

Typology Problems

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

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Introduction

These problems are to be used with 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: Coast Tsimshian 1, 2; Fante 1, 2; Maung 1, 3, 4; Minor Mlabri 2; Southwestern Ojibwe 1, 2, 3; Waskia 1; Zayse 1, 2

Hard: Dumi 1; Kisi 1; Maung 2; Mingrelian 1; Minor Mlabri 1; Southwestern Ojibwe 4

Typological Markedness, including Hierarchies and Correlations

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

Hard: Fante 3; Kisi 3; Lenakel 1, 2; Kharia 1, 2; Lushootseed 1; Mam 1; Maung 5; Miya 1-; Mupun 1; Upriver Halkomelem 1, 2; Waskia 2, 3; Yapese 1, 2; Yurok 3; Zayse 3

Very Hard: Mundari 1; Yagaria 1

Prototypes, including Parts of Speech

Easy: Finnish 2; Guaraní 1; Limbu 3; Tswana 1; Yurok 1

Hard: Kharia 2; Mangap-Mbula 2; Mangap-Mbula 3-5; Yagaria 2; Yurok 2

Very, Very Hard: Fante 4-5

Iconicity

Easy: Lushootseed 3

Hard: 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: Epena Pedee 3; Fante 4; Lango 1; Mam 2; Manga-.Mbula 2; Vai 1

Very Hard: 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-ghâm
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?

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>	–	bādi
<i>2nd</i>	bū	bū-a
<i>3rd (masc)</i>	ĩ	ĩ-dā
<i>(fem)</i>	so	ĩ-dā
<i>(inan)</i>	tí	ĩ-dā

- (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?

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 tɔv'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?

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	wā	-hi	wā	raa	hermanaa	-rā	-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 *-rā*. 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. *eperāā-rā-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>
1st	mī	taī
2nd	pī	pārā
3rd	iru	ārā

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^harii-rā* [we-ART under-PL] ‘we (people) from below’; *p^huuru-de-pemaa-rā* [village-LOC-ORIGIN-PL] ‘villagers’. Note the lengthened vowels just before the plural.

In addition, there is a pair of morphemes *-rā/-ra* which mean ‘many’; *-rā* is used for animates and *-ra* is used for inanimates. They are also enclitics, and also occur before the ergative case enclitic: *usa p^haima-rā-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-rā-rā* [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, *-rā* ‘plural’ or *-rā/-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]’/*hā* ‘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 *-gi*. This set also has a three-way distinction. Semantically, it is used to 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-gi-pa* [that.INVS-SPEC-ERG] ‘that one (the man)...’
- (iii) There is a single form *či* 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: *či phaima* ‘the black ones [beads]’; *či thēē 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 nkyɛn
ADPOS me ADPOS
'towards me'

The first part *baa* comes from the verb 'come' and the second part *nkyɛn* 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):

Present: méhòr ‘I wash’
Past: méhóř ‘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):

Future: me-ba-frɛ ‘I shall call’
Perfect: m’-a-frɛ ‘I have called’
Progressive: 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 *-ri-* 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 | | (xi) | ɔ- | bɔ- | kɔ | a- | ka- | pra |
| | 3SG- | go | go- | sweep | | | 3SG- | fut- | go | INF- | go- | sweep |
| | | | | ‘He goes to 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 hū a- kyerɛw
 ISG- 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’
dɔnkuronn	‘deep’	dɔ	‘be deep’
fufuw	‘white’	hoa	‘be white’
ekyew	‘crooked’	kyea	‘be crooked’
pitsiw	‘thick’	piw	‘be thick’
kakraka	‘great’	sū	‘be great’
kakraba	‘small’	sua	‘be small’
tɛtɛr	‘broad’	terɛ, trɛ	‘be broad’
tsentsen	‘long’	war	‘be long, tall’
pa, papa	‘good’	ye	‘be good’
bɔn	‘bad’	muɔ	‘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 yɛ 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'	fɛɛfɛw	fɛw
'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'	hyeeyew	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)’	mbɔwɛmambɔwɛma	‘green’
bəkɔɔ, bəkɔbəkɔ	‘soft (voice)’	amon, momon	‘fresh’
dəkɔdəkɔ	‘sweet’	pitsiw, pitsipitsiw	‘thick (liquids)’
ebun	‘unripe’	pipipipi	‘thick (cloth)’
ebunebun	‘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’	ɔkɛ	akɛ
‘egg’	kyerɛfua	nkyerɛfua

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 *nsoε*, a pluralia tanta, i.e. plural in form but invariant). They include words for foodstuffs, natural substances, and the elements. Some examples:

ahwea	'sand'	dεtse	'earth'
nsō	'ashes'	aahow	'air'
ekutu	'orange'	ahai	'ale'
tum	'power'	nsoε	'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'	nsoεnsoε	'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	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’, *pitá* ‘red’) and words describing size (*miší* ‘little’, *mikí* ‘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.

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.

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(á)* ‘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- -ká -ná*
2SG.OBJ- see -1SG.SBJ -PRF
‘I saw you.’
- (iii) *nyí -à rú -ká -nà*
2SG -ASSOC see -1SG.SBJ -PRF
‘YOU I saw.’
- (iv) *nyí -à nzú- rú- -ká -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*
3PL -ASSOC greet
‘Greet them.’
- (vi) *lèfàné sàndí -à*
greet 3PL -ASSOC
‘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’
timsŋ	‘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>	ĩñ	ĩñar	ele
<i>(incl.)</i>		anaŋ	aniŋ
<i>2nd</i>	am	ambar	ampe
<i>3rd</i>	hokaṛ	hokiyar	hoki
	ukaṛ	ukiyar	uki
	hankaṛ	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 *kaṛ* 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* ‘*ŋ*’.

- (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:

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

Nonspatial Relations:

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

Note: *čiči* 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 *čiči*, 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 lééηndó 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 léη
egg -CL that.IDX
‘that egg’

Numerals:

- (iv) nàù -wá à ηìsósη
cow -CL IDX- two.CL
‘two cows’
- (v) siàù -wáη mà mìsósη
orange -CL IDX- two.CL
‘two oranges’

Relative clauses [in brackets]:

- (vi) mèη mà [ó kól] -áη
water CL [he drink] -IDX
‘the water that he drank’

Adjectives:

- (vii) kòlà -lá húmbù -láη
cloth -CL white -IDX
‘white cloth’

Genitive:

- (viii) bě̀l -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 kùŋndáŋ ó bɔ́ bènǵú
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 *bènǵú*. 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- ɲìsɔ́ŋ
cow -a.CL a.PRN- two.a.CL
'two cows'

- (ix) sààù -wǎŋ mà- mìsɔ́ŋ
orange -ma.CL ma.PRN- two.ma.CL
'two oranges'

(and so on)

The numeral 'three' has only two forms: *ŋgàá* for the *ŋ* class, and *yàá* for all the other classes. The higher numerals, e.g. *hí́sɔ́hí* '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:
- polarity (affirmative/negative)
 - aspect (perfective/habitual/ progressive)
 - 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...bèŋgú, 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.

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:

bán	‘to [somewhat archaic]’
bòt	‘to’
mɛ	‘for’
pì	‘because of’
tê	‘under’
tú	‘toward’
kà	‘instead of’

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

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

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):

ì kòm d’ákô	‘in, about, on, etc. the woman’
ì kòmś	‘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:

ì dóg kúlú	[on mouth river]	‘on the edge of the river’
ì kór òt	[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:

ì bÒt	[at to]	‘after (e.g. walking after someone)’
ì tē	[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:

bàlà án ‘like me’
bàlà yín ‘like you’

- (4) 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- ìm- 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> <i>(incl)</i>	aŋga	anchige anchi	anige ani
<i>2nd</i>	khɛnɛʔ	khɛnchi	khɛni
<i>3rd (an)</i> <i>(“inan”)</i>	khunɛʔ khɛŋ	khunchi khɛŋhaʔ	khunchi, khɛŋhaʔ khɛŋhaʔ

The third person forms are worth noting in some greater detail. The “regular” 3rd person pronouns *khunɛʔ* etc. are restricted to animates. *khɛŋ* 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 *khɛŋhaʔ* 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 *khɛŋ*) 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:maʔ* ‘know’ and *sukmaʔ* ‘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 $dx^w\text{lə}\check{s}ucid$) 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>	$ti\check{?}i\check{!}$	$ti\check{?}\check{?}$	ti	$t\check{a}$
<i>Set II</i>	$tsi\check{?}i\check{!}$	$tsi\check{?}\check{?}$	tsi	$ts\check{a}$

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 $ti\check{?}i\check{!}$ as in the table, but ‘this’ as a modifier (as in ‘this salmon’) is $tii\check{!}$. In northern Lushootseed, ‘this’ as a modifier is normally $ti\check{?}i\check{!}$, but in relaxed conversation, $tii\check{!}$ 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{a} is a reduced vowel.)
- (3) The modifier form $tii\check{!}$ is a reduced version of the pronoun form $ti\check{?}i\check{!}$. 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.

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 *ka/le* 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’
siŋaanabi	‘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', *siηsiη* '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) iηgi 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 *-ηa*, or made into relative clauses using the relativizer *ta*:

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

- (xvii) kam koroη 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

- (4) Which class is the most prototypical verb in typological-universal terms? Justify your answer.
- (5) Which class is the most prototypical adjective? Justify your answer.
- (6) 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 mɛrg
this.CLV ART.V big ART.CLV leaf
'this big leaf'

(ii) gigi dja djura dja gumijaɹma
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 ɲari dja gjab
ART.CLI 1PL.EX ART.CLI fish
'our fish'

(iv) adɕ- agbi.ɯdj da ɲalmar
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) guɻiŋga nuwuri gudamanj mada ɲarwuri 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>
1 <i>excl.</i>	ɲari	ɲabi
<i>incl.</i>	—	ɲarwuri
2	nuji	nuwuri
3 <i>masc.</i>	janad	wɛnad
<i>fem.</i>	in-janad	wɛnad
IV	an-janad	an-janad
V	manad	manad
VI	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?

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) γur -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 chuŋ
 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) chuuɛɛ bɛɛɾ ləbooʔ
 shirt two CLF
 ‘two shirts’

(vi) mlaʔ ləboʔ ɲaʔ
 people CLF that
 ‘that person’

Sentence order is SVO, as in the following example:

(vii) ʔat ʔuuj krəkkrək ʔat ʔɛɛw
 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 chɛɛm pal juur
 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) | mbàrgu pyóo -na
ram white -M | (iii) | tómáku pyóo -ya
ewe white -F |
| (ii) | ndùwul hómày -na
pot empty -M | (iv) | tsórdíy hòmày -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'; *jìfana* '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) | nákən 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

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).

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>	niny	ininy	hininy
<i>near</i>	nay	aniny	haniny
<i>Dual</i>			
<i>nearest</i>	nikiŋ	inkiŋ	hinkiŋ
<i>near</i>	nakiŋ	ankiŋ	hankiŋ
<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
- deixis,
 - nearness
 - number
 - animacy
 - 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?

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)*aŋiŋ*
3SG- water- come.out -CAUS
‘make water come out’
- (ii) *gu*- Ø- *ɖoro?* -*ji?* *guŋu* -*we?*
3 3SG- dry.up -FUT.NEG CLF- water
‘The water can't dry up.’
- (ii) *we?*- *ŋu*
water- eat
‘drink’

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

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?

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 indication 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/OBV 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.)

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.

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>	tɛʔélθɛ	tɛHíməl
<i>2nd person</i>	tɛ:ləwə	tɛ:ləwəlɛp
<i>3rd person</i>		
<i>masculine</i>	túλ'ə	túλ'aləm
<i>feminine</i>	θúλ'ə	θúλ'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 *-cɛ* 'FUTURE'; and (iv) they do not take the evidential particle *θ'ɛ* '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 tìě-ě* (with the specific suffix) means ‘my chickens’, i.e. all those I own, whereas *ná tìě* (without the suffix) means ‘my chickens’, but implies that I have others. Vai also has two demonstratives, proximal *měé* ‘this’ and distal *mènúú* ‘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 kè wá βě ń 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 *kènúúj* ‘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	-kizam	-em
<i>2sg</i>	-sam	-kizam	-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>Sbj</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) yo -to'
 house -at
 'at the house'
- (vi) nalu -di
 wife -my
 '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.

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 Lenakel data, which of the seven tense/aspect values is the typologically least marked? Why?
- (2) Now compare the English translations for the Lenakel 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?

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 tí -rì nwóké áhù òkpó gbú -é ya
he hit -FACT man that blow kill -and him
'He hit that man and killed him.'

In the first sentence, 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 the second sentence, 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) mekɔɔe mabaae
1SG.go.PST 1SG.come.PST
'I went and came back.'
- (vi) *mekɔɔe maba
1SG.go.PST 1SG.come.PRF
'I went and (I) have come back.'
- (vii) *mekɔɔe kofi yɛɛ adwuma
1SG.go.PST Kofi do.PST work
'I went and Kofi worked.'

Coordinate sentence construction

- (viii) mekɔɔe ma maba
1SG.go.PST and 1SG.come.PRF
'I went and (I) have come back.'
- (ix) mekɔɔe 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:

peloy-	‘big’	cey(kel)-	‘small’
knewolep-	‘long, tall, high’	tk ^w ep-	‘short, low’
to:moh	‘thick, wide’	meʔsir(on)-	‘thin, slender’
sk.ɪw.ɪhk.ɪy-	‘flat, smooth’		
loogey(ow)-	‘black’	muncey(ow)-	‘white’
pɪk ^w .ɪh	‘gray’	pɪk.ɪy.ɪʔ.ɪy(-)	‘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 denǵí
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	hays̀	hays̀í
4	ʔoydd	ʔoyddí
5	ʔišič	ʔišič
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)