cases, there is variation between forms, but both can be used both ways, I assume.) Modifying forms do not use the relativizer; predicating forms use the copula *yɛ*. A list follows:

bɛtɛɛ, bɛtɛ bɛtɛ	‘soft (touch)’	mbɔwɛmambɔwɛm	‘green’
bɔkɔɔ, bɔkɔbɔkɔ	‘soft (voice)’	amon, momon	‘fresh’
dɔkɔdɔkɔ	‘sweet’	pitsiw, pitsipitsiw	‘thick (liquids)’
ebun	‘unripe’	pipipipi	‘thick (cloth)’
ebunɛbun	‘green’	sakasaka	‘confused’
fremfrem	‘sweet, very sweet’	sorɔnsorɔm, sorɔm	‘pointed’
hwerɔmhwerɔm	‘pointed’	yɛrɛyɛrɛw	‘sour’
hyɛmhyɛm	‘bright’		

Again, the modifying forms presumably do not index the number of their head referents.

Inchoative Properties. These are words in which the present tense is actually not the property but the action or process of becoming the property (called the INCHOATIVE). The property is expressed by using the perfect (which involves the addition of a prefix *a-*, as can be seen from the examples). I have given just a selection below:

<i>Present</i>		<i>Perfect</i>	
bow	‘become dry’	a-bow	‘be dry (e.g. leaves)’
dow	‘be roasting’	a-dow	‘roasted’
fɔw	‘become wet’	a-fɔw	‘be wet’
fona	‘become tired’	a-fona	‘be tired’
guan	‘become scorched’	e-guan	‘be scorched’
nyin	‘grow’	e-nyin	‘be mature’
sensen	‘become stiff’	a-sensen	‘be stiff’
tow	‘become slack’	e-tow	‘be relaxed, unstrung (drum)’

As modifiers, they also require the relativizer *a*.

Object words. Object words can be divided into two classes (simplifying somewhat).

Object Class 1. Object words in Class 1 inflect for singular and plural, in one of four or five patterns, when used as referring expressions. A few examples are given below:

	<i>singular</i>	<i>plural</i>
‘child’	eba	mba
‘stone’	beba	mbeba
‘horse’	pɔnkɔ	mpɔnkɔ
‘ditch’	ɔkã	akã
‘egg’	kyɛrɛfua	nkyɛrɛfua

Nouns as classifying predications require the copula verb *yɛ* or the etymologically deictic copula *a* (the latter may also be used with those property class words which require *yɛ*):

(xxiii) ɔ- yɛ ɔhen
3SG- COP king
‘He is a king.’

(xxiv) ɔhen a
king COP
‘He is a king.’

Nouns as genitive modifiers are simply juxtaposed to the head noun without any additional morphology:

- (xxv) Ata fie
 Ata home
 ‘Ata’s home’

Object Class 2. Object Class 2 words do not have a singular/plural distinction; they are mass nouns (or in the case of *nsoe*, a pluralia tanta, i.e. plural in form but invariant). They include words for foodstuffs, natural substances, and the elements. Some examples:

ahwea	‘sand’	detse	‘earth’
nsō	‘ashes’	aahow	‘air’
ekutu	‘orange’	ahai	‘ale’
tum	‘power’	nsoe	‘thorn(s)’

When at least some of these nouns are used as modifiers, they are reduplicated; if they are predicated, they use the copula *yε*. Examples of such denominal modifiers are:

anhwēanhwēa	‘sandy’	fuafua	‘cloudy, foggy’
dede	‘noisy’	nsōnsō	‘ash-colored, gray’
ekutu-ekutu	‘orange-colored’	wusiwusiw	‘foggy’
fī, fīfī	‘dirty’	nsoensoe	‘thorny’

The data from the grammar is incomplete, but assume that this class of words works uniformly.

Object Class 3. Object Class 3 words, of which there are two illustrated in the grammar, have a singular and a plural AND a reduplicated modifying form:

	<i>Singular</i>	<i>Plural</i>	<i>Modifying form</i>	
‘stone’	ɔbo	abo	aboabo	(‘stony’)
‘breeze’	mframa	mframa mframa	mframamframa	(‘windy’)

Note that the reduplicated adjectival form for ‘stone’ is based on the plural, and that the so-called “singular” of ‘breeze’ is actually a pluralia tanta, and the “plural” is a special reduplicated form.

- (5) Describe the evidence supporting the typological-universal theory of syntactic categories in the textbook. That is, rank the various property, action and state classes in a scale of degree of typological markedness as adjectives (modifiers) and as verbs (predicates), and justify your ranking. Rank the object classes with respect to typological markedness as modifiers on a separate hierarchy. Compare your ranking of semantic classes of words as typologically unmarked adjectives with Dixon’s hypothesis of which semantic classes correspond to the core adjectives, and also compare the semantic classes of objects as to degree of “adjective-like” behavior.

- (6) Recent research (Leon Stassen, *Intransitive Predication*) suggests that adjectives can be characterized as “nouny” and “verby”. Which property classes in Fante-Akan appear to be nouny? Which appear to be verby? (You should split the suppletive forms in Property Class 1 for this question.) Justify your answer.

Finnish

Finnish is a Uralic language spoken in Finland.

Typological markedness of case marking categories

The following example gives a fraction of the paradigm of the noun *kylä* ‘village’ in Finnish:

	<i>singular</i>	<i>plural</i>
<i>nominative</i>	kylä	kylä-t
<i>accusative</i>	kylä-n	kylä-t

- (1) State what typological markedness asymmetry (if any) is supported by the Finnish data for the categories of number and case. Give your reasoning and describe what type of evidence you used.

Parts of speech

Finnish has words denoting objects such as *talo* ‘house’ and words denoting properties such as *iso* ‘large’. Both classes of words inflect for number and case in exactly the same way (including complicated allomorphy): *isot talot* ‘large houses [nom. pl.]’ and *ison talon* ‘of the large house [gen. sg.]’, etc. in the preceding examples, object words and property words behave the same way morphologically, although one would normally say the property word is functioning as a modifier and the object word is a referring expression.

Both classes of words can stand alone as referring expressions, with the appropriate number/case inflections: *talot* ‘houses [nom. pl.]’, *isot* ‘the large ones [nom. sg.]’. Note that *isot* means ‘the large ones’, that is, it refers not to a property but to an object or objects possessing that property. To refer to the property itself one must add a suffix (-*us*, -*ys*, -*uus*, -*yys* depending on the stem shape), e.g. *suuri* ‘great’ > *suuruus* ‘greatness, size’. Also, both property words and object words require a copula verb (COP) when predicated (verbs do not):

- (i) *tyttö on pieni*
girl COP.3SG.PRS small
‘the girl is small’
- (ii) *ystävä -ni on pappi*
friend -1SG.POSS COP.3SG.PRS vicar
‘my friend is a vicar’
- (iii) *mina puhu -n*
1SG.NOM speak -1SG.PRS
‘I speak’

For a noun to function as a modifier, it must take a genitive suffix:

- (iv) miehe -n nimi
man -GEN.SG name(NOM.SG)
'the man's name'

Also, object words do not have comparative or superlative forms, unlike almost all property words (inessive is the case suffix corresponding to the English preposition 'in'):

- (v) pien- imm -i -ssä kyl -i -ssä
small -SUP -PL -INESS village -PL -INESS
'in the smallest villages'

- (2) Go through each piece of evidence I have given and describe how it does or does not provide evidence supporting the typological model of parts of speech described in the textbook.

Guaraní

Guaraní is spoken by over 3 million people in Paraguay (95% of the population).

Parts of speech

Intransitive verbs come in several varieties. Type A takes subject prefixes (the ones in the last column of problem one) when predicated; semantically, it represents intransitive actions with a volitional agent (e.g., *puká* 'laugh'). When used as a modifier, a Type A intransitive verb must be nominalized with *va* (nonpast), *vakwé* (past) or *vará* (future of purpose or obligation). Type B takes the possessive person prefixes (usually used with nouns) instead of the subject prefixes when predicated; semantically, it represents intransitive actions without a volitional agent (e.g. *manuʔa* 'remember'). When used as a modifier, Type B verbs must also be nominalized. Type C takes the possessive person prefixes when predicated, but can be used as a modifier without any special inflections or markings; semantically, it includes color terms (*oví* 'blue', *pítá* 'red') and words describing size (*mišĩ* 'little', *mišĩ* 'short', *tuvišá* 'big', *pukú* 'long').

- (1) How does the behavior of Types A, B and C support (or not support) the typological model of parts of speech described in the textbook? Justify your answer.

Hopi

Hopi is a Uto-Aztecan language spoken in Arizona. Hopi has a number of noun inflections, which are morphologically very complex and irregular. The examples here are selected from the full range of morphological variation, but largely represent the patterns found in the language.

Typological markedness of nominal categories

Hopi nouns can be divided into two categories, animate and inanimate ('animate' includes self-moving objects such as stars, clouds, cars and also sacred things such as places with shrines or developing ears of corn). Animate nouns are inflected for singular, dual and plural. Two common patterns are given below (ignore differences in vowel length for this problem, also assume that an *a* is elided before the final *t* in the plural in the second pattern):

singular	dual	plural
<i>sino</i> 'person'	<i>sinot</i>	<i>sinom</i>
<i>kawayo</i> 'horse'	<i>kawayot</i>	<i>kawayom</i>
<i>Tasavu</i> 'Navajo'	<i>Tasavut</i>	<i>Tasavum</i>
<i>taaqa</i> 'man'	<i>taaqt</i>	<i>tàataqt</i>
<i>nukpana</i> 'evil one'	<i>nukpanat</i>	<i>nuunukpant</i>
<i>oomaw</i> 'cloud'	<i>oomawt</i>	<i>oo'omawt</i>

Inanimate nouns do not have a dual and often lack a plural as well (consider only the following examples for the problem):

leletspi 'tension bar(s)'
pesru 'squirreltail plant(s)'

All of the above forms are nominative case forms. In the accusative case, animate singulars are formed as follows:

- (i) *Nu' kawayot tuwa.* 'I saw a horse.' (compare to 'horse' above.)

Animate dual accusatives are usually formed as follows:

- (ii) *Ivava taavotuy niina.* 'My older brother killed two cottontails.' (*taavo* is nom.sg.)

Animate plural accusatives are usually formed as follows:

- (iii) *Pam tuwqamuy amungaqu waaya.* 'He fled from the enemies.' (*tuwqa* is nom.sg.)

The inanimate accusative covers singular, dual and plural values:

- (iv) *Maana sipmasmit tuwa.* 'The girl found a silver bracelet.' (*sipmasmi* is nom.)

- (v) *Sòosok yuwsit naa'apsinya.* 'They got all the costumes [any number] they needed.'
(*yuwsi* is nom.)

(1) Describe evidence in Hopi, if present, supporting a typological markedness asymmetry for the categories of:

- (a) number
- (b) case
- (c) animacy

Hua

Hua is an Indo-Pacific (Papuan) language spoken in the highlands of Papua New Guinea.

Typological markedness of possessive inflectional categories

Hua indexes the possessor with the following suffixes (Haiman 1980:224):

	<i>Singular</i>	<i>Dual</i>	<i>Plural</i>
<i>1st person</i>	-di	-ti'a	-ti
<i>2nd person</i>	-Ka	-tina'a	-tina
<i>3rd person</i>	-a	-tina'a	-tina

- (1) What typological markedness asymmetry among singular, dual and plural number is supported by the Hua data? Justify your answer.

Jamsay

Jamsay is a Niger-Kordofanian language (Dogon subgroup) spoken by over 30,000 people in eastern Mali.

Affix order

Jamsay has a set of aspect prefixes for both positive and negative polarity. The forms are given below, with the terms used by the author (NB the reduplication pattern is to copy the initial stem consonant [C] plus an ì vowel nucleus):

	positive	negative
Perfective	-tì-, -yè-/-yà-, -â:-	-lí-
unsuffixed Perfective	-Ø-	-lí-
Resultative	-sà-	-lí-
reduplicated Perfective	Cì-	-lí-
Recent Perfective	-jè-	-lí-, rarely -jè-lì
Experiential Perfect	-térè-	-tè-lí-
unsuffixed Imperfective	-Ø-	-gó-
reduplicated Imperfective	Cì-	-gó-
marked Imperfective	-tóγò-	-gó-, rarely -tóγò-lá-
Habitual	-á:rà-	-gó-, rarely -á:rà-lá-

(1) Evaluate the relative typological markedness of the values in the following categories. Justify your answer (i.e. state what type of evidence supports your ranking and what that evidence is).

- a. Aspect
- b. Polarity

Parts of speech

The following is a description of four semantic classes in Jamsay.

Class A. These words express actions. When predicated, they inflected for a wide range of aspectual categories, both positive and negative (recall Exam 1), and index the subject with a suffix. In the example, 3 is the 3rd singular nonhuman pronoun:

- (i) óγóró kò -rú yðwð -l -á
 quickly 3 -DAT accept -PF.NEG -3PL
 ‘They did not quickly accept it (plow).’

Core arguments are zero-coded and generally occur in SOV order:

- (ii) cín dòγǒ -m yír bět -tóγð -bà
 thus Dogon -PL garment get -IMPF -3PL
 ‘That is how Dogon people get clothing.’

When functioning as modifiers, Class A words occur only in the unsuffixed Perfective form with a special HL tone pattern. Instead of a subject indexation suffix, there is a morpheme that indexes the head noun for humanness and number (singular human, plural human, nonhuman; see class B). In the example, H and L in the interlinear morpheme translations indicates the tone pattern associated with the grammatical inflection:

- (iii) ìnè -m dùṅdàṅá lè jéyè -m
 person -PL.L elephant with fight.PF.HL -PTCP.PL
 ‘persons who have fought with an elephant’

Subject indexation (in the case where the subject is not the head), is accomplished by a special set of low-toned prefixed indexation markers, that inflect for person and number like the predicating subject indexation markers (but they are not identical).

When functioning in reference, Class A words occur in a form with a suffix, usually -*y*, -*ú* or -*gú*: *gó*: ‘go out’ vs. *gò-y* ‘going out’; *bé*: ‘happen, stay’ vs. *bé:-gú* ‘staying, living’. There is no inflection. Core arguments (S, A, P) are expressed with the possessive postposition *mà* ‘of’ when they occur (NML = nominalization):

- (iv) kìká: mà pìliwè- -yèr -ú
 grasshopper POSS go.back.L- -come -NML
 ‘the locusts’ coming back (here)’

Class B. These words name humans. When used in reference, they inflect for number: *tórð-n* ‘mountaineer’, *tórð-m* ‘mountaineers’. When predicated, they take a copula clitic which inflects (irregularly) for subject indexation only (i.e. no aspect inflections; there is only a positive/negative polarity inflection):

- (v) bè ké nùnúwⁿò dàḡá fú: dānám =ÿ: -bà
 3PL TOP daytime night all hunter =COP-3PL
 ‘As for them [topic], by day and by night they are hunters.’

When used as modifiers, they use the possessive postposition:

- (vi) íné -m mà èjú mà támbórò mà bòròká:
 person -PL.L POSS field POSS date POSS debris
 ‘(and there’s sweeping of) the debris of date palms of (in) people’s fields’

Class C. These words name properties. When used as modifiers, they index the head for humanness and number:

- (vii) ùrò gàrá ñè:rⁿ -ùm daḡá -m ìnè -n mòñú -n
 house.L big girl -PL.L small-PL person -SG.L bad -SG
 ‘(a) big house’ ‘small girls’ ‘(a) bad person’

When predicated, they do not inflect for number, nor for aspect affixes (there are only positive/negative forms); they occur with a copula clitic (different from the one used with Class B words), which inflects for subject indexation only:

- (viii) gùrú = wò -ba
 long =COP.HUM-3PL
 ‘They are tall.’

No information is provided for how Class C words are used in reference.

Class D. These words name nonhuman objects (animates, inanimates). When used in reference, they do not inflect for number: *títá*: ‘hyena(s)’. When predicated, they use the same copula clitic as Class B, but since they are always third person and without number inflection, the clitic is an invariant form (apart from morphophonological changes; there is also a negative form):

- (ix) tàrà-nòwnó cè: pòrbá =ÿ
 collective.hunt-meat thing.L collective =COP
 ‘Meat from a collective hunt is everyone’s (= collective) property.’

As modifiers, Class D words use the possessive postposition *mà*:

- (x) má ìjú mà kó:
 1SG.POSS dog POSS foot
 ‘my dog’s foot’

- (2) Describe how the grammatical and semantic facts for Classes A-D support (or do not support) the functional-typological theory of parts of speech. NB: this is best done by describing it class by class: Class A, Class B, etc. Indicate which classes belong to which prototypes, and which class does not, explaining why.

Kanuri

Kanuri is a Nilo-Saharan language spoken in northern Nigeria.

Grammaticalization of pronominal morphemes

Kanuri is an SOV language. It has independent pronouns such as *nyí* ‘2SG’ and *sàndí* ‘3PL’ which, if used as subject or object, precede the verb. It also has pronominal suffixes such as *-nzá* ‘2SG.OBJ’ [v = vowel] and *-k(é)* ‘1SG.SBJ’ (at least, most of the time they are suffixes; with a small number of verbs they are prefixes). The independent pronouns are used only for emphasis (usually with an associative suffix, whose meaning you should not worry about). If the independent pronouns are used, the pronominal affixes can be dropped:

- (i) *lèfà -nzá -k -ìn*
greet -2SG.OBJ -1SG.SBJ -IMPF
‘I greet you.’
- (ii) *nzú- rú- -kó -ná*
2SG.OBJ- see -1SG.SBJ -PRF
‘I saw you.’
- (iii) *nyí -à rú -kó -nà*
2SG -ASSOC see -1SG.SBJ -PRF
‘YOU I saw.’
- (iv) *nyí -à nzú- rú- -kó -nà*
2SG -ASSOC 2SG.OBJ- see -1SG.SBJ -PRF
‘YOU I saw.’

The third person object markers are zero. One can use the third person plural independent pronoun (with the associative suffix) to indicate plurality of the 3rd person object without the emphatic or topical meaning normally associated with the independent pronoun. In this case, the pronoun can precede or follow the verb—unexpected in an SOV language:

- (v) *sàndí -à lèfàné* (vi) *lèfàné sàndí -à*
3PL -ASSOC greet greet 3PL -ASSOC
‘Greet them.’ ‘Greet them.’

- (1) **a.** Rank the pronominal morphemes, independent and suffixed, on a grammaticalization scale, and give your reasoning.
b. Why do you think the rigid SOV word order is violated in the last example?

Kharia

Kharia is a member of the Munda group of Austroasiatic, and is spoken in northeast India.

Typological markedness of pronominal inflectional categories; parts of speech

Kharia has the following categories of referring expressions:

A. *Animates*. Animate nouns occur with all postpositions and the genitive suffix *-(y)(a)g*. They also take dual and plural endings, as follows:

<i>singular</i>	<i>dual</i>	<i>plural</i>	
lebu	lebukiyar	lebuki	‘person’
biloi	biloikiyar	biloiki	‘cat’

B. *Inanimates*. Inanimate nouns occurs with all postpositions and the genitive suffix. However, they do not take dual or plural number affixes:

dAru	‘tree/trees’
soreŋ	‘stone/stones’
timsoŋ	‘fire’

C. *Independent Personal Pronouns*. These occurs with all of the postpositions and the genitive suffix; they also have the following singular/dual/plural forms:

	<i>singular</i>	<i>dual</i>	<i>plural</i>
<i>1st (excl.)</i>	iñ	iñjar	ele
<i>(incl.)</i>		anaŋ	aniŋ
<i>2nd</i>	am	ambar	ampe
<i>3rd</i>	hokaŋ	hokiyar	hoki
	ukaŋ	ukiyar	uki
	hankaŋ	hankiyar	hanki

The three different third person forms are created from three of the four demonstrative pronouns: *u* ‘this’, *ho* ‘that’, *han* ‘that (remote)’. The morpheme *kaŋ* found in the singular is the noun ‘person’.

The genitive forms of the pronouns (including the 3rd person pronouns) are highly irregular compared to classes A, B and D.

D. *Infinitives*. These are derived from verbs by adding the suffix *-na*:

gojna	‘dying, to die’
cona	‘going, to go’
ñogna	‘eating, to eat’

Infinitives occur only with the genitive suffix, with or without the postposition *t’oŋ*.

- (1) What evidence does Kharia provide for typological markedness asymmetries of number and person? Justify your answer.
- (2) Which of the four classes (animate nouns, inanimate nouns, personal pronouns and infinitives) constitutes the most prototypical referring expressions, based on the Kharia evidence? Justify your answer. Determine the (relative) typological markedness of all four classes as referring expressions supported by the Kharia data, justifying your answer.

K'iche'

K'iche' (Quiché) is a Mayan language spoken in Guatemala.

Grammaticalization of adpositions

In K'iche', we find the following forms used to represent grammatical relations, including spatial relations (POSS means possessive index, as is found on the head or possessum in genitive constructions):

Spatial Relations:

<i>pa</i>	'to, from, at' (i.e. location and direction, either towards or away)
<i>či</i> POSS- <i>pām</i>	'inside' (<i>pām</i> = 'belly')
<i>či</i> POSS- <i>wač</i>	'in front of' (<i>wač</i> = 'face') [<i>či</i> not always necessary]
<i>pa</i> POSS- <i>wi?</i>	'on top of' (<i>wi?</i> = 'hair [on head]')
<i>či</i> POSS- <i>ix</i>	'behind, over, around' (<i>ix</i> = 'back, skin, covering')
<i>či</i> POSS- <i>či?</i>	'at, at the edge of' (<i>či?</i> = 'mouth, edge, opening')
<i>či</i> POSS- <i>še?</i>	'under, below' (<i>še?</i> = 'root')

Nonspatial Relations:

<i>či</i> POSS- <i>wač</i>	experiencer (dative)
<i>či</i> POSS- <i>e(č)</i>	dative, benefactive, experiencer, instrumental (<i>eč</i> = 'possession, belonging')
POSS- <i>ūk'</i>	'with (accompanying)' (<i>ūk'</i> = ?)
POSS- <i>umal</i>	'through, because', passive agent marker (<i>umal</i> = ?)
POSS- <i>ačil</i>	'with (accompanying)' (<i>ačil</i> = 'companion')

Note: *či* is used almost solely in combination with the other morphemes described here. It is also used as a complementizer for sentential complement clauses (as in 'he said *that...*')

- (1) Rank the different forms, including *či*, according to degree of grammaticalization. Justify the position of the morphemes on the ranking. Don't expect to come up with an absolute ranking; discuss any difficulties you have with the ranking process. Hint: nonspatial relations are considered to be more grammatical in meaning, spatial ones more lexical in meaning.

Kisi

Kisi is a language of the Atlantic subgroup of the Niger-Kordofanian family, spoken in Guinea, West Africa. Accents indicate tones.

Word order

The order of elements in the clause differs depending on whether there is the irregular auxiliary verb ‘be’ (glossed AUX in the examples) in the clause or not. (There is no difference between nouns and pronouns in their positioning.)

- (i) kè-uwó lòwá sàá
snake bite Saa
‘The snake bit Saa.’
- (ii) fàlà có lééṅndó yìkpàá
Fallah AUX machete sharpen
‘Fallah is sharpening the machete.’

The order of various modifiers is given in the examples below. There is a complicated set of gender/class affixes or particles used to mark nouns and modifiers. (They are glossed CL and IDX, the latter being indexation markers). You do not have to worry about the number of particles or where they occur in the various constructions.

Demonstratives:

- (iii) pèl -lè léṅ
egg -CL that.IDX
‘that egg’

Numerals:

- (iv) nàù -wá à ṅìsósṅ
cow -CL IDX- two.CL
‘two cows’
- (v) siàù -wáṅ mà mìsósṅ
orange -CL IDX- two.CL
‘two oranges’

Relative clauses [in brackets]:

- (vi) mènŋ mà [ó kól] -án
water CL [he drink] -IDX
'the water that he drank'

Adjectives:

- (vii) kòlà -lá húmbù -lánŋ
cloth -CL white -IDX
'white cloth'

Genitive:

- (viii) běl -ŋ sàà -óŋ
palm.nut -CL Saa -IDX
'Saa's palm nuts'

Adpositions come in several varieties. There are three prepositions: *á* 'with', *ó* 'at, to, in, from, against, etc.', and *lé* 'for', as in:

- (ix) ó cǎŋ ó kpèlè
she rose to/etc. bed
'She arose from her bed.'

In addition the preposition *ó*, which has the most general meaning of the three prepositions, can be combined with postpositions to produce circumpositions.

- (x) ò wá kùŋndánŋ ó bɔ́ bènŋú
he AUX groan to/etc. bush foot
'He was groaning under the bushes'

The postposed part of these circumpositions are often identical to body part nouns, as with *bènŋú*. Some other circumpositions such as *ó...ló* 'for' do not have postposed parts that are identical to any nouns currently in the language. Some circumpositions can drop the prepositional part, leaving postpositions proper.

There are quite a few circumpositions, but it appears that simple prepositions are more common than circumpositions in texts.

- (1) What are the word orders in Kisi for verb-object, noun-demonstrative, noun-numeral, noun-relative clause, noun-adjective, noun-genitive, and adposition? For the constructions with alternative word orders, which order is more basic (justify your answer)? For each basic word order, describe which of the competing motivations presented in the textbook motivates (or does not motivate) that word order.

Typological markedness of numerals

When a numeral modifies a noun, the noun takes its class marker (usually a suffix) and the class pronoun is prefixed to the numeral. In addition, the numeral ‘two’ has a distinct form for each of the five (plural) gender classes:

(viii) nàù wá à- ñìsósù
cow -a.CL a.PRN- two.a.CL
‘two cows’

(ix) sààù -wáŋ mà- mìsósù
orange -ma.CL ma.PRN- two.ma.CL
‘two oranges’

(and so on)

The numeral ‘three’ has only two forms: *ngàá* for the *ŋ* class, and *yàá* for all the other classes. The higher numerals, e.g. *híṣṣhí* ‘four’, have no differences in form. (These remarks do not apply to the numeral ‘one’ since it is not plural.)

- (2) Describe evidence (if any) supporting a typological markedness asymmetry for the numerals of Kisi. What relative token frequency would you predict for the numerals 2, 3 and 4?

Typological markedness and grammaticalization of verbal inflectional categories/forms

Kisi’s verbal inflectional system does not involve affixes, just tonal changes and in some forms, additional words or particles.

The PERFECTIVE has a low-high tone pattern. The PAST PERFECTIVE represents completed action and does not involve any additional morpheme. The PRESENT PERFECTIVE is like the English perfect (*I have eaten*) and involves the additional particle *nîŋ*.

The HABITUAL has a low tone pattern. The PAST HABITUAL involves an additional morpheme (sort of, but take it as such), namely the doubling of the subject pronoun vowel. The PRESENT HABITUAL involves no additional morpheme.

The PROGRESSIVE also involves a low tone pattern, but has in addition the auxiliary ‘be’. The verb is nominalized, but the auxiliary inflects for present and past tense.

There is also a set of NEGATIVE forms. They all involve a clause-final particle *lé*. In addition, the negative perfective and negative habitual forms are identical, using a low-high tone pattern.

- (3) Describe evidence (if any) supporting a typological markedness asymmetry for the following verbal categories:
- a. polarity (affirmative/negative)
 - b. aspect (perfective/habitual/ progressive)
 - c. tense (past/present).

Give a plausible semantic explanation for any typological markedness interactions among these three categories, if there are any (hint, hint...).

- (4) Rank the following adpositional constructions by degree of grammaticalization: *á, ó, lé, ó..bèηgú, ó..ló*. (Hint: to answer this question, make a table with each form and its degree of phonological, morphosyntactic and semantic grammaticalization.) What is the relative age of preposition, circumposition and postposition? Justify your answer.

Kryz

Kryz is a Nakh-Daghestanian (North Caucasian) language spoken in Azerbaijan. This problem presents several classes of words in Kryz and their grammatical behavior in predication, modification and reference.

Class A consists of action words. Class A words, when predicated, index the gender and/or number of their absolutive argument. The gender/number indexation is quite grammaticalized and has fused sometimes with the Class A word, sometimes with an inflection, and sometimes with a prefix called a preverb (PV-) that is found with most Class A words. (Preverbs combine semantically with Class A words in the same way as English *break up*, *break out*, *break down*, or like Spanish or Russian prefixes. Ignore preverbs for this problem.) I should also mention that the gender system is basically masculine-feminine-neuter (M/F/N) in the singular and human-nonhuman (HPL/NPL) in the plural.

Class A words also inflect for several tense-aspect forms, including present, aorist (which also acts as a recent past), perfect (which also acts as a remote past), and past imperfect (contrasting with the aorist and perfect); see the inflection of ‘turn’ in example (i).

- (i) nehana gi-r ğa-ta ğaz-ri girt ğay-ickar
last_night REFL.H.PL-ERG PV-pluck.PF.PART goose-PL all cold-SUBEL
- asar-a rik-eŋ ği-xhar-e
shudder-MANNER yard-INCESS PV-turn-PRS.NPL

‘The geese that were plucked last night were all in the yard shuddering from the cold.’
(262)

Class A words as modifiers of a referring expression use a participle form:

- (ii) xinib.ci-r v-az-i zir yux
woman-ERG F-milk.IMPF-PART cow.GEN milk
‘the milk of the cow that the woman is milking.’ (348)

Class A words as referents, that is, as arguments of predications, take a variety of forms. They may occur in an infinitive in -z:

- (iii) fura-r riş tu-ğva-z icza vuts’-re
man-ERG girl PV-carry.F-INF permission give-PRS
‘The man gave permission to carry his daughter.’ (305)

The infinitive form of the Class A word indexes the absolutive argument in gender and number, as in predication. However, it does not inflect for case.

Another option is with a form called a ‘masdar’ (MSD) in *-ic*:

- (iv) lu riş furi-mbi yi-p-ic-iğ tam řu-b-ğur-cu
 this girl man-PL PV-HPL.go-MSD-SUPER fully PV-F-trust-PFCT.F
 ‘The girl is sure that the men have left.’ (313)

The masdar form allows the action word to index the absolutive argument in gender and number, but also takes case suffixes (in this case the superessive).

Still another option is with a complementizer *ki* (see also (vii) below):

- (v) div.ci-r li-p-uc ki bilğays ğva-yn-i
 demon-ERG PV-say-AOR.N COMP Bilqis PV.F-take-OPT
 ‘The demon pretended that he had married Bilqis.’ (294)

Class B consists of object words. Class B words are predicated using a copula suffix. The copula suffix varies for gender and number, distinguishing human plural vs. feminine vs. the rest (masculine, neuter, nonhuman plural). Object words retain their inflections in predication—number and even case marking, as in (vii):

- (vi) eb-rı-ya
 wolf-PL-COP.NPL
 ‘They are wolves.’ (112)

- (vii) ik-re ki kel rik-éř-yu
 look-PRS COMP lamb yard-INESS-COP.F
 ‘He sees that the lamb is in the yard.’ (112)

Class B words can take the past inflection *-ni* after the copula suffix, but no other tense-aspect inflections.

Class B words as modifiers use the genitive case:

- (viii) ul-i q’an
 eye-GEN base
 ‘the corner of the eye’ (179)

Class B words in reference inflect for case—ergative, absolutive (zero-coded, incidentally), genitive, dative, instrumental and a large number of spatial cases—and also for number (singular vs. plural). This can be seen in many of the examples above and below.

Class C words consists of property words. All Class C words, when predicated, take the copula:

- (ix) xuruz-ci t’ut’ul iuru-ya-ni
 rooster-GEN crest red-COP.N-PST
 ‘the crest of the rooster was red.’ (112)

The copula has forms for gender and past tense, as with object words.

Class C words as modifiers mostly end in vowels. As modifiers, they take no inflections:

- (x) sunci q'usa řala eb.il-iř rast řa-re
 one.OBL old lean wolf-SUPER meeting be-PRS
 'He met an old lean wolf.' (180)

Class C words ending in *-a* are the most common; let us call them Class C1. They are illustrated in (x). Other Class C words ending in vowels include words ending in *-u*, as in (ix). Another subclass of Class C words are mostly borrowings. They take *-a* as modifiers, but when predicated, they drop the *-a* (though they still take the copula):

- (xi) meřa-c řalin-a cigařa
 forest-GEN thick place:INESS
 'in the depths of the forest' [lit. 'in a place of thick forest'] (70)

- (xii) meřa řalin-e
 forest thick-COP
 'The forest is thick.' (70)

Let us call these words Class C2.

One native word that ends in *-a* (and the *-a* is part of the root, like Class C1) has different forms that index the gender of the word it modifies:

- (xiii) řarqa/řabqa/řadqa
 'long.M/long.F/long.N' (69)

Although the one example is predicative, assume that 'long' indexes the referent when it is functioning as a modifier as well. Let us call this one-word class Class C3.

No examples of reference to properties is given. The only examples of property words used in reference refer to a person or thing possessing the property (*sila* is a Class C1 word, by the way):

- (xiv) sila-c-a sila řa-yts'ar-a
 small-NONH-INESS small(ABS) PV-put.MEDP-EVT
 'In a small (bag), one can put little.' (71)

- (1) Show how these facts do (or do not) conform to the typological-universal theory of parts of speech. Justify your answer. Be sure to discuss the status of subclasses C1, C2 and C3 as well as Class C as a whole. Also, be sure to identify the relevant evidence and ignore the irrelevant evidence for the typological-universal theory.

Kuku Yalanji

Kuku Yalanji is a Pama-Nyungan (Australian) language still spoken west of Cairns, North Queensland, Australia. Word order in Kuku Yalanji is quite free, but there are some order preferences. The preferred order for intransitive sentences is SV and for transitive sentences, SOV.

- (i) dinga -angka yawu dama -ny yinba -bu
man -ERG stingray(ABS) spear -PST 3.prong.spear -INST
'The man speared the stingray with a three-pronged spear.'

Demonstratives may appear before or after the noun, but if there is a noun-noun combination, it is preferred for the demonstrative to precede (this latter option is not illustrated):

- (ii) yinya karrkay
that child
'that child'
- (iii) karrkay yinya
child that
'that child'

Numerals and adjectives prefer to follow, but if a noun phrase has both a numeral and an adjective, then the numeral tends to precede:

- (iv) dubal murrurr-murru
bark rough
'rough bark'
- (v) jambul kaya kuli-ji
two dog vicious
'two vicious dogs'

Alienable genitives may precede or follow the head noun (only one order is illustrated):

- (vi) badur ngamu -mu
fishing.line mother -POSS
'mother's fishing line'

Inalienable (part-whole) genitives use a distinct construction (no possessive affix, just juxtaposition), and the possessor invariably precedes (the example uses a pronoun, but assume that nouns behave the same way):

- (vii) nyulu dukul
he head
'his head'

There are no adpositions; case affixes are used instead:

- (viii) maral bungku -bu janjana -y
girl(ABS) knee -INST stand.RDP -PST
'The girl is kneeling [lit. 'stand with knees'].'

- (1) Name the basic order for the following elements. If necessary, justify your choice of basic order, or your reason for not proposing a basic order. For each order, provide its motivation, if any, according to the dominance and harmony patterns on the cheat sheet (ignore the suffixing preference for this problem):
- a.** verb and subject
 - b.** verb and object
 - c.** genitive and noun
 - d.** adjective and noun
 - e.** numeral and noun
 - f.** demonstrative and noun
 - g.** case affix
- (2) When numeral and adjective occur together in a noun phrase, why do you think they occur in the order that they do?
- (3) Assuming that the word orders were all once harmonic with each other, which harmonic pattern do you think preceded the current state of affairs? What was the sequence in which the word orders changed? Justify your answer.

Lango

Lango is a Nilo-Saharan language spoken in Uganda.

Grammaticalization of adpositions

Lango has a variety of ways to express grammatical and semantic relations; they are listed below, each type indicated by a number:

Class 1. This includes:

<i>báj</i>	‘to [somewhat archaic]’
<i>bòt</i>	‘to’
<i>mε</i>	‘for’
<i>pì</i>	‘because of’
<i>tê</i>	‘under’
<i>tú</i>	‘toward’
<i>kà</i>	‘instead of’

Class 1 forms inflect for pronominal objects, e.g. *bòt*:

	<i>sg</i>	<i>pl</i>
<i>1st</i>	<i>bòtɔ́</i>	<i>bòtwá</i>
<i>2nd</i>	<i>bòtí</i>	<i>bòtwú</i>
<i>3rd</i>	<i>bòté</i>	<i>bòtgí</i>

They do not inflect when followed by nominal objects.

Class 2. This consists of *ì* ‘on, at, in, about, to, from’ with nonhuman objects. This preposition is inflected for pronominal objects (obviously, only 3rd person) and takes nominal objects without inflections.

Class 3. This consists of *ì* (same range of meanings) with human objects. With human objects, *ì* must be used in combination with the noun *kòm* ‘body’, which is found in an inalienable possession construction with the human noun or pronoun (simple juxtaposition for the former, pronominal inflection for the latter):

<i>ì kòm d’ákô</i>	‘in, about, on, etc. the woman’
<i>ì kòmé</i>	‘in, about, on, etc. me’

Class 4. This consists of *ì* in combination with words which are still used as nouns denoting body parts, but are here used to indicate various spatial relations:

<i>ì dóg kúlú</i>	[on mouth river]	‘on the edge of the river’
<i>ì kór òt</i>	[on chest house]	‘against the house’

Class 5. This consists of *ì* combined with another preposition of Class 1, and gives a meaning not always predictable from the combination:

<i>ì bôt</i>	[at to]	‘after (e.g. walking after someone)’
<i>ì tê</i>	[at under]	‘under (involving motion, at least)’

Class 6. This consists of a small number of prepositions such as *bàlà* ‘as, like’ which do not inflect for a pronominal object, but instead take the independent pronouns:

<i>bàlà án</i>	‘like me’
<i>bàlà yím</i>	‘like you’

- (1) Rank the six construction types by degree of grammaticalization, and justify your ranking.

Lenakel

Lenakel is an Austronesian language of Melanesia.

Typological markedness of clause types

Lenakel verbs inflect for person, number, tense/aspect, etc. We can divide clauses in Lenakel into two types. They can be illustrated by the following coordinate sentence:

k- im- ia- os nuw nivin m- ia- kin m- ia- lelig i- imwa
3.NSG- PST- DU- take yam some CONJ- DU- eat CONJ- DU- return LOC- house
'They (dual) took some yams and ate them and returned home.'

The first type, which we can call the “personal” type, is found in the first clause. Its verb uses person prefixes and has the full complement of verbal prefixes indicating all verbal categories (tense, aspect, negation, intention, future, number, etc.) The second type, which we can call the “conjunctive” type, generally indicates that the subject of the verb is the same as the subject of the preceding verb. It has the prefix *m-* instead of the regular person prefixes (and therefore does not distinguish person), usually does not have any other inflection except for the number prefix (dual *ia-* in the example), and never occurs with the intentional or future prefixes.

- (1) Is there evidence for a typological markedness asymmetry between the personal clause type and the conjunctive clause type? Why?
- (2) Compare the Lenakel original to the English constructions in the translation. Do you see any parallels? Is there a typological markedness pattern in the English constructions, and does it match that of Lenakel?

Limbu

Limbu is a Tibeto-Burman language spoken by 180,000 people in eastern Nepal.

Typological markedness of pronominal inflectional categories

The independent pronouns of Limbu are as follows:

	<i>Singular</i>	<i>Dual</i>	<i>Plural</i>
<i>1st (excl)</i>	aŋga	anchige	anige
<i>(incl)</i>		anchi	ani
<i>2nd</i>	khεŋ?	khenci	kheni
<i>3rd (an)</i>	khunε?	khunchi	khunchi, kheŋha?
<i>(“inan”)</i>	khεŋ	kheŋha?	kheŋha?

The third person forms are worth noting in some greater detail. The “regular” 3rd person pronouns *khunε?* etc. are restricted to animates. *khεŋ* is the distal demonstrative pronoun (‘that’). It can be used for anything animate and inanimate, but you should think of it as a basically inanimate pronoun being extended to animate usage. This is particularly clear in the dual and plural. The 3rd “regular” (animate) dual is also used for the plural, though the “inanimate” demonstrative *kheŋha?* is also used for animate plural (in which case *khunchi* is restricted to animate dual).

- (1) What is the typological markedness pattern for person with respect to number and gender (animacy)? That is, say which person(s) is (are) least marked with respect to number and to gender. Does this fit your expectations based on readings/lectures?
- (2) Another fact about the personal pronouns (i.e. the pronouns except for the demonstrative *khεŋ*) is that they do not take the ergative suffix *-le*, unlike common nouns and the demonstrative. Instead they take no case suffix when functioning as transitive subjects. (Absolutive is zero coded, as expected.) Does this fact surprise you? Why or why not?

Transitivity prototype

- (3) Explain for each of the following facts why the fact supports Hopper and Thompson's transitivity hypothesis:
- a. The subject of a reflexive verb is in the absolutive, not ergative, case
 - b. The ergative case, used with agents of course, is identical to the instrumental case. But the verb indexes only ergative NPs. Likewise, the passive agent is in the instrumental case, but the verb does not index it either.
 - c. If the patient is indefinite or generic, the verb is inflected intransitively
 - d. The transitive forms with 3SG agent are actually similar to the intransitive forms
 - e. Object indexation is with the primary object, not the direct object
 - f. The verbs *le:ma?* 'know' and *sukma?* 'be able to' are sometimes conjugated intransitively in the negative.

Lummi

Lummi is a Coast Salishan language spoken in the Washington (USA)-British Columbia (Canada) area.

Typological markedness of categories of indexation markers

Lummi has a complicated system of verbal affixes; the following represent only the singular nominative and accusative suffixes.

	<i>nominative</i>	<i>accusative</i>
<i>1st</i>	-sən	-oŋəs
<i>2nd</i>	-sx ^w	-oŋəs
<i>3rd</i>	-∅	-∅

- (1) State what typological markedness asymmetry (if any) is supported by the Lummi data for the categories of case and person. Give your reasoning and describe what type of evidence you used (structural or behavioral).

Lushootseed

Lushootseed (a.k.a. Puget Salish; the speakers call their language $dx^w lə\check{s}ucid$) is spoken by less than 170 people around Puget Sound, Washington State, USA. Most of the speakers are from the northern dialects (Skagit and Snohomish).

Pronominal categories/forms: typological markedness, grammaticalization, iconicity

In the northern dialects of Lushootseed, we find the following forms for demonstratives and definite articles:

	<i>Proximal</i>	<i>Distal</i>	<i>Neutral</i>	<i>Stage II</i>
	<i>Deictic</i>	<i>Deictic</i>	<i>Deictic</i>	<i>Article</i>
	‘this’	‘that’	‘particular one’	‘the/a’
<i>Set I</i>	$ti\check{?}i\check{l}$	$ti\check{?}\check{e}\check{?}$	ti	$t\check{e}$
<i>Set II</i>	$tsi\check{?}i\check{l}$	$tsi\check{?}\check{e}\check{?}$	tsi	$ts\check{e}$

The neutral deictic points out a referent, but does not specify its location in the way that the proximal and distal deictics do.

In addition, there is a Stage III article, *s-*, as in *s-tubš* ‘man’ and *s-tulək^w* ‘river’. The Stage III article is only a ‘meaningless’ affix, a sort of nominalizer (sometimes the form without the *s-* refers to an action rather than a thing). The Set I/Set II distinction doesn’t apply to it.

Set I is used for masculine singular and Set II is used for feminine singular (and also some inanimate diminutives, but you needn’t worry about these). Set I is used for all plurals.

In southern Lushootseed, ‘this’ as a pronoun (as in ‘This is a salmon’) is $ti\check{?}i\check{l}$ as in the table, but ‘this’ as a modifier (as in ‘this salmon’) is $tii\check{l}$. In northern Lushootseed, ‘this’ as a modifier is normally $ti\check{?}i\check{l}$, but in relaxed conversation, $tii\check{l}$ is used, just as in southern Lushootseed.

- (1) What typological markedness asymmetries (if any) for the categories of gender and number are supported by the Lushootseed data? (Ignore the Stage III article for this question.)
- (2) Rank the Set I forms and the Stage III article by degree of grammaticalization, and justify your ranking using the phonological, grammatical and/or semantic criteria relevant to the data given. Propose a historical scenario for the Set I forms. (Hint: \check{e} is a reduced vowel.)
- (3) The modifier form $tii\check{l}$ is a reduced version of the pronoun form $ti\check{?}i\check{l}$. This is a common phenomenon—the demonstrative adjective is a shorter or more reduced version of the demonstrative pronoun. Give a plausible iconic motivation for the fact that the modifier form is shorter/reduced while the pronominal form is not.

Mali (Baining)

Mali (Baining) is an Indo-Pacific (Papuan) language spoken by around 2200 people on the island of New Britain off the coast of Papua New Guinea.

Mali has three sets of “concordial pronouns”, which mark S, A and P arguments in a split intransitive system. Class I and II pronouns are used for A and active intransitive Ss. Class III pronouns are used for P and inactive intransitive Ss. We will ignore Class III in this problem. The semantic distinction between Class I and Class II pronouns will be described in problem (4).

The concordial pronouns distinguish person, number and gender. Masculine (M) and feminine (F) genders are found on both human and nonhuman nouns, while neuter (N) gender is found only on nonhuman nouns. In Mali orthography, ē is /ə/ and th is /ɬ/.

Class I:

<i>Person/gender</i>	<i>Singular</i>	<i>Dual</i>	<i>Plural</i>
<i>1</i>	ngua	un	ut
<i>2</i>	ngia	in	ngēn
<i>3M</i>	ka	in	ta (<i>human masculines only</i>)
<i>3F</i>	kia	in	ta (<i>human feminines only</i>)
<i>3N</i>	ngē	ngē	ngē

Class II:

<i>Person/gender</i>	<i>Singular</i>	<i>Dual</i>	<i>Plural</i>
<i>1</i>	ngu	uni	uthi
<i>2</i>	ngi	ini	ngēni
<i>3M</i>	kē	ini	ti (<i>human masculines only</i>)
<i>3F</i>	ki	ini	ti (<i>human feminines only</i>)
<i>3N</i>	ngēthi	ngēthi	ngēthi

Third person plural nonhuman masculine and feminine nouns are referred to with the third person neuter pronoun.

- (1) State what typological markedness asymmetries (if any) are supported by the Mali data for the following categories. Justify your answer. For (3a-d), state whether the evidence conforms to the universal pattern.
- Number
 - Gender
 - Person
 - Human/Nonhuman
 - Class I/Class II

The Class I and Class II pronouns help to distinguish tense in three of the four verb classes of Mali. The four verb classes are called A, B, C and D; there are two subclasses of C, called C1 and C2 here. The verb class tense constructions are illustrated in the following table using the first person singular Class I and Class II pronouns:

	<i>A</i>	<i>B</i>	<i>C1</i>	<i>C2</i>	<i>D</i>
<i>Present</i>	ngua tet 'I walk'	ngu bang 'I run'	ngu tlu 'I see'	ngu ngim 'I search'	ngu su 'I try'
<i>Future</i>	ngua thet 'I'll walk'	ngu vang 'I'll run'	ngu lu 'I'll see'	ngu ingim 'I'll search'	ngu su 'I'll try'
<i>Past</i>	ngua met 'I walked'	ngua vang 'I ran'	ngua lu 'I saw'	ngua ingim 'I searched'	ngua su 'I tried'

In Class A, only the verb forms are used to distinguish the tenses: all tenses use the Class I pronouns. Past, present and future tenses are each differentiated by an initial consonant change in the verb stem.

In Class B, both the verb forms and the pronoun forms are used to distinguish the tenses. The verb form distinguishes only present from nonpresent (past and future), by an initial consonant change in the verb stem. Past and future tenses are distinguished by using the Class I and Class II pronouns respectively. The present tense uses the Class II pronouns only.

In Class C, both the verb forms and the pronoun forms are used to distinguish the tenses. The verb form distinguishes only present from nonpresent, in two ways. In Class C1, the present form adds a *t-* to the verb stem, which always begins with an alveolar consonant. In Class C2, the nonpresent form adds an *i-* to the verb stem. Past and future tenses are distinguished by using the Class I and Class II pronouns respectively. The present tense uses the Class II pronouns only.

In Class C, only the pronoun forms are used to distinguish the tenses. The verb has only one form. As in Classes B and C, the Class I pronouns are used for the past tense and the Class II pronouns are used for the present and future tenses.

- (2) **a.** Provide a ranking of the four verb classes (A, B, C, D) in terms of typological markedness. Justify your answer. *Hint:* you won't find an exhaustive ranking of all four classes.
- b.** The author states that Class A contains the most frequent verbs in the language. Are you surprised? Why or why not?

Mam

Mam is a Mayan language spoken in Guatemala.

Typological markedness of transitivity

Mam, like most Mayan languages, makes a fairly sharp grammatical distinction between transitive and intransitive verbs. This is due in part due to the fact that Mam uses ergative/absolutive indexation for transitive/intransitive subjects. But transitive and intransitive verbs also use distinct forms for some inflections:

(a) One finds the following mode inflections for transitive and intransitive verbs:

	<i>Potential</i>	<i>Imperative</i>
<i>Transitive</i>	-aʔ	-m (-n/_ directionals)
<i>Intransitive</i>	-l	-∅

(b) Virtually every transitive sentence occurs with a “directional”, even with verbs denoting actions that do not involve motion, and whose semantics is obscure in many cases (DIR = directional, REC = recent past, DS = directional suffix, which is not the form in question):

- (i) ma chi kub' t- tx'eeʔma -n xinaaq tzeəʔ
 REC.PST 3PL.ABS DIR 3SG.ERG- cut -DS man tree
 ‘The man cut the trees.’

Intransitive sentences may take directionals, but they also occur without them:

- (ii) ma ∅- kyim xiinaq
 REC.PST 3SG.ABS- die man
 ‘The man died.’

- (1) For each of (a) and (b), state whether the grammatical facts support a typological markedness asymmetry between transitive or intransitive, and justify your answer.

Grammaticalization of tense-aspect markers

In Mam, we find the following tense/aspect markers: *ma* ‘recent past’, *o* ‘past’, *x-* ‘recent past dependent’, \emptyset - ‘past dependent’, *ok* ‘future’, *n-* ‘progressive’. Past is more than a day ago. *Ma* and *o* do not change phonologically, and are separate words:

(iii) *ma* *chin* *jaw tz'aq -a*
REC.PST 1SG.ABS DIR slip -1SG
‘I slipped (just now).’

(iv) *o* *chin* *jaw tz'aq -a*
PST 1SG.ABS DIR slip -1SG
‘I slipped (a while ago).’

These forms are used in “main clauses”. *x-* and \emptyset - are used in “dependent clauses”, which are found (among other places) when a noun phrase or prepositional phrase is fronted. They are affixed to the absolutive prefix (which precedes the directional) and cause the loss of the first consonant of certain absolutive pronominal prefixes, such as *chin* ‘1SG.ABS’:

(v) *t-* *uj b'ee x-* *-in* *jaw tz'aq -a*
3SG.POSS- in road REC.PST.DEP- -1SG.ABS DIR slip -1SG
‘In the road I slipped (just now).’

(vi) *t-* *uj b'ee \emptyset -* *-in* *jaw tz'aq -a*
3SG.POSS- in road PST.DEP- -1SG.ABS DIR slip -1SG
‘In the road I slipped (a while ago).’

The future *ok* is an independent word, does not undergo phonological change, and is optional; this is due in part to the fact that future meaning is also expressed by a potential suffix on the verb:

(vii) *ok chin* *jawa -l* *tz'aq -a*
FUT 1SG.ABS DIR -POT slip -1SG
‘I will slip.’

The progressive *n-* is prefixed to the verb, does not undergo any morphophonemic changes, and is not specific as to time, which can be derived from context or explicitly expressed by a time adverb:

(viii) *ojtxa n-* *poon a?*
before PROG- arrive water
‘The water was arriving before.’

(2) Rank the aspect markers by degree of grammaticalization, and justify your ranking.

Mangap-Mbula

Mangap-Mbula is an Austronesian language spoken on islands off the coast of Papua New Guinea.

Typological markedness of pronominal inflectional categories

The pronouns of Mangap-Mbula are given below:

	<i>Nominative/Genitive</i>	<i>Accusative</i>	<i>Oblique</i>	<i>Locative</i>
<i>1sg</i>	nio	io	pio	tio
<i>2sg familiar</i>	nu	u	pu	ku
<i>2sg formal</i>	niwi	u	piwi	kiwi
<i>3sg</i>	ni	i	pini	kini
<i>1du.incl</i>	ituru			
<i>1du.excl</i>	niamru			
<i>2du</i>	niomru			
<i>3du</i>	ziru			
<i>1pl.incl</i>	iti	iti	piti	kiti
<i>1pl.excl</i>	niam	iam	piam	tiam
<i>2pl</i>	niom	iom	piom	tiom
<i>3pl</i>	zin	zin	pizin	kizin

- (1) Examine the data from the grammatical categories in (a)-(c), and what typological markedness asymmetries are supported by the data. Note any anomalies and/or correlations. Also, compare Mangap-Mbula with the typological markedness patterns described in class lecture and the textbook. Discuss each category (Case, Number, Person) separately; DO NOT mix together discussion of the three categories. Ignore the inclusive/exclusive distinction for these questions.

- a. Case (Nominative/Genitive, Accusative, Oblique, Locative)
- b. Number (Singular, Dual, Plural)
- c. Person (1st, 2nd, 3rd)

Grammaticalization of “prepositions”

There are several classes of “prepositions” which express spatial and grammatical relations in Mangap-Mbula:

Class K. There are two very general “true” prepositions, *pa* and *ki*. *Pa* can mean goal, source, location, instrument, benefactive, duration, frequency and reason. A couple of examples are given below:

- (i) aŋ- ko pa Lablab
1SG- flee from Lablab
‘I fled from Lablab.’ (150)
- (ii) aŋ- taara ke pa nakabasi
1SG- cut tree with axe
‘I cut the tree with an axe.’ (150)

Ki is used as a locative with animates and as an alienable genitive:

- (iii) nio aŋ- la ki ato -ŋ
1SG.NOM 1SG- go to older.sibling -1SG.GEN
‘I went to my older brother.’ (152)
- (iv) buza ki Silas
knife of Silas
‘Silas’ knife’ (152)

Class L. Four words indicate spatial relations and take the inalienable possession suffixes:

muri	‘in the place of’
lukutu-	‘in the center of’
mazwa-	‘between’
mbarma-	‘underneath’

The inalienable possession suffixes are given below:

	<i>Singular</i>	<i>Plural</i>
<i>1st</i>	-ŋ	-yam (<i>exclusive</i>) -ndV (<i>inclusive</i>)
<i>2nd</i>	-m	-yom
<i>3rd</i>	-VnV	-n

Class M. Some body part nouns, which use the inalienable possession suffixes, are also used to indicate spatial relations. Some Class M words are given below:

	<i>Body Part Noun</i>	<i>Spatial Relation</i>
ndeme-	'back'	'behind'
kere-	'face'	'in front of'
ute-	'head'	'on top of (solid object)'
kuli-	'skin'	'on the surface of (liquid)'

Class N. There are two words, *ka-* and *le-*, which are used to indicate possessive (genitive) relations. *Ka-* is used for possession of something to be consumed, and also some part-whole relations, while *le* is used for possession of something not to be consumed, and also some kin relations:

- (v) ruumu ka kataama
house GEN:3SG door
'door of a house'

Ka- and *le-* take endings that are slightly different from the alienable possessive suffixes:

	<i>Singular</i>	<i>Plural</i>
<i>1st</i>	koŋ	koyam (<i>exclusive</i>) kanda (<i>inclusive</i>)
<i>2nd</i>	kom	koyom
<i>3rd</i>	ka	kan

	<i>Singular</i>	<i>Plural</i>
<i>1st</i>	leŋ	leyam (<i>exclusive</i>) lende (<i>inclusive</i>)
<i>2nd</i>	lem	leyom
<i>3rd</i>	le	len

In particular, the vowel in *ka* has coalesced with the vowel in the 1SG, 2SG and 2PL suffixes; and the 3SG forms *kalle* do not have the 3SG alienable suffix at all.

- (2) Rank the classes of “prepositions” by degree of grammaticalization. Justify your answer.

Parts of speech

Several word classes of Mangap-Mbula are given below.

Class W. Semantically, Class W consists of property words indicating quality (*ambai* ‘good’, *kalansom* ‘bad’) or relationship (*bok* ‘full’, *raraate* ‘same’, *ndel* ‘different’).

•In predication, they occur without any copula, but they do not index their subject referents:

- (vi) ke tina ambai som
tree this good NEG
‘This tree isn’t good.’

•In predication, they do not inflect for aspect

•As modifiers, they must be nominalized with the suffix *-ŋa*, or made into relative clauses using the relativizer *ta*:

- (vii) kam kini ambai -ŋa -na
2SG:get food good -NOM -3SG.GEN
‘Get some good food.’ (119)

- (viii) kam kini ta ambai
2SG:get food REL good
‘Get some good food.’ (119)

•As modifiers, they do not index the number of their head noun referents

Class X. Semantically, Class X consists of action words, which describe a dynamic process, not a state. Class X has the following features:

•In predication, they occur without any copula, and index their subject referents:

- (ix) kon kwo:no i- kaaga
spirit mouth:3SG.GEN 3SG- open
‘The spirit’s mouth opened.’ (166)

•In predication, they inflect for aspect (progressive/habitual) via reduplication:

- (x) wok ti- wedet kasek som
wallaby 3PL- appear:RDP lowlands NEG
‘Wallabies do not typically come to the lowlands.’ (182)

•As modifiers, they must be nominalized with the suffix *-ŋa*, or made into relative clauses using the relativizer *ta* (only the latter option is illustrated here):

- (xi) ro ku toro ta Silas i- kam ma i- mar
leaf on.you other REL Silas 3SG- get and 3SG- come
'your other letter that Silas brought' (216)

•As modifiers, they do not index the number of their head noun referent

Class Y. Semantically, Class Y consists of property words mostly indicating dimensions (106):

biibi	'big'
molo	'long'
munmun	'young'
musaana	'little'
sijaanabi	'huge'
kunaanabi	'huge'
toro	'other'

•In predication, they occur without any copula, but they do not index their subject referents:

- (xii) kado -ono tana biibi mete
equivalent -3SG.GEN that big too
'That price for it [lit. 'its equivalent'] is too high.' (224)

•In predication, they do not inflect for aspect

•As modifiers, they do not require a nominalizing suffix or a relative clause construction:

- (xiii) buza tio molo
knife on.me long
'my long knife' (106)

•As modifiers, they index the number of their head noun referent via reduplication:

- (xiv) man tio bibip ru tana
bird on.me big:RED two those
'those two big birds of mine' (86)

Class Z. Semantically, Class Z consists of property words indicating color (*kokou* 'white', *siŋsiŋ* 'red'), physical quality (*mbol* 'strong', *bayou* 'hot') and shape (*minip* 'thin', *baba* 'flat')

•In predication, they occur without any copula, and index their subject referents:

- (xv) *ingi* *i-* *mbol* *som*
this 3SG- strong NEG
'This is not strong.' (106)

•In predication, they do not inflect for aspect

•As modifiers, they must be nominalized with the suffix *-ŋa*, or made into relative clauses using the relativizer *ta*:

- (xvi) *kam* *koron* *mbol* *-ŋa* *-na*
2SG:get thing strong -NOM -3SG.GEN
'Get something strong.' (106)

- (xvii) *kam* *koron* *ta* *i-* *mbol* *kat*
2SG:get thing REL 3SG- strong very
'Get something really strong.' (107)

•As modifiers, they do not index the number of the head noun referent

- (3) Which class is the most prototypical verb in typological-universal terms? Justify your answer.
- (4) Which class is the most prototypical adjective? Justify your answer.
- (5) Rank the four classes in the scale from prototypical verb to prototypical adjective. Justify your answer.

Maung

Maung is a non-Pama-Nyungan Australian language spoken in northern Australia.

Word and affix order

The basic word order of Maung is SVO, and it has prepositions.

(1) For each of the following grammatical features of Maung, give the typological factors that motivate them—or give the typological factors that they appear to contradict:

a. Demonstratives, numerals and adjectives generally precede the head noun, but relative clauses follow (I, CLV = noun class I, V):

(i) muga mada gargbin mada mεrg
this.CLV ART.V big ART.CLV leaf
'this big leaf'

(ii) gigi dja djura dja gumija.ma
which ART.CLI book ART.CLI you.wish
'Which is the book that you wish?'

b. Possessive pronouns precede but genitive noun phrases follow:

(iii) dja ηari dja gjab
ART.CLI 1PL.EX ART.CLI fish
'our fish'

(iv) aḍa- abgi.iidj da ηalmar
POSS.CLVI- mouth ART.CLVI house
'the door (mouth) of the house'

c. Polarity questions (those answered by “yes” or “no”) add a particle at the beginning of the sentence:

(v) guḷiŋga nuwuri gudamanj mada ηarwuri mada gubunj
INT 2PL take.PST ART.CLV 1PL.EX ART.CLV canoe
'Did you take our canoe?'

d. Maung uses a complicated set of prefixes to index subject, object and (inalienable) possessor. Most tenses and moods are indicated with suffixes, except the future, which is a prefix.

Typological markedness of pronominal inflectional categories

Maung has a noun class system consisting of six classes: masculine (I), feminine (II), a plural for I and II (III), and three inanimate classes (IV-VI). The personal pronouns (subject forms) have different forms for noun classes in the third person (1st/2nd person forms given for your reading pleasure; *j* is the palatal glide):

	<i>Singular</i>	<i>Plural</i>
<i>1 excl.</i>	ɲari	ɲabi
<i>incl.</i>	—	ɲarwuri
<i>2</i>	nuji	nuwuri
<i>3 masc.</i>	janad	wenad
<i>fem.</i>	in-janad	wenad
<i>IV</i>	an-janad	an-janad
<i>V</i>	manad	manad
<i>VI</i>	ad-janad	ad-janad

- (2) What evidence is there for the typological markedness asymmetry of masculine vs. feminine? Animate (i.e. masculine and feminine) vs. inanimate (classes IV-VI)? Singular vs. plural?

Mavea

Mavea (actually, Mañea, with a linguo-labial) is an Oceanic (Austronesian) language spoken on the island of (you guessed it) Mañea, a “satellite” of Espiritu Santo island in Vanuatu. Mavea has a wide variety of forms to express tense-aspect-mood, a subset of which will be described here. I will give them class names for convenience although most of the “classes” consist of exactly one construction.

A. Future. The Future is expressed by the form *me* or *me ro*, followed by a verb form with an irrealis subject index. The Future may occur before or after an independent subject phrase that precedes the verb. In (xv), the Future is *me ro* and occurs after the subject phrase:

- (i) nao me ro ka-suruv aul peren vuae
 1SG FUT 1SG.IR-sleep above branch tree
 ‘I will sleep on top of the trees.’

B. Imperfective (1). The first Imperfective is a prefix *l(o)-* that occurs between the subject index and the verb stem.

- (ii) kir-l-ul pepe
 1DU.EX-IMPF-write letter
 ‘We are writing a letter.’

C. Imperfective (2). The second Imperfective is made up of the verb ‘go’ and an invariant third person singular prefix. This Imperfective form follows the main verb which is inflected for subject. The form of ‘go’ may or may not include the Imperfective prefix. Example (xvii) includes the imperfective prefix:

- (iii) ra-ñã ra-pula mo-lo-ñã
 3PL-go 3PL-fish 3SG-IMPF-go
 ‘The went night-fishing.’

D. Perfect. The perfect is formed with a prefix *pete-* that occurs between the subject index and the verb stem.

- (iv) mo-lo-suruv mo-pete-lleo
 3SG-IMPF-sleep 3SG-PERF-wake_up
 ‘He was sleeping, he has just woken up.’

E. Desiderative (1). The first Desiderative is formed with a root *tarao* ‘want’ or *rong(o)* ‘feel’, inflected with the subject index, and followed by a fully inflected verb using the irrealis subject index.

- (v) na-rong ka-in te ai
 1SG-feel 1SG.IR-drink some kava
 'I want to drink some kava.'

F. Desiderative (2). The second Desiderative is formed with a root *v* 'say', inflected with the subject index, and followed by a fully inflected verb form using the irrealis subject index.

- (vi) nao na-v ka-la sun no=ku
 1SG 1SG-say 1SG.IR-take hat CLF=1SG.POSS
 'I want to take my hat.'

G. Epistemic modal. Epistemic modality is expressed by the invariant forms *or* 'maybe' or *dav* 'seem' followed by a fully inflected verb form using the realis verb prefix. Example (xxii) illustrates *dav*.

- (vii) na-on dav mo-l-nile nila lere
 1SG-see seem 3SG-IMPF-nail nail the.PL
 'I see that he seems to be nailing the nails.'

H. Deontic modal. Deontic modality is expressed by the forms *adi* 'can, may' or *ria* 'must' inflected with a subject index, followed by an invariant verb form.

- (viii) na-adi ŵatu aitenge sivo na pong aite
 1SG-can weave one exactly LOC night one
 'I can weave exactly one (mat) per day.'

- (1) Rank the forms by degree of grammaticalization. Justify your answer. Remember that some evidence may give conflicting results, and that there might not be a complete ranking of all the classes (some may be of equal rank). Ignore the variation between realis and irrealis subject forms (for the most part, each construction takes just one or the other, and so is invariant in this respect). HINT: write down the construction schema for each construction (including its variants), and then reorder the schemas following your ranking by degree of grammaticalization.

Maybrat

Maybrat is a West Papuan language spoken in the Bird's Head Peninsula, West Papua, Indonesia. Maybrat uses pronominal prefixes very widely, and they take the following forms:

	Singular	Plural
1st person	t-	p-
2nd person	n-	n-
3rd person masculine	y-	m-
3rd person other	m-	m-

- (1) State what typological markedness asymmetries (if any) are supported by the Maybrat data for the following categories. Justify your answer.
- a. number (singular, plural)
 - b. gender (masculine, other)
 - c. person (1, 2, 3)

Mina

Mina is an Afroasiatic language of the Chadic subgroup spoken in northern Cameroon. Mina has a number of word classes defined by their behavior in propositional act constructions:

Class A. Class A consists of action words. Class A words can only function as referring expressions when overtly derived (in fact, the only examples of derived Class A referring expressions are agentive object concepts such as ‘the one who jumps’). As modifiers, Class A words require the relativizer:

- (i) hìdì m̀è tí
 person REL look
 ‘the person who looked’

Class A words may take the habitual if the relative clause is generic, but otherwise do not take other tense and aspect markers characteristic of predication. Class A words may be reduplicated as modifiers, but it is not obligatory:

- (ii) ʒì m̀è m̀èsà̀r m̀èsà̀r
 meat REL RDP grill
 ‘grilled meat’

In predication, Class A words take all tense and aspect markers, and take a subject index as an independent word (in the form of a possessive pronoun), illustrated with the habitual aspect and the third person subject indexation marker in (iii):

- (iii) míndáŋ à ndí lóm líŋ
 another 3SG.SBJ HAB twirl stick
 ‘Another one twirls a stick.’

Class B. Class B includes the following words:

jíŋ	tall
d̀ùk	short
c̀èrc̀èr	narrow
p'úm	deep
t̀à̀l̀à̀d̀á̀y	shallow

Class B words do not occur as referring expressions, nor can referring expressions be derived from them (don’t ask me how Mina speakers refer to height, depth, etc.). Class B words require the relativizer in modification:

- (iv) hìd̀è m̀è jíŋ
 man REL tall
 ‘a tall man’

As predicates, Class B words do not take tense or aspect markers or subject indexation. Class B words may take a demonstrative as an apparent 3rd singular subject indexation marker:

- (v) lāk wát wà p'úm
 river DEM deep
 'The river is deep.'

Outside simple present and past meaning (e.g., future), Class B words use the copula *nzà* 'stay, remain, be' in predication (no examples given).

Class C. Class C words refer to objects in the broad sense (including humans and animates). They occur as referring expressions. They also may take prepositions for oblique cases. Class C words are identical in form for subject and object (Mina is SVO), and the Dative is formed with the locative preposition *nè*:

- (vi) báhámàn là á lúw -á -ŋ nè hǎmbáy nákà wà
 Bahaman say 3SG.SBJ say -GOAL -3SG PREP stick REM DEM
 'Bahaman spoke to the stick.'

As modifiers, they require the genitive as in (iv):

- (vii) tàlàn tó záváŋ =yî
 head GEN guinea.fowl =PL
 'the heads of the guinea fowl'

Referring expressions headed by Class C words take a plural marker, but the plural marker is enclitic on the entire referring expression; see example (vii).

As predicates, Class C words do not take tense or aspect markers or subject indexation, though like Class B words, they may use a demonstrative for 3rd singular subject indexation (in this example however, the demonstrative modifies the subject):

- (viii) míndí wàcín gáw
 another DEM hunter
 'Another is a hunter.'

Outside simple present and past meaning (e.g., future), Class C words use *nzà* 'stay, remain, be' in predication.

Class D. Class D consists of two words, *báytàŋ* 'large' and *pár* 'another'; since *pár* is not a property concept, we will ignore it here. Class D words do not occur as referring expressions, nor can referring expressions be derived from them. Class D words occur as modifiers without any additional morphology (ignore the allomorphy of 'large'):

- (ix) sè kó lim ñkù báytè zé á idó təkóŋ
 1SG INF see goat large EE PRED house 2SG
 ‘I saw a large goat at your compound.’

As predicates, Class D words do not take tense or aspect markers or subject indexation. Class D words may take a demonstrative as a 3rd singular subject indexation marker (no examples given). Outside simple present and past meaning (e.g., future), Class D words use *nzà* ‘stay, remain, be’ in predication (no examples given).

Class E. Class E consists of pronouns. As referring expressions, they inflect for number, including a first person dual. There are distinct subject, object, dative and genitive (possessive) pronoun forms. The Subject paradigm is given below:

	Singular	Dual	Plural
1	sə	nám	na (excl) nók (incl)
2	ha		hi
3	a, Ø		i

The object and dative forms are suppletive, though some forms could be analyzed as a pronoun stem plus suffix. The genitive form is a reduced and fused combination of the genitive preposition and the pronoun stem. Class E takes other prepositions in the same way as class C.

As modifiers, Class E words require the genitive marker, but as just noted above, the genitive marker is reduced and affixed to the pronoun (in fact, the whole construction is reduced in this example):

- (x) gədûr -t- kóŋ
 pot GEN 2SG
 ‘your pot’

In predication, Class E appears to function like Classes B, C and D. It is not clear what would count as predication of a pronoun, but the focus equational construction is illustrated in (viii), and you can see that there are no tense or aspect markers:

- (xi) à zá mbí nàmú
 3SG COMP 3SG.FOC 1PL
 ‘He said, “So it is us.”’

Since it is present tense, there is no copula verb either. *Mbí* is the focus form that is parallel to the demonstrative used as a 3rd singular subject indexation marker in the other examples (there is no overt subject noun phrase in (xi)).

Class F. Class F words include color terms and also *nek* ‘good’ and a number of other words. Class F words do not occur as referring expressions, nor can referring expressions be derived from them. Class F words require the genitive in modification:

- (xii) rùkùt t̀ liv̀ej
shirt GEN black
‘a black shirt’

As predicates, Class F words do not take tense or aspect markers or subject indexation. Class F words must be reduplicated in predication, and may take a demonstrative as an apparent third singular subject indexation marker:

- (xiii) c̀c̀el̀em ẁa pr̀ew pr̀ew
wood DEM RDP hard
‘The wood is hard.’

Outside simple present and past meaning (e.g., future), Class F words use *nz̀a* ‘stay, remain, be’ in predication:

- (xiv) h̀idə t̀uk̀oj̀ à n k̀é nz̀e d̀ám d̀ámà
compound 2SG 3SG PREP INF be RDP good
‘Your compound will be well.’

- (1) Which class is the most prototypical predication? In justifying your answer, compare the most prototypical predication class to all the other classes.
- (2) There are three property classes. Rank the three property classes by their degree of prototypicality as modifiers. Which class is the most prototypical modifier?
- (3) Which class is the most prototypical referring expression? In justifying your answer, compare the most prototypical referring class to all the other classes.

Mingrelian

Mingrelian is a South Caucasian language spoken in the Caucasus Mountains, in the republic of Georgia.

Word and affix order

Some basic morphological and syntactic facts are given here. Nouns inflect for number and case, both being suffixes:

- (i) t'u -ep iše
udder -PL -ABL
'from the udders'

Verb morphology is hideously irregular, but the following generalizations can be made. Subject and object indexation is circumfixal, that is, prefixes and/or suffixes are used in either case. Tense-aspect-mood are fused together and occur as a suffix. Examples follows (SM = series marker, usually indicating tense):

- (ii) yur -u -da -s
die -SM -PRS.SUBJ -SG.SBJ
's/he would be dying'
- (iii) b- č'ar -un -d -a
1sg.sbj- write -SM -PRS.SUBJ -SG.SBJ
'I would be writing'

Negation is prefixed (ignore the fact that the "subject" is dative and the "object" is nominative):

- (iv) čki va- v- a-ʔvil -e -t inen -s
us(NOM) NEG- 1.SBJ- kill -SM -PL.SBJ they -DAT
'They cannot kill us.'

Word order in the noun phrase is generally as follows (NARR = narrative case, ALL = allative case):

- | | |
|--|--|
| (v) sumi žimalepi
three brother.PL.NOM
'three brothers' | (vi) ti p'ap'a -k
that priest -NARR
'that priest' |
| (vii) xenc'pe -š doxore -ša
governor -GEN palace -ALL
'to the governor's palace' | (viii) ežgua žgiri osuri
this.kind good wife(NOM)
'such a good wife' |

However, adjectives can also follow, though they must be inflected for indexation if they do. There are also postpositions, but not very many, and they are written as a single word with the (inflected) noun:

- (ix) ʔude -ša -x
house -ALL to
 ‘to the house’

Word order in the clause is more variable. The majority of examples in the description are VO, but there are a number of OV examples given without comment. Subjects also typically precede but are also found to follow (see for example (iv), with its OVS order). Other examples follow:

- (x) k’oč -i gišanc’q’uns sagan -s
man -NOM extract arrow -DAT
 ‘The man is pulling out the arrow.’

- (xi) muma -k cxen -i kimeč -u skua -s
father -NARR horse -NOM give -3SG.SBJ child -DAT
 ‘The father gave a horse to his child.’

- (1) **a.** Discuss the word order patterns for each nominal modifier and for the major word order. Describe how each word order is (or is not) motivated in the competing motivations model of word order given in the textbook. Which order do you think is older, VO or OV? Justify your answer.
 b. Discuss the morpheme order patterns for each inflectional category discussed, in terms of the competing motivation model of affix order presented in the textbook. Justify your answer.

Minor Mlabri

Minor Mlabri is a Mon-Khmer (Austroasiatic) language spoken in northern Indochina.

Word and affix order

Minor Mlabri has two genitive or genitive-like constructions. One is simple juxtaposition, as in

- (i) mlaʔ briiʔ
man forest
'Mlabri (lit. people of the forest)'

The genitive noun (the second noun in (i)) is always non-referential. The other genitive construction employs the linker *di*. Compare the meaning of the following two expressions:

- (ii) ʔεεw braŋ
child/young dog
'whelp'
- (iii) braŋ di ʔεεw
dog LNK child/young
'the dog's whelp(s)'

Most adjectives follow the head noun:

- (iv) cəboh chuuj
mountain high
'high mountain'

However, two precede the head noun, *blaaj* 'big' and *ʔεεw* 'small' (which also means 'child/young', as we have seen).

Numerals and demonstratives occur after the head noun. Both occur in combination with classifiers, but the numeral precedes the classifier while the demonstrative follows it:

- (v) chuureε bæεr ləbooʔ
shirt two CLF
'two shirts'
- (vi) mlaʔ ləboʔ ɲʌʔ
people CLF that
'that person'

Sentence order is SVO, as in the following example:

- (vii) ʔat ʔuuj krəkkrək ʔat ʔεεw
the hen cluck.at the chick
'The hen clucks at the chick.'

However, OSV order is found if the object is focused, as in this description of repairing an axe with a loose iron head (note the sequence of verbs, called serial verbs, common in languages of this area):

- (viii) ʔat hlek mlaʔ cheem pal ʃuur
the iron person insert beat descend
‘The iron [spike], one sticks it in [the upper end of the wooden shaft] and beats it so that it sinks [into the shaft].’

One also finds prepositions:

- (ix) ti trlɔh
in(to) pot
‘into the pot’
- (x) toc luŋ ʔoh
get from 1SG
‘get from me’

Minor Mlabri, like most of the languages in this area, has virtually no inflection. The closest thing to an inflection is a perfective aspect marker found with verbs (note that perfective meaning can indicate a future to-be-completed action as well as a past already-completed action; what matters is the sense of completion):

- (xi) ʃruw ʔa wɔl
tomorrow PRF be.back
‘I shall be back tomorrow.’

The author states that he formerly analyzed *ʔa* as a prefix, but now writes it as a separate word (without giving an explanation as to why he changed his mind).

- (1) For alternative word orders, discuss which order you think is basic. Describe how the competing motivations for word order motivate (or do not motivate) the basic word orders of Minor Mlabri.
- (2) Is it surprising to you that *ʔa* is or might be a prefix? Justify your answer.

Miya

Miya is a Chadic language spoken in northeast Nigeria.

Typological markedness of nominal inflectional categories

A slightly simplified outline of noun inflections in Miya is given below.

Miya nouns are all grammatically masculine or feminine. Gender is not expressed directly on the noun, but is found in indexation:

- | | | | |
|------|----------------------------------|-------|-------------------------------------|
| (i) | mbèrgu pyóo -na
ram white -M | (iii) | tómáku pyóo -ya
ewe white -F |
| (ii) | ndùwul hámày -na
pot empty -M | (iv) | tsórdíy hèmày -ya
space empty -F |

Regular plurals are formed by (a) the vowel *a* plus reduplicating the last consonant AND (b) the suffix *-aw* as in (v):

- | | | | |
|-----|------------------------|---|--|
| (v) | [...C _f] | ⇒ | [...C _f -aC _f -aw] |
| | ndùwul
'pot' | ⇒ | ndùwulálàw
'pots' |
| | vìyayúw
'fireplace' | ⇒ | vìyayúwawàw
'fireplaces' |

The tone pattern of the plural is predictable by rule from that for the singular; ignore the tonal patterns for this problem.

The basic terms for humans have distinct masculine and feminine forms (i.e. they are in a suppletive relationship), e.g. *lày* 'boy, son' / *wùn* 'girl, daughter', *báahə* 'father' / *máahə* 'mother', *yàsə* 'brother' / *vàki* 'sister'. The basic terms for humans also have irregular or suppletive plurals, e.g. *'ám* 'woman, wife' / *təvam* 'women, wives'; *jífana* 'man' / *dzàfə* 'men'. Other terms for humans and for domestic animals and larger wild animals are not distinguished by gender.

Plural indexation is triggered by plural animates (humans, domestic animals, larger wild animals) only. Inanimates always take the relevant gender indexation; that is, they do not inflect for plural indexation:

(vi) níykin dzáfə
this.PL man.PL
'these men'

(vii) náκən víyayúwawàw
this.M fireplace:PL
'these fireplaces'

(1) For each of the following categories, is there evidence in Miya for a typological markedness asymmetry? Justify your answers.

- a. number
- b. gender (sex)
- c. animacy

Mosetén

Mosetén is a Macro-Panoan language (according to Greenberg), spoken in Bolivia.

NB: two dots over a vowel indicates nasalization. M = masculine, F = feminine.

Typological markedness and iconicity in grammatical number

The singular and plural forms of pronouns and nouns are given below:

<i>yäe</i>	1SG	<i>tsin</i>	1PL
<i>mi</i>	2SG	<i>mĩ'in</i>	2PL
<i>mi'</i>	3SG.M	<i>mi'in</i>	3PL.M
<i>mö'</i>	3SG.F	<i>mö'in</i>	3PL.F

<i>nanasi'</i>	'girl'	<i>nanasi'in</i>	'girls'
<i>nanatyí'</i>	'boy'	<i>nanatyí'in</i>	'boys'

For the third person pronoun, if one wants to emphasize that a large number of referents are involved, the following forms are used instead of the ones listed above:

<i>mi'inin</i>	3PL.M	<i>mö'inin</i>	3PL.F
----------------	-------	----------------	-------

An alternative formation of the plural is through partial reduplication of the nominal stem, as in the following two examples:

- (a) *yo-khan mö' bae'-i -' yirij -ri' khan*
where 3SG.F live -F liana -RDP INESS
where she lives, in the liana (place)' [where lianas are scattered about]
- (b) *si näkä' jebewa'ke' yomo -mo'*
yes agouti is.eating night -rdp
'Yes, the agouti [an animal] is eating (yucca) every night.'

The examples indicate that the reduplicated forms are used for distributed plurality (lianas scattered about, every night).

The singular form is also used even when referring to a plural number of referents if the referents are not human or higher animate (the latter include animals which in mythology appear in the shape of humans).

- (1) Does the data given above support any typological markedness patterns? Justify your answer.
- (2) Some plural formations involve reduplication. What sort of iconic motivations underly the use of reduplication in Mosetén nominal plural marking?

Hierarchies and typological markedness: relative clauses.

There are several different relative clause constructions in Mosestén. The ones illustrated here will be called Type I, Type II and Type III.

Type I adds a nonperson indexation marker onto the relative clause verb. The marker indexes (“agrees with”) the head noun. Type I is used only with core argument types (A, S, P and T). The relative clause is indicated with square brackets.

- (c) *mö’ majmi [Santa Ana -ya’ jijka’ -si’]*
the.F road Santa Ana -to goes -F
‘the road to Santa Ana’
- (d) *[iya’ bae’i -tyi’ -in] colono -in*
here live -M -PL colonizer.M -PL
‘the colonizers living here/who live here’

Type II consists of the form *yodye(dye)’* to which the gender indexation marker is added. Type II is used for oblique roles of head nouns, such as the inessive (locative) ‘in’ relation in example (e):

- (e) *jiri -s kirjka yodye’ -si -khan [yäe yäjkin’ jiri -s paper jaem’si’dye -si’]*
one -F book YODYE -F -INESS 1SG left one -F paper important -F
‘a book in which I forgot [lit. ‘left’] an important paper’

Type II is also used in core argument roles but only when the head noun is plural (*kolla* ‘Aymara’ is masculine in this context):

- (g) *kolla -tom -in [yodyedye’ -tyi’ tsin -si -khan jäkh bae’iin]*
Aymara -with -PL YODYE -M our -F -INESS area live
‘with the Aymaras who live in our area’

Type III consists of the particle *yo*, without the gender indexation marker. Type III is also used for oblique roles, such as the ‘downriver’ locative case in example (g):

- (g) *bae’edye’ -in yo -we bae’i tata Roberto*
place -PL YO -DOWNRIVER lives father Roberto
‘the places where the priest Roberto works [lit. ‘lives’]

- (3) Is there any evidence in the relative clause constructions of Mosestén supporting any part of the grammatical relations hierarchy? Justify your answer.
- (4) Do the facts presented in this section alter your analysis of the typological markedness pattern for the category of number based on the Mosestén data in the first section? Justify your answer.

Parts of speech: property words and action words.

In modification, both property words and action words take the masculine/feminine indexation marker, which “agrees” with the head noun. The action word as modifier was already illustrated in the preceding section (for the purposes of this problem, consider only the Type I construction illustrated in examples (c) and (d)). The property word as modifier is illustrated in (h):

- (h) *jaem’ -si’ shiish*
good -F meat
‘good meat’

In predication, the property word occurs without a copula, but also without the indexation marker (note that the subject is null):

- (i) *jam jaem’*
NEG good
It [the chicha, an alcoholic drink] is not good.’

Action words in predication also do not require any additional word, but they do index (“agree with”) with A, S and/or P in gender and/or person (the pattern is very complex, but this is all you need to know for this problem). They also inflect for aspect, such as the progressive. An example is given in (j)

- (j) *shiphkewa’ -jo -n’*
leave -PROG -1PL.INCL
‘We (inclusive) are leaving.’

- (5) Do the facts given above support the typological-universal theory of parts of speech described in the textbook? Justify your answer.

Mundari

Mundari is an Austroasiatic language spoken in NE India.

Typological markedness of demonstrative pronominal inflectional categories

Mundari has a rich and complex demonstrative system. There is a three-way deictic distinction: Proximate (near speaker), Intermediate (near hearer) and Remote (Distal, visibility irrelevant). In addition there is a degree of nearness dimension that cross-cuts the deictic distinction, which is glossed 'nearest/nearer/near' in its maximum expression. There are both adjectival and pronominal forms. All the forms are given below:

Demonstrative Adjectives

	<i>Proximate</i>	<i>Intermediate</i>	<i>Remote</i>
<i>nearest</i>	ni	in	hin
<i>nearer</i>	ne	en	hen
<i>near</i>	na	an	han

Demonstrative Pronouns: Animates

	<i>Proximate</i>	<i>Intermediate</i>	<i>Remote</i>
<i>Singular</i>			
<i>nearest</i>	niy	iniy	hiniy
<i>near</i>	nay	aniy	haniy
<i>Dual</i>			
<i>nearest</i>	nikij	inkij	hinkij
<i>near</i>	nakij	ankij	hankij
<i>Plural</i>			
<i>nearest</i>	niku	inku	hinku
<i>near</i>	naku	anku	hanku

Demonstrative Pronouns: Inanimates

	<i>Proximate</i>	<i>Intermediate</i>	<i>Remote</i>
<i>nearest</i>	nia	ina	hina
<i>nearer</i>	nea	ena	hena
<i>near</i>	naya	ana	hana

(1) Discuss the presence of evidence for typological markedness asymmetries among values in the categories of

- a. deixis,
- b. nearness
- c. number
- d. animacy
- e. syntactic function (adjectival vs. pronominal).

For each category, consider also the following issues:

- Are there conflicts in the evidence?
- How well does the evidence fit with the hypothesized universals of typological markedness for grammatical categories in chapter 5 of the textbook?

Mupun

Mupun is a member of the Chadic subfamily of the Afroasiatic family, spoken in north-central Nigeria.

Typological markedness of pronominal inflectional categories

The pronouns of Mupun are as follows:

	<i>singular</i>		<i>plural</i>
<i>1st</i>	an	<i>1st</i>	mun
<i>2nd masc.</i>	ha	<i>2nd</i>	wun
<i>2nd fem.</i>	yi		
<i>3rd masc.</i>	wur	<i>3rd</i>	mo
<i>3rd fem.</i>	war		
<i>3rd inan.</i>	nə		

- (1) State what typological markedness asymmetry (if any) is supported by the Mupun data for the categories of number, gender, and person. Give your reasoning and describe what type of evidence you used (structural or behavioral).

Musqueam

Musqueam is a dialect of the endangered Downriver Halkomelem, a Salishan language spoken on the Fraser River in British Columbia.

Typological markedness: number and gender

Musqueam has two articles used for present and visible (we ignore the nearby invisible and remote or hypothetical forms). The articles introduce nouns and the phrases can be either definite or indefinite. The form *θə* is used for singular females:

θə slénəy 'a/the woman'

The form *tə* is used for non-females (we won't go into uses with nonhumans) and for plurals, either male or female:

tə nəmən'ə 'my son (here)'
tə t'xəmələ slənłénəy 'six women, the six women'

(1) Describe evidence in Musqueam, if present, supporting a typological markedness asymmetry for:

- (a) number
- (b) sex gender (ignore nonhumans)

Parts of speech

Musqueam has a small category of property words which is grammatically similar to and different from the larger classes of object words and action words. Examples of such property words (not a complete list) are *ǰéw's* 'new', *k^w'ám'k^w'əm'* 'strong', *nás* 'fat', *ʔəy'* 'good', *p'əq'* 'white', *qəl* 'bad', *mím'ən'* 'little', *tsás* 'poor'. When used in predication, property words can occur without a copula; the same is true of object words and action words.

- (i) *k^w'ám'k^w'əm'* *cən*
strong I
'I'm strong.'

Property words have plural forms as predicates, as do object words and action words. They do not occur in the progressive, unlike action words but like object words.

As modifiers, property words are juxtaposed to the object words they modify:

- (ii) *k^wθə ʔəx^wín' sǰ'əǰ'qəl*
the little child
'the little child'

Property words can modify object words when the combination is predicated as a whole (the person indexation particle occurs in second position in the predicate, between the property word and object word):

- (iii) *ʔəy' čx^w swəy'qe*
good you man
'You're a good man.'

Action words cannot function as modifiers of object words when the latter are predicated. Action words as modifiers of object words when the latter are in referring expressions are so complicated that we will skip them here.

As referring expressions, property words cannot take possessives directly but must first be nominalized with *s-* (the grammar does not give examples showing what a nominalized property word actually means, but I suspect it means 'the [property] one's...'). In this respect, property words are like action words but unlike object words. Action words in reference and taking possessives do refer to the action:

- (iv) *nə- s- nəm'*
1SG.POSS- NR- go
'my going'

Finally, property words, object words and action words all have diminutive forms but action words have diminutive forms only for the progressive.

(2) Describe the evidence in Musqueam, if any, for the typological prototypes 'noun', 'verb' and 'adjective'.

Ngalakan

Ngalakan is a non-Pama-Nyungan Australian language spoken in Arnhem Land.

Grammaticalization of noun forms

In Ngalakan, one finds noun incorporation: i.e., the noun is compounded to the verb. In most cases, the noun root that can appear as a free morpheme can be incorporated. However, there are two roots which occur ONLY as incorporated forms. One of them is *biji-* ‘water, liquid’. The free-standing counterpart of *biji-* is *we?* ‘water’, though *we?* can also be incorporated. Some examples:

- (i) Ø- biji- bolk (g)anjɪn
3SG- water- come.out -CAUS
‘make water come out’
- (ii) gu- Ø- doro? -ji? guŋu -we?
3 3SG- dry.up -FUT.NEG CLF- water
‘The water can't dry up.’
- (iii) we?- ŋu
water- eat
‘drink’

- (1) Which noun root is more grammaticalized? Why?
- (2) Which noun root is the newer word for ‘water’? Why?

Osage

Osage is a highly endangered Siouan language formerly spoken along the Osage River in Missouri, and later in Oklahoma.

Word and affix order

The following examples illustrate typical word order and affix order in Osage (NB: these sentences are morphologically analyzed from the actual forms, which are reduced and contracted):

- (i) htóožu ək- óohó -hta əkáđe
meat.pie A1P- cook -FUT 1P:CONT
'We're going to cook some meat pies.'
- (ii) Mogri əkxa isóka hcí íhta ci a- Ø- đée -api -đe
Mogri SBJ his.brother house 3S.POSS to PREV- A3S- go -PL -DECL
'Mogri went to his brother's house.'
- (iii) naníopa ək- đáašoe -api -aži -nə -đe
pipe A1P- smoke -PL -NEG -ITER -DECL
'We don't smoke.'
- (iv) še žáą ži akxa ohtáza akxa -đe
that tree small SBJ beautiful 3:CONT -DECL
'That little tree is pretty.'

A = agent person index
S = singular (of pronouns)
P = plural (of pronouns)
PL = plural
FUT = future
CONT = continuative aspect auxiliary
SBJ = subject marker
POSS = possessive
PREV = preverb
NEG = negative
ITER = iterative aspect
DECL = declarative

(1) Name the basic word/affix order for the following categories, and give the motivations (if any) for the order:

- (a)** subject|verb|object
- (b)** genitive|noun
- (c)** adjective|noun
- (d)** adposition|noun
- (e)** demonstrative|noun
- (f)** auxiliary|verb
- (g)** person indexation
- (h)** negation
- (i)** tense
- (f)** aspect (affixed)

Paamese

Paamese is an Austronesian language spoken by about 2,000 people on the islands of Paama and Lopevi in the Republic of Vanuatu.

Iconicity in verbal inflections

Paamese inflects verbs for subjects (and objects). The subject indexation marker is fused with mood marking (not relevant for answering this question). Example (first line is surface form, second line morphological analysis, third line gloss; RL = realis):

- (i) Nevaal telai.
na- vaali telai
1SG.RL- sharpen axe
'I sharpened the axe.'

However, there are some verbs in which the subject of the English translation is not the subject of the Paamese verb. Instead, the verb is in an impersonal form (third singular, as impersonals almost always are), and the "subject" is a possessive modifier of something that is usually identifiable as a noun, as in:

- (ii) Metok long.
meto -ku longo
eye -1SG 3SG.RL:sleepy
'I am sleepy.'
- (iii) *Nalong.
na- longo
1SG.RL- sleepy

The impersonal constructions are used with verbs that represent internal physical, emotional or mental states. For most such verbs, the second, personal, construction cannot be used at all. In some cases, there are impersonal and personal constructions with the same verb, but the verb has a different meaning in the impersonal construction, as in:

- (iv) Kai dangis pistas.
kaie dangisi pistase
3SG 3SG.RL:cry.for peanuts
'He is crying for peanuts.'
- (v) Len dangisi.
le -ne dangisi -e
belly -3SG 3SG.RL:cry.form -3SG.OBJ
'He is upset about it.'

In all such cases, the impersonal construction is used for an internal state, and the personal construction is used for an externally-visible physical action, such as crying.

Likewise, a complement-taking verb such as *vati* ‘want, like’ is impersonal, because it also indicates an internal mental state (PART = partitive, IMM = immediate; don’t worry about these suffixes):

- (vi) Lok rovattei maha.
lo -ku ro- vati -tei ma- haa
belly -3SG 3SG.RL.NEG- want -PART 1SG.IMM- go
‘I don’t want to go.’

- (1) Assuming iconic motivation for this systematic correlation in the difference between meaning and form, what do you think is the reason that the impersonal construction is used for internal states and the personal one for external actions?

Pendau

Pendau is a Western Austronesian language spoken in Sulawesi (formerly the Celebes) in Indonesia. Pendau has a variety of modality markers, which can be grouped into different classes:

Class W. Class W consists of the realis and irrealis prefixes. They come in several allomorphs:

Realis: *N-*, *no-*, *ne-*, *na-*, *ni-*, *no'u*

Irrealis: *M-*, *mo-*, *me-*, *ma-*, *ro-*, *'u*, *mu-*

In addition, the prefixes interact phonologically with the verb stem: some of them exhibit vowel harmony, and the *N-/M-* allomorphs lead to deletion of the initial consonant of the following morpheme (prefix or verb stem). An example of realis *N-* interacting with the prefix *pe-* is given in (i). In this example, I have given the underlying morphological analysis as well as the actual forms; the remaining examples give only the morphemes in their actual forms, and the fusion of the prefix with the other category is indicated by a colon (e.g. IRR:STAT.DYN):

- (i) ami nesoo ribuut nao
 'ami N-pe-soo ri=buut nao
 IPL.EXCL RL-STAT.DYN-stop.by LOC=mountain that
 'We stopped by (for a visit) at that mountain.'

Morphologically, the Class W prefixes are also fused with the Active/Inverse voice markers when the latter occur (the voice markers are not found on all verb forms):

- (ii) ne- te- dua' sono seseng togoge
 ACT.RL- NONVOL- arrive COMIT cat large
 'They came upon a giant cat.'

This fusion with the voice markers is apparently the cause of the allomorphy of the realis and irrealis forms.

Semantically, the prefixes describe 'factuality' and 'non-factuality' respectively. However, they interact with the aspectual enclitics *=mo* (completive) and *=po* (continuous) in a semantically irregular fashion to produce the following tense-aspect meanings:

Realis + Completive = past completive

Realis + Continuous = past continuative or sequential (used in a sequence of past events)

Irrealis + Completive = present (including immediate future)

Irrealis + Continuative = future continuative or sequential

Class X. Class X consists of two words, *ala* 'able, can, may, allow' and *luar* 'want, would like'. Class X words take the Class W and other verbal prefixes.

Class X words usually occur immediately before the main verb, but other words such as the agent (subject) pronoun, can occur between it and the main verb:

- (iii) nene ndau =mo ma- ala a'u me- ntuung
 grandma.VOC NEG =CMPL STAT- able 1SG.ABS IRR:STAT.DYN- descend
 'Grandma, I can no longer descend.'
- (iv) iye, a'u mo- luar moje mo- savung
 yes, 1SG.ABS IRR- want also IRR:STAT.DENOM- cockfight
 'Yes, I also want to be in the cockfight.'

In some sentences, *luar* functions more like a main verb with a different subject in the complement:

- (v) tarus no- luar rapi =nyo bengkel uo ni- 'ute -i
 continue RL- want spouse =3SG.GEN female yonder INV.RL- louse -DIR
- ni= rapi =nyo langkai
 GEN= spouse =3SG.GEN male

'And then the wife wanted her husband to delouse her.'

Class Y. Class Y consists of three words, described as "semi-auxiliary verbs" in the grammar: *ma'ule/na'ule* 'able to', *matua/natua* 'capable of' and *otoi* 'know (how) to'. Class Y words have realis and irrealis forms (*otoi* occurs only in the realis form because its meaning only applies to real situations). Class Y words are unique in Pendau in that they index the subject, using a genitive enclitic (regular verbs do not index the subject; nor do Class X words). Class Y words always occur immediately before the main verb:

- (vi) a'u matua ='u me- ngkani bau
 1SG.ABS IRR:capable =3SG.GEN IRR:STAT.DYN- eat fish
 'I am capable of eating fish.'

As can be seen from the glosses, the meanings are abilitative.

Class Z. Class Z consists of two prefixes. One is the deliberative prefix *ti-*, *titi-*, *tingka-*, *naningka-* (these are apparently allomorphs). It occurs between the Class W prefixes and the verb root, and means deliberate action:

- (vii) io no- titi- nabu
 3SG.ABS ACT.RL- DEL- fall
 'He/she deliberately fell down.'

The other is the nonvolitional prefix, which occurs only in the form *te-*. It also occurs between the Class W prefixes and the verb root; it means nonvolitional (i.e. non-deliberate) action, as in (ii) above.

- (1) The two forms in Class X are slightly different in their structure and/or behavior. Is one form more grammaticalized than the other? Likewise, the two forms in Class Z are slightly different in their structure and/or behavior. Is one form more grammaticalized than the other? Justify your answers.
- (2) Now, rank the four classes by degree of grammaticalization. For Classes X and Z, treat the forms that differ in degree of grammaticalization separately. Justify your ranking.

Semelai

Semelai is an Austroasiatic language (Aslian subgroup) spoken by approximately 4103 people on the Malay peninsula.

Semelai uses the following pronominal proclitics for the A argument of transitive verbs:

	singular	plural
1st	<i>yɛ=</i>	<i>hɛ=</i>
2nd	<i>ji=</i>	<i>hɛ=</i>
3rd	<i>ki=</i>	<i>de=</i>

(1) Evaluate the relative typological markedness of the values in the following categories. Justify your answer (i.e. state what type of evidence supports your ranking and what that evidence is).

- a. Person
- b. Number

Sougb (Manikion)

Sougb (the language formerly known as Manikion) is a West Papuan language spoken by around 12,000 people in eastern Bird's Head, West Papua, Indonesia. The following are some of the kin terms of Sougb. All of the examples have first person possessor prefixes (irrelevant to the problem), and following standard kin term reference, the possessor—the reference point of the kin relation—is called Ego.

Terms referring to kin in the ascending generation. These terms can be used by male or female Ego:

ind-ina 'my father'
ind-im 'my mother'

Terms referring to kin in the same generation. If the kin is male, there are different terms for older and younger siblings, and different terms depending on the sex of Ego:

<i>ind-agona</i>	'my older brother' [Ego is male]	<i>ind-igbebena</i>	'my older brother' [Ego is female]
<i>ind-agto</i>	'my younger brother' [Ego is male]	<i>in-jemeito</i>	'my younger brother' [Ego is female]

If the kin is female, there are different terms for older and younger siblings, but they can be used by either male or female Ego:

in-damowa 'my older sister' [Ego is male or female]
in-damehito 'my younger sister' [Ego is male or female]

Terms referring to kin in the descending generation. There is one term used by male or female Ego:

ind-ih 'my child'

Sex of the kin (child) can be distinguished by adding *giji* 'male' or *gihida* 'female':

ind-ih giji 'my son'
ind-ih gihida 'my daughter'

(5) Evaluate the relative typological markedness of the values in the following categories. Justify your answer (i.e. state what type of evidence supports your ranking and what that evidence is).

- a. Kin sex: male, female
- b. Ego sex: male, female
- c. Generation: ascending, same, descending

Southeastern Tepehuan

Southeastern Tepehuan is a Uto-Aztecan language spoken by 15,000 people in the Durango province in Northern Mexico.

Typological markedness of verbal inflectional categories, iconicity of affix order

Southeastern Tepehuan has a rich and complex verbal inflectional system, with 21 prefixes and 31 suffixes. Without going into gory detail, here are the basics.:

- The outermost prefixes indicate deixis: *mu-* (toward speaker/remote location) and *mi-* (distal location)—ignore this category for this problem.
- Then there are a series of prefixes of largely aspectual meaning, such as *ji-* (inception) and other more obscure types.
- Finally, just before the root are the object indexation affixes: *ñ-* 1sg, *m-* 2sg, \emptyset - 3sg, *ch-* 1pl, *jam-* 2pl, *ja-* 3pl.
- Following the root are benefactive *-xi* and causative *-t(u)* or *-hl(i)*, which require the applicative suffix *-(i)dya*, which comes next.
- Then there are a few suffixes which are sort of modal (what Bybee calls ‘agent-oriented modality’) such as *-m* [desiderative].
- After that comes the obligatory tense suffixes: *-(a)'* future, *-t* past and \emptyset present.
- Finally there are the subject indexation suffixes: *-iñ* 1sg, *-ap* 2sg, \emptyset 3sg, *-ich* 1pl, *-apim* 2pl, *-am* 3pl. Some examples (ignore RLZ and ATR):

(i) va- ji- chu- ja- 'águidya -' -iñ
RLZ- INCP- EXT- 3PL- tell -FUT -1SG
'I will then begin telling them.'
(RLZ = realization, EXT = extended aspect)

(ii) ja- vatvi -ch -dya -' - \emptyset
3PL- bathe -CAUS -APPL -FUT -3SG
'He will bathe them.'

(iii) xi- m- chiñ -xi -dya -m - \emptyset
ATR- 2SG- kiss -BEN -APPL -DES -3SG
'S/he wants to kiss you.' (ATR = attributive)

- (1) Explain why the zero morphemes occur where they do in the subject, object and tense paradigms.
- (2) Describe how well the order of affixes relative to the root fits with Bybee's hypothesis regarding their position, i.e. for each grammatical category, state whether the affix occurs in the expected position relative to all of the other affixes.

Southwestern Ojibwe

Southwestern Ojibwe is an Algonquian (Amerind) language that was, and still is, spoken in Minnesota.

Word order and affix order

Southwestern Ojibwe is generally described as a free word order language; that is, subject, verb and object can occur in any order, though there is a tendency to put new information earlier and old information later in the sentence (hence one might call it OVS). For example, the following sentence can occur with any word order (BEN = verb indexes benefactor; OBV = obviative):

- (i) Rose o- ki: išiwita:n pakkwešikan -an Angie -an
Rose 3- PST- take.BEN.3/3OBV bread -OBV Angie -OBV
'Rose took the bread to Angie.'

The order of modifiers is much more restricted, however. Numerals, demonstratives and genitives precede the noun, adjectives—which are in the form of a subordinate [SUB] verb—follow:

- | | |
|---|--|
| (ii) pešik pišiw
one lynx
'one lynx' | (iii) a'aw inini
that man
'that man' |
| (iv) Ernie o- ma:ma:y -an
Ernie 3- mother -OBV
'Ernie's mother' | (v) maššwe meskosit
shawl red.SUB.3
'red shawl' [lit. 'shawl that is red'] |

You will have noticed that Ojibwe has some prefixes and suffixes. In fact, it has a lot of prefixes and suffixes. Tense/aspect are prefixes (note the past prefix above), while plurality and obviation are suffixes. Indexation of subject, object and possessor is indicated by circumfixes. The meaning of the suffix part of the person markers is rather complicated, but you can see from the examples that a prefix indicates person (1st, 2nd, 3rd).

- (1) Although Ojibwe is currently free in its word order, what fixed word order do you think it had in its recent past? Give your reasons.
- (2) In the order of modifiers, adjective order is the odd one out. Does this surprise you? Why or why not?
- (3) For each of the modifier orders, describe how it is (or is not) motivated by one or both of the competing motivations for word order patterns described in the textbook.

- (4) Given the competing motivations model for prefixation vs. suffixation presented in the textbook, say for each grammatical category whether its being prefixed/suffixing is motivated or not, giving justification. (Ignore the suffixal part of indexation affixes. Note that you can answer this question for obviation even though you don't know exactly what the category represents.)

Sunwar

Sunwar is a Sino-Tibetan language (Kirantish subgroup) spoken by over 25,000 people in eastern Nepal.

The following sentences illustrate the basic word order and affix order of various constructions in Sunwar (glosses are somewhat sanitized):

(i) māma ā- kāka khī -mī hoi -tu
maternal.uncle 3SG.POSS- paternal.uncle house -LOC keep -PST.3SG
'My maternal uncle kept me at his paternal uncle's house.'

(ii) nāso -kali buj pheta ge -ni -mi
priest -OBJ white headcloth give -NPST -3PL
'They give the priest a white headcloth.'

(iii) chak -kā suni min nādo khī -m khame
turns -one morning and evening house -LOC cooked.rice

ma- jai -ni -mī
NEG- eat -NPST -3PL

'(They take) turns morning and evening (and) do not eat rice at home.'

(iv) meko bideji pahuna -kali dherei gyer -ja ṅāmin
that foreign guest -OBJ much be.pleased -PERF then
'They were pleased with that foreign guest, then.'

(1) Describe the word order or affix order of the following elements. Give ALL applicable motivations for the occurring order, following the Greenberg model for competing motivations in word order and the model in the handout for competing motivations in affix order.

- a. verb and subject
- b. verb and object
- c. genitive and noun
- d. adjective and noun
- e. demonstrative and noun
- f. subject indexation
- g. possessor indexation
- h. tense
- i. aspect
- j. negation
- k. case

Tauya

Tauya is an Indo-Pacific (Papuan) language of the Adalbert Range group.

Grammaticalization of location expressions

Tauya has a variety of means of forming locative expressions (expressed by prepositions in English). The various locative constructions are given below (N or Prn stands for the noun or pronoun they combine with):

Prn-*pi mei*: Allative, restricted to human pronouns, e.g. *nen-pi mei* ‘to them’

N-*nani*: Allative, restricted to human nouns, e.g. *aresa-nani* ‘to Aresa’. This may be two morphemes, *-na* Genitive and *-ni* ?? (perhaps ergative, but semantically that doesn’t make too much sense)

N-*’ai*: Allative or Adessive (‘at’), restricted to nonhuman common nouns

N-*sa*: this is a suffix which is used derivationally to create locative nouns, as in *awasa* ‘beach’, *tetisa* ‘highlands’ (the stems *awa* and *teti* no longer exist in the language). It is attached to certain other nouns of a locative meaning to indicate Allative or Adessive, e.g. *bundi-sa* ‘to Bundi [a village]’. As we will see, it is also added to other locative expressions.

N-*’u(sa)*: Inessive (‘in’), e.g. *wate-’u(sa)* ‘in the house’. The morpheme *-sa* is optional and is obviously the locative.

N-*’aisami*: Ablative (‘from’), restricted to common nouns, e.g. *lotu-’aisami* ‘from church’. It consists of *-’ai* (see above) plus *-sa* (see above), and *-mi*, the “real” ablative element.

N-*sami*: Ablative, restricted to locative nouns, e.g. *funema-sami* ‘from the valley’. This is also obviously *-sa* plus *-mi*.

N-*’usami*: Elative (‘out of’ or ‘from in’), e.g. *ya’e-’usami* ‘out of the water, from in the water’. This is the Inessive plus *-mi*. All of the examples suggest that the *-sa* is obligatory here, unlike with the Inessive by itself.

N *’ofi*: ‘in the middle of’, e.g. *siya ya’e ’ofi* ‘in the middle of the ocean [lit. ‘salt water’]’.

N *’onini’i*: ‘beside’, e.g. *ya ’onini’i* ‘beside me’.

N POSS-*nai-sa*: ‘beside’ [lit. ‘rib-LOC’], e.g. *ya-nai-sa* ‘beside me’. This and the following forms can also govern nouns, although no examples are given.

N POSS-*otufu-sa*: ‘in front of’ [lit. ‘nose-LOC’], e.g. *Ø-otufu-sa* ‘in front of him’

N POSS- 'emasi-sa: 'behind' [lit. 'back-LOC'], e.g. *na-'emasi-sa* 'behind you [sg.]' Note that the difference between the locative use of a body part word like 'back' and its literal use is in the choice of *-sa* instead of *-'ai*: compare *na-'emasi-'ai* 'on your back'.

N-*tei*: found with only two nouns: *o'o-tei* 'outside' [*o'o* = fire; the Tauya have their cooking fires outside]—the grammar doesn't say what the other noun is.

- (1) Rank the forms by degree of grammaticalization. That is, group the forms together by degree of grammaticalization. Note that my instructions here assume that some forms can be grouped together as being at the same level of grammaticalization. Also, remember you are judging WHOLE CONSTRUCTIONS, NOT individual morphemes. So you judge *Prn-pi mei* and N-*'aisami* as whole units as to their degree of grammaticalization, not the individual morphemes. (Of course, you must also judge *-'ai* and *-sa* separately, but that is only because they occur independently.)

For each group, identify what grammaticalization process (degree of attrition, coalescence, etc.) situates that group of forms at that position in your scale of grammaticalization.

Ts'amakko

Ts'amakko is a Lowland East Cushitic (Afroasiatic) language spoken in sixteen villages in southwest Ethiopia. Ts'amakko word order patterns are illustrated in the following examples (treat clitics, labeled with =, as separate words):

- (i) dfall -e dagg -o sek -e žag -inki
 children-PL young -PL sticks.of.roof -PL insert-3PL.CONNS
 'Young children inserted the sticks of the roof.'
- (ii) loʔ -o geecc -atte =nu gomb -o c'aab -a
 cow.F -M old -F =for kraal -M build.a.fence -PL.IMP
 'Build a kraal for an old cow!'
- (iii) šamb -o -se gudurk -ilo (iv) gaar -k -o kotta
 child -M -DEF hyena -LOC.M tree -SG-M that.M
 'the child of the hyena' 'that tree'
- (v) loʔ -o -se dal -ti par -ti
 cow.F -M -DEF give.birth -3SG.F die -3SGF
 'the cow that gave birth died.'
- (vi) geeray ʔerr -o dibb -a =kka
 yesterday rain -M rain -3SG.M.PST.NEG=SENT
- ba makin -a zaarb -i
 CONS car -F pass -3SG.F.CONNS

'Since it didn't rain [lit. 'rain didn't rain'] yesterday, the cars passed.'

Pronominal possession is expressed by a possessive suffix attached to a pronominal particle that indexes the head noun (possessum):

- (vii) luḅ -ḅ -e k -aaki xinaw -anki
 foot -PL -PL PRON.PL -2SFF.POSS stink -3PL.IMPF
 'Your (fem.) feet stink.'

(1) Name the order for the following elements and provide their motivation, if any, according to the dominance and harmony patterns on the cheat sheet (ignore the suffixing preference for this problem):

- a. subject and verb
- b. object and verb
- c. adposition and noun
- d. genitive and noun

- e. adjective and noun
- f. demonstrative and noun
- g. relative clause and noun
- h. possessor indexation
- i. subject indexation
- j. negative affix
- l. definite affix

- (2) Assuming that the word orders were all once harmonic with each other, which harmonic pattern do you think preceded the current state of affairs? What was the sequence in which the word orders changed? Justify your answer.

The independent pronouns of Ts'amakko are given below:

	SUBJECT	OBJECT
1SG	?ano	?ee
1PL	?ine	?ine
2SGM	?ato	koo
2SGF	?ato	kee
2PL	?atundɛ	kune
3SGM	?ufo	?ufo
3SGF	?ise	?ise
3PL	?ufundɛ	?ufundɛ

- (3) State what typological markedness asymmetries (if any) are supported by the Ts'amakko data for the following categories. Justify your answer.
- a. number (singular, plural)
 - b. gender (masculine, feminine)
 - c. person (1, 2, 3)
 - d. grammatical role (subject, object)

Tswana

Tswana is a Bantu language, the chief language of Botswana, spoken by around 2,500,000 people in 1975.

Parts of speech

The following is a description of some basic facts about two classes of words which we will abbreviate N and V (just for convenience, of course).

When Ns are referred to, they inflect by prefix for one of many gender classes (typical of Bantu languages), with separate singular and plural forms for the prefixes: *Mo-tšwana* ‘A Botswana tribesperson’, *Ba-tšwana* ‘Botswana tribespeople’ [class 1].

When Vs are predicated, they always index their subjects and object referents (if any), and take a vast array of tense-aspect inflections that are generally expressed as prefixes. The tense prefixes take either one of two verb stems, the present and the perfect stem. There are also separate forms for main clause and subordinate clause verbs. The perfect/nonperfect, main/subordinate and positive/negative forms are expressed by inflections in the present tense. Nonpresent tenses are formed with auxiliaries. The large range of tense-aspect forms are divided by grammarians into four moods: indicative, conditional, subjunctive, hortative.

When Ns are predicated in the simple present (positive or negative), they inflect for 1st and 2nd person subject just like Vs, but the third person uses the prefix *ké-*, regardless of the gender or number of the subject: *Nna kè-mo-ruti* [I 1SG-CL1.SG-teacher] ‘I am a teacher’, *Ké-mo-goma* [IMPR-CL2.SG-plough] ‘It is a plough’. The Ns carry their inherent gender prefixes, which are singular or plural as appropriate: *Lo-bô-mang* [2PL-CL1.PL-who] ‘You are who?’ All other tenses are formed by means of auxiliaries, with the N standing alone after it. Usually there is an invariant 3sg *e-* on the N, but class concords can also be used. There is no perfect stem, nor are there any continuous tense-aspect forms, nor are there any subjunctive or hortative mood forms. The subordinate forms are formed by means of auxiliaries.

When Vs are referred to, they take a gender prefix *go-*, which is called class 8, but there are no separate singular and plural forms: *go-ja* ‘to eat, eating’. Unlike other referring expressions, class 8 forms (infinitives) have six forms: positive, negative, future positive, conditional positive, progressive positive and perfect negative—far fewer forms than Vs have when predicated—e.g. *go-ka-rêka* [CL8-COND-buy] ‘to be able to buy’. Vs may also take object indexation or the reflexive: *go-bo-nwa* [CL8-CL7.SG-drink] ‘to drink it (*bo-jalwa* ‘beer’)’. Subject indexation, however, is not possible.

- (1) Describe how the grammar of Ns and Vs in Tswana supports or does not support the typological prototypes for ‘noun’ and ‘verb’. Justify your answer.

Upriver Halkomelem

Upriver Halkomelem is a Salishan language spoken in British Columbia.

Typological markedness of pronominal inflectional categories

The personal pronouns are given below:

	<i>singular</i>	<i>plural</i>
<i>1st person</i>	teʔéíθe	teíííməł
<i>2nd person</i>	tełəwə	tełwəłəp
<i>3rd person</i>		
<i>masculine</i>	túł'ə	túł'aləm
<i>feminine</i>	θúł'ə	θúł'aləm

When there is no inherent sex gender for the referent, the 3rd singular masculine pronoun is used.

- (1) State what universal typological markedness asymmetry (if any) is supported by the Upriver Halkomelem data for the categories of number, gender, and person for Upriver Halkomelem. Give your reasoning and describe what type of evidence you used.

Typological markedness of clause types

Now apply the model of typological markedness to a syntactic rather than a morphological structure. Compare main clauses to conjoined clauses. Main clauses in Upriver Halkomelem consist minimally of a main verb which is inflected for subject and object indexation, tense, aspect and mood, as well as taking a variety of particles as modifiers. Conjoined clauses are just like main clauses, except that (i) they are preceded by a conjunction, such as *qə* 'and, but, or' or *ʔəsu* 'and so'; (ii) they do not take the subject pronouns (indexation markers) found with main verbs; (iii) they do not take the inflection *-ce* 'FUTURE'; and (iv) they do not take the evidential particle *θ'e* 'it is said...'.

- (2) What evidence is there (if any) to support the typological markedness asymmetry of simple main clauses vs. conjoined clauses; and which is more marked? Compare to English, as in *Jack slipped and fell*; do you see any similarity between the Upriver Halkomelem and English facts?

Vai

Vai is a Mende language spoken by 40,000 people on the northwest coast of Liberia.

Grammaticalization of specificity markers

Vai has several morphemes used to specify nouns. First there is the “specific” form of nouns, formed by adding a suffix, described as *-ě* whose vowel changes with the final vowel of the noun. It appears to indicate that there is a specific thing or set of things being referred to. For instance, *ná tîě-ě* (with the specific suffix) means ‘my chickens’, i.e. all those I own, whereas *ná tîě* (without the suffix) means ‘my chickens’, but implies that I have others. Vai also has two demonstratives, proximal *měé* ‘this’ and distal *měnúú* ‘that’, that modify nouns (but not personal pronouns). They are separate words that modify nouns, in fact adjectives and numerals can come between the demonstratives and the noun. They also take the plural marker *nú*—that is, *nú* modifies the demonstrative, not the head noun. Finally, there is an anaphoric demonstrative *kě*, which takes the form *kě* before words with a high tone, that refers to ‘the X’ where X is previously mentioned. It is also used to modify pronouns:

- (i) à kě wá βě í βò’ò
it the EMPH be I have
‘It’s what I have’
[literally ‘the it is [what] I have’, referring to money already mentioned].

There is also a form *kěnúúj* ‘the other one’.

- (1) Rank the three forms by degree of grammaticalization. Give the evidence of the degree of grammaticalization of each—phonological, morphosyntactic, and semantic (functional).

Waskia

Waskia is a Papuan (Indo-Pacific) language spoken on Karkar Island off the coast of Papua New Guinea.

Word order

Waskia has word orders represented by the following examples:

- (i) Gagi maresang pamu kara -nd -am
Gagi vegetable this heat -OBJ.PL -PRS.3SG
'Gagi heated these vegetables.'
 - (ii) kadi mu ko kawam
man the POSS house
'the man's house'
 - (iii) kadi kuareng yawara itelala mu
man old good two the
'the two good old men'
 - (iv) Takia kadi kuareng-kuareng pamu
Takia man old-RDP this
'these old Takia men'
 - (v) naur mu ali ti dagulum
coconut the ground to fell
'the coconuts fell to the ground'
 - (vi) ane kadi anega buruk usag -am mu arig -em
1SG man my pig kill -PRS.3SG REL see -PRS.1SG
'I saw the man who killed my pig.'
 - (vii) naur pamu anega i
coconut this mine INT
'Is this coconut mine?'
- (1) Motivate the word orders found in this language for subject/verb/object, adposition, adjective, genitive, numeral, demonstrative and question marker, using the competing motivations model given in the textbook. Ignore the nationality term *Takia* in (iv).

Typological markedness of verbal inflectional categories

The Waskia verb inflectional system consists of inflectional suffixes that indicate tense-mood-aspect and the person and number of the subject. The realis suffixes are given below:

	<i>Present</i>	<i>Past habitual</i>	<i>Past simple</i>
<i>1sg</i>	-sam	-kisam	-em
<i>2sg</i>	-sam	-kisam	-em
<i>3sg</i>	-so	-kiso	-am
<i>1pl</i>	-san	-kisan	-man
<i>2pl</i>	-san	-kisan	-man
<i>3pl</i>	-san	-kisan	-un

- (2) Describe evidence (if any) indicating the typological markedness asymmetry between values in the categories of number, person and tense-mood-aspect (present, past habitual, past simple).

Typological markedness of pronominal inflectional categories

The Waskia pronominal system includes the following forms:

	<i>Subj</i>	<i>Dir.Obj</i>	<i>Ind.Obj</i>	<i>Reflexive</i>
<i>1sg</i>	ane	aga	anega	ami
<i>2sg</i>	ni	ka	nika	nimi
<i>3sg</i>	nu	–	–	numi
<i>1pl</i>	anena	anenga	anenga	ami
<i>2pl</i>	nina	ninga	ninga	nimi
<i>3pl</i>	nuna	–	–	numi

Third person direct and indirect object pronouns are not used: instead, there is a direct object plural marker on transitive verbs, and four different verbs ‘give’ indicating the number and even the person of the indirect object.

- (3) Describe evidence (if any) indicating the typological markedness asymmetry between values in the categories of number, person and grammatical function (subject, direct object, indirect object, reflexive).

Yagaria

Yagaria is an Indo-Pacific language spoken in the Eastern Highlands in Papua New Guinea.

Typological markedness of pronominal inflectional categories

Yagaria has no shortage of personal pronoun forms: clitic subjects, same-subject (SS) and different-subject (DS) suffixes, object/possessive prefixes, possessive suffixes, and possessive infixes (found only with five words). This is in addition to three different independent pronoun sets and an emphatic pronoun set. And they're all slightly different. Here are the object/possessive prefixes, the possessive suffixes, the same-subject suffixes, and the different-subject suffixes:

<i>Obj/Poss</i>			<i>Poss</i>				
	<i>Sg</i>	<i>Du</i>	<i>Pl</i>		<i>Sg</i>	<i>Du</i>	<i>Pl</i>
<i>1st</i>	da-	la'a-	la'	<i>1st</i>	-di	-ti'a	-ti
<i>2nd</i>	ga-	lata-	lapa-	<i>2nd</i>	-ka	-tati	-tipi
<i>3rd</i>	Ø-	ta-	pa-	<i>3rd</i>	-a	-ti'a	-pi
 <i>SS</i>			 <i>DS</i>				
	<i>Sg</i>	<i>Du</i>	<i>Pl</i>		<i>Sg</i>	<i>Du</i>	<i>Pl</i>
<i>1st</i>	-da	-ta'a	-ta	<i>1st</i>	-da	-ta'a	-ta
<i>2nd</i>	-ka	-ta'a	-ta	<i>2nd</i>	-ka	-tati	-tapi
<i>3rd</i>	-na	-da'a	-da	<i>3rd</i>	-ni	-ti	-pi

(1) Describe, and give your reasoning for, the typological markedness patterns of the categories of:

- a. number
- b. person

Do this by looking at each pronoun set separately. (Hint: there are no cross-categorical correlations).

Parts of speech

Some words in Yagaria, including *yo* ‘house’, *nalu* ‘wife’, *yava* ‘tree’, and *dalepa* ‘casuarina’ (a kind of tree) take a suffix *-e'* when they are predicated:

- (i) *ima yava dalepa -e'*
 this tree casuarina -...
 ‘This tree is a casuarina.’

When negated, they use *-opa* (*-ope*, *-nopa*) instead:

- (ii) *ima yava dalepa -opa*
 this tree casuarina -NEG
 ‘This tree is not a casuarina.’

We will call the above words Class 1 words. Class 2 words, including *hao* ‘shoot’, *bei* ‘sit’, *do* ‘eat’ and *ag* ‘see’, do not take *-e'*, but they do take tense, aspect and mood markers, and also person indexation markers for subject and object (including a vowel change in the root).

- (iii) *ba no- don -e*
 sweet potato PROG- eat.1PL -IND
 ‘We are eating/we eat sweet potatoes.’

Class 2 words are negated with a prefix *'a-*:

- (iv) *a'- ag -e*
 NEG- see.3SG -IND
 ‘He does not see.’

Turning now to reference: Class 1 words (‘house’, etc.) can have a possessive suffix and/or a locative/directional suffix added to them when they are being referred to:

- | | | | |
|-----|-------------------|------|-----------------|
| (v) | <i>yo -to'</i> | (vi) | <i>nalu -di</i> |
| | <i>house -at</i> | | <i>wife -my</i> |
| | ‘at the house’ | | ‘my wife’ |

When Class 2 words are used to refer, they require a suffix. If you want to combine the Class 2 words with a possessive marker, you use the suffix *-te'na*:

- (vii) *hao -te'na -di*
 shoot -... -my
 ‘my shooting’

If you want to combine the Class 2 words with a locative/directional suffix, you use the suffix *-ma*:

- (viii) yale bei -ma -to'
people sit -... -to
'to where the people are sitting'

- (2) How does the Yagaria evidence support (or not support) the typological universals for parts of speech described in the textbook? Remember to examine all evidence given above.

Yagua

Yagua is a Macro-Carib language spoken by around 3000 people (in 1990) in the northeastern lowlands of Peru.

The sentences in (i)-(vii) illustrate the basic word orders of Yagua. The first line gives the actual word forms, the second line a morphological analysis, the third line the IMT, and the fourth line the translation. (Sometimes the first line is not needed.)

- (i) siimiy Alchíconí quiiva
 sa-jimiy Alhíco-níí quiiva
 3SG.I-eat Alchico-3SG.II fish
 ‘Alchico is eating the fish.’
- (ii) vánu jiryátiy radyítyánijéy jantyasjíní
 vánu jiy-ra-tiy ray-díty-tániy-jáy jantyasjíní
 man PRX-CLF.NEUT-REL 1SG.I-see-CAUS-PRX picture
 ‘the man I showed a picture to...’
- (iii) tomáasa rooriy
 tomáasa rooriy
 Tom house
 ‘Tom’s house.’
- (iv) vuyajúúñu nñnu
 vuyajúúy-nu nñnu
 ten-POLE.CLF tree
 ‘ten trees’
- (v) tíjquii quiiva jáámu
 one:ANIM.CLF fish big
 ‘one big fish’
- (vi) mamértu júsaá
 Mamerto with
 ‘with Mamerto’
- (vii) jñnu deerapu
 jiy-nu deera-pu
 this-CLF.ANIM.SG child-M
 ‘this boy’

(1) Describe the word order or affix order of the following elements. Provide its motivation(s) according to the model on the cheat sheet.

- a. subject and verb
- b. object and verb
- c. adjective and noun
- d. numeral and noun
- e. demonstrative and noun
- f. relative clause and noun
- g. adposition and noun
- h. genitive and noun
- i. subject indexation (set I affixes; ignore the set II affixes)

There are in fact alternative orders for the genitive and adposition:

- | | | | | | |
|--------|-------------|---------|------|--------------|-----------|
| (viii) | sa-rooriy | Alchico | (ix) | sa-viimu | nurutu |
| | 3SG.I-house | Alchico | | 3SG.I-inside | alligator |

In the alternative order, unlike the basic order, there is indexation of the possessor with the set I affixes. If the possessor or object of adposition is a pronoun, it almost always occurs affixed as follows:

- | | | | |
|-----|----------------|------|-----------------|
| (x) | sa-dee-tu | (xi) | rá-ta |
| | 3SG.I-child-F | | 3SG.INAN.I-with |
| | 'his daughter' | | 'with it' |

Finally, in the basic adposition construction in (vi), the adposition is often compounded with the noun:

- (xii) jumuñu-bimu
canoe-outside
'outside a/the canoe'

- (2) **a.** Name the alternative orders for genitive and noun, and adposition and noun, illustrated in (viii)-(ix).
b. Based on the facts about the alternative orders given in (viii)-(xii), which order of genitive and adposition do you think is older, the basic order or the alternative order? Justify your answer.
c. Based on your answer in (2b), if Yagua had a set of completely harmonic word orders in the recent past, what was it? Which word order(s) changed first from this hypothesized prior completely harmonic set? Which word order(s) changed next?

Yapese

Yapese is an Austronesian language spoken on the island of Yap in the Pacific Ocean.

Typological markedness of polarity and tense/aspect

Like many Austronesian languages spoken in the area, Yapese has a set of particles that precede the verb and indicate tense and aspect. Also like related languages, Yapese has a set of forms that indicates negation. The forms are slightly simplified here:

	<i>Positive</i>	<i>Negative</i>	<i>Translation</i>
<i>Past</i>	Ø	daa	'did it/didn't do it'
<i>Perfect</i>	ka	daa	'has done it/hasn't done it'
<i>Present Progressive</i>	bea	daar	'is doing it/isn't doing it'
<i>Habitual</i>	maa	daar	'does it/doesn't do it'
<i>Inceptive</i>	nga	daab	'is going to do it/isn't going to do it'
<i>Definite Future</i>	baey	daab	'will do it/won't do it'
<i>Simple Future</i>	raa	daab	'will do it/won't do it'

- (1) Does the Yapese data support a typological markedness asymmetry between positive and negative polarity? Why or why not? Based on the Yapese data, which of the seven tense/aspect values is the typologically least marked? Why?
- (2) Now compare the English translations for the Yapese particles. Does the data from the English translations support a typological markedness asymmetry between positive and negative polarity? Why or why not? Based on the English data, which of the seven tense/aspect values is the typologically least marked? Why?

Yessan-Mayo

Yessan-Mayo is an Indo-Pacific (Papuan) language spoken on the Sepik River in Papua New Guinea.

The nonemphatic subject pronoun forms of Yessan-Mayo are given below:

	Singular	Dual	Plural
1st	<i>an</i>	<i>nis</i>	<i>nim</i>
2nd	<i>ni</i>	<i>kep</i>	<i>kem</i>
3rd masc.	<i>ri</i>	<i>rip</i>	<i>rim</i>
3rd fem.	<i>ti</i>	<i>rip</i>	<i>rim</i>

(1) Describe evidence in Yessan-Mayo, if present, supporting a typological markedness asymmetry for:

- (a) number
- (b) gender
- (c) person

Yessan-Mayo has a set of suppletive verbs of motion indicating different paths:

	General	Upward	Downward	Other Sideward	Cross Over
Towards speaker (‘come’)	<i>ya</i>	<i>wayi</i>	<i>yer</i>	<i>wera</i>	
Away from speaker (‘go’)	<i>yi</i>	<i>yaw</i>	<i>war</i>	<i>wur</i>	<i>wu</i>

Other verbs can take suffixes indicating action moving upward or action moving downward:

- (i) *me atek yay -ruw -ti*
wood there lean -up -FUT
‘Lean the wood up there.’
- (ii) *ni mati ras -kwun -ti*
you bag put -down -FUT
‘You put the bag down.’

(2) Describe evidence if any, supporting a typological markedness relation between ‘come’, ‘go’, and other verbs (treat ‘other verbs’ as a single value of this category).

Yoruba

Yoruba is a Kwa language spoken in southwestern Nigeria.

Grammaticalization of focus constructions

In Yoruba, there are two ways to form emphatic constructions. In both constructions, the focus element, in these examples an emphatic pronoun, is followed by a focus marker (glossed ‘it.is’ and often attached to the next word orthographically with an apostrophe; the alternation between *n'* and *l'* is morphophonemic) and then the out-of-focus clause, which is in the usual SVO order. In the first construction, the regular subject pronoun is the same as the emphatic pronoun in person and number. In the second construction, the regular subject pronoun is always *ó*, the third singular pronoun. Examples:

(i) àwa n' a rà á
we it.is' we buy it
‘WE bought it.’

(ii) àwa l' ó rà á
we it.is' he buy it
‘WE bought it.’

(1) Which out-of-focus clause type is the more grammaticalized one? Justify your answers.

Yoruba/Igbo/Akan

Yoruba and Igbo are two of the major languages of Nigeria, which contains one quarter of the population of Africa. Yoruba and Igbo are Kwa languages spoken by 16,000,000 and 12,000,000 people respectively in southern Nigeria. Akan is also a Kwa language is spoken by 4,300,000 people in Ghana (nearly half the population).

Iconicity in verbal constructions

All of these languages are characterized by serial verb constructions, which differ from coordinate structures—see the following examples from Yoruba:

Serial verb construction

- (i) mo mú ìwé wá ilé
I took book come home
'I brought the book home.'

Coordinate sentence construction

- (ii) mo mú ìwé mo sì wá ilé
I took book I and came home
'I took the book and came home.'

Note, however, that there is a difference in meaning between the two constructions here, as is indicated by the English translation. For example, the coordinate sentence can be followed by the statement '...but I forgot to bring it [the book] along', but the serial construction cannot be followed by that statement; it would be contradictory. A similar contrast is found in Igbo (FACT = factitive; don't worry about this):

Serial verb construction

- (iii) ó tí- gbù rù nwóké áhù
he hit- kill -FACT man that
'He beat that man to death.'

Coordinate sentence construction

- (iv) ó ò -rì nwóké áhù òkpó gbú -é ya
he hit -FACT man that blow kill -and him
'He hit that man and killed him.'

In (iii), the beating or hitting is the direct and necessary cause of the man's dying (something that the English resultative construction used to translate it also requires). In (iv), the killing is a separate act from the hitting, and in fact the hitting may not have anything to do with the killing.

In Akan, there are other kinds of restrictions on serial verb constructions. The two actions joined in a serial verb construction must be in the same tense, and have the same subject/agent; neither of these constraints apply to coordinate sentences (PERF = perfect tense):

Serial verb construction

- (v) mekoɔɛ mabaɛ
1SG.go.PST 1SG.come.PST
'I went and came back.'
- (vi) *mekoɔɛ maba
1SG.go.PST 1SG.come.PRF
'I went and (I) have come back.'
- (vii) *mekoɔɛ kofi yɛɛ adwuma
1SG.go.PST Kofi do.PST work
'I went and Kofi worked.'

Coordinate sentence construction

- (viii) mekoɔɛ ma maba
1SG.go.PST and 1SG.come.PRF
'I went and (I) have come back.'
- (ix) mekoɔɛ na kofi yɛɛ adwuma
1SG.go.PST and Kofi do.PST work
'I went and Kofi worked.'

- (1) **a.** How do the serial verb constructions differ in grammatical structure from the coordinate sentence constructions in these languages? (Make a general statement about all three languages as well as describing the differences in each individual language.) Does the same iconic principle motivate the difference between the serial verb constructions and the coordinate sentence constructions in all of these languages? Explain your answer.
- b.** Now look at the English translations of the original language sentences. Is there evidence for the same iconic principle applying here also? Explain your answer.

Yurok

Yurok is related to the Algonquian languages (such as Ojibwe), but is spoken in the redwood country in the California Northcoast.

Parts of speech

In Yurok, there do not seem to be any adjectives. That is, the concepts that are expressed by adjectives in English are said to be expressed by intransitive verbs in Yurok: *kimol-* ‘to be bad’, *skuyep-* ‘to be good’. However, in the case of several “verbs”, if they are used as modifiers they “inflect” (very irregularly) for the noun class of the noun they modify. These words are given here in the form for human nouns:

<i>peloy-</i>	‘big’	<i>cey(kel)-</i>	‘small’
<i>knewolep-</i>	‘long, tall, high’	<i>tk^wep-</i>	‘short, low’
<i>to:moh</i>	‘thick, wide’	<i>meʔsir(on)-</i>	‘thin, slender’
<i>sk.ɪw.ɪhk.ɪy-</i>	‘flat, smooth’		
<i>loogey(ow)-</i>	‘black’	<i>muncey(ow)-</i>	‘white’
<i>p.ɪk^w.ɪh</i>	‘gray’	<i>p.ɪk.ɪy.ɪʔy(-)</i>	‘red’

Numerals, when used as modifiers, also inflect for the noun class of the noun they modify. The noun classes are: human beings; animals and birds; round things, rocks, etc.; trees, sticks, etc.; plants other than trees; body parts, utensils, clothes; tools, etc.; worms, snakes, ropes, etc.; flat things; houses; boats; water. However, at the time that the fieldwork on this language was done (1954), the language was dying, and the classifier system was breaking down: while the classes of “human” and “animal” persisted, everything else was put into the class of “round objects”.

- (1) Does the Yurok data provide evidence supporting the typological model for parts of speech described in the textbook? Why?
- (2) What does the fact that numerals also inflect for class when they modify nouns suggest about their status as modifiers?
- (3) Are you surprised at the way the noun class system has broken down, that is, at what noun class distinctions survived and which were lumped together? Why or why not?

Zayse

Zayse is an Afroasiatic language of the Omotic subgroup spoken in SW Ethiopia.

Word order

The common word orders for Zayse are given below:

- | | | | |
|-------|---|------|---|
| (i) | tá -j wóotaš denǵí
1SG -NOM farmer saw
'I saw a farmer.' | (ii) | karts ʔoolló
black horse
'a black horse' |
| (iii) | pélleš'o pišo
klipspringer tail
'a klipspringer's tail' | (iv) | ʔótá ʔoommo
pot under
'under a pot' |
| (v) | namʔí ʔaši -ri yeedi
two man -PL came
'Two men came.' | (vi) | ha kúll -ir -i
these guineafowl -PL -NOM
'these guineafowl' |
| (vii) | ʔi šamé -ss hare -j tá maašutte
she bought -REL donkey -NOM my property:COP
'the donkey which she bought was mine.' | | |

- (1) Name the basic word orders of Zayse for subject/verb/object, adposition, and the following modifiers: adjective, numeral, demonstrative, genitive. Show what competing motivations account for the word order patterns, and point out violations (if any) of the competing motivations analysis.

Affix order

The Zayse verbal system is extremely complex, so instead of illustrating it, let me merely state that tense, aspect, mood, negation and subject indexation are all suffixes (indeed, often fused into portmanteau morphemes). However, the affixes on nouns are more transparent, so they are illustrated in the following examples:

(i) tá ʔu- gárm -ir deŋgí
1SG DEF- lion -PL saw
'I saw the lions.'

(ii) k'ásté -nna
bow.and.arrow -INST
'with a bow and arrow'

- (2) Name the affix positions for case, number and definiteness for Zayse. Discuss how the competing motivations model for affix position accounts for—or doesn't account for—each of the nominal affix types AND the aforementioned verbal affix types. (In doing so, consider also the fact that the definite affixes are transparently affixed versions of the 3rd person singular possessive pronouns.)

Typological markedness of numerals

Zayse has the following basic numerals (1 through 9):

	<i>counting form</i>	<i>modifying form</i>
1	bizzó	bizzí
2	namʔ	namʔí
3	hayš	hayší
4	ʔoydd	ʔoyddí
5	ʔišíč	ʔišíč
6	ʔizúp	ʔizúp
7	láap	láap
8	lakkúče	lakkúče
9	š'éet	š'éet

- (3) Discuss evidence for the typological markedness asymmetry between values of the following categories in Zayse:

- a. counting form vs modifying form
- b. numerals (1-9)