

Inflection

LING 481/581

Winter 2011

Inflectional values

On nouns, pronouns	On verbs	On adjectives, demonstratives, relative pronouns, adpositions	
number (SINGULAR, PLURAL,...)	number (SINGULAR, PLURAL,...)	number (SINGULAR, PLURAL,...)	agreement
case (NOMINATIVE, ACCUSATIVE,...)	person (1ST, 2ND, 3RD)	case (NOMINATIVE, ACCUSATIVE,...)	
gender (MASCULINE, FEMININE,...)	tense (PRESENT, FUTURE, PAST, ...)	gender (MASCULINE, FEMININE,...)	
person (1ST, 2ND, 3RD)	aspect (PERFECTIVE, IMPERFECTIVE, HABITUAL, ...)	person (1ST, 2ND, 3RD)	
	mood (INDICATIVE, SUBJUNCTIVE, IMPERATIVE,...)		

Table 5.1 Common inflectional features and values

polarity (positive, negative)

Feature sets for inflection

(5.19) a. Spanish
caminábamos
 'we were walking'

[TENSE: PAST
 PERSON: 1ST
 NUMBER: PLURAL]

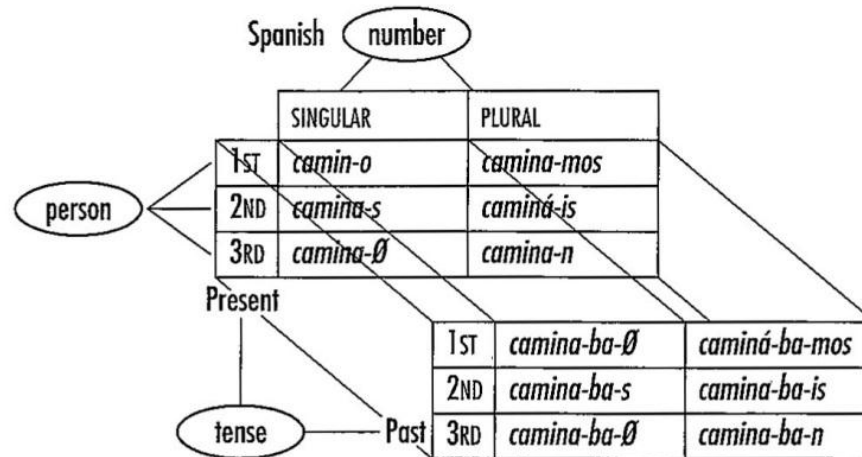


Figure 5.7 A three-dimensional representation of a three-dimensional paradigm

b. Sanskrit

dātṛṇoh

'of two givers'

NUMBER:	DUAL
GENDER:	NEUTER
CASE:	GENITIVE

- Are there natural classes in feature systems?
 - e.g. [-dual] (sg, pl pattern together)
 - not so much as in phonology

Agreement

morphological inflection to show syntactic relationships

- **noun agreement**
- its determiner, adjectives, genitive NP must agree with head noun in gender or noun class, number, case) usually within a noun phrase

le petit garçon

the little boy

la petite fille

the little girl

les petits garçons

the little boys

les petites filles

the little girls

La fille est petite

The girl is small.

Les filles sont petites

The girls are small.

Le garçon est petit

the boy is small

Verb agreement

- verb must agree with the subject NP (and object NP) in Person, Number, Gender/Noun class
- typical in Indo-European languages

infinitive	donner	demander	finir	gémir	rendre	rompre
	<i>to give</i>	<i>to ask</i>	<i>to finish</i>	<i>to groan</i>	<i>to turn in</i>	<i>to break</i>
1sg	donne	demande	finis	gémis	rends	rompe
2sg	donnes	demandes	finis	gémis	rends	rompes
3sg	donne	demande	finit	gémit	rend	rompe
1pl	donnons	demandons	finissons	gémissons	rendons	rompons
2pl	donnez	demandez	finissez	gémissez	rendez	rompez
3pl	donnent	demandent	finissent	gémissent	rendent	rompent

Swahili Noun Class Agreement

Wa-tu wa-zuri wa-wili wa-le wa-me-anguka.

NC1p-person NC1p-good NC1p-two NC1p-those NC1p-PastP-fall

'Those two good people have fallen.'

sg. Mtoto mmoja anasoma.

One child is reading.

pl. Watoto wawili wanasoma.

Two children are reading.

sg. Kitabu kimoja kinatosha.

One book is enough (suffices)

pl. Vitabu viwili vinatosha.

Two books are enough (suffice).

Inflectional classes

- Nominal declensions, verbal conjugations
- Latin nouns

(8.7)		<i>o</i> -declension	<i>u</i> -declension	
	SG	NOM	<i>hort-us</i>	<i>grad-us</i>
		ACC	<i>hort-um</i>	<i>grad-um</i>
		GEN	<i>hort-ī</i>	<i>grad-ūs</i>
		DAT	<i>hort-ō</i>	<i>grad-uī</i>
		ABL	<i>hort-ō</i>	<i>grad-ū</i>
	PL	NOM	<i>hort-ī</i>	<i>grad-ūs</i>
		ACC	<i>hort-ōs</i>	<i>grad-ūs</i>
		GEN	<i>hort-ōrum</i>	<i>grad-uum</i>
		DAT	<i>hort-īs</i>	<i>grad-ibus</i>
		ABL	<i>hort-īs</i>	<i>grad-ibus</i>

Sahaptin inflectional classes

- Inanimate
 - no dual
 - plural formed by reduplication
 - *pshwá* ‘rock’, *pshwápshwa* ‘rocks’ (also ‘rocky’)
- Animate
 - dual formed by –in suffixation
 - plural formed by –ma suffixation
 - *k’úsi* ‘horse’, *k’úsiyin* ‘2 horses’, *k’úsima* ‘horses’
 - *†ch’ách’a* ‘ghost’

Sahaptin inflectional classes

- Animate
 - Non-human
 - Human: benefactive, dative, allative, ablative, instrumental, locative cases added to genitive

Table 6. Noun Case Endings

	<i>Nonhuman</i>		<i>Human</i>	
		<i>Singular</i>	<i>Dual</i>	<i>Plural</i>
Unmarked	Ø (<i>kúsi</i> 'horse')	Ø (<i>iwínš</i> 'man')	- <i>in</i> (<i>awínšin</i>)	- <i>ma</i> (<i>awínšma</i>)
Inverse ergative	- <i>nim</i> (<i>kúsinim</i>)	- <i>nim</i> (<i>iwínšnim</i>)	(no dual or plural forms)	
Obviative ergative	- <i>in</i> (<i>kúsiyin</i>)	- <i>in</i> (<i>iwínšin</i>)	(no dual or plural forms)	
Objective	- <i>na</i> (<i>kúsina</i>)	- <i>na</i> (<i>iwínšna</i>)	- <i>inaman</i> (<i>awínšinaman</i>)	- <i>maaman</i> (<i>awínšmaaman</i>)
Comitative	- <i>in</i> (<i>kúsiyin</i>)	- <i>in</i> (<i>iwínšin</i>)	(no dual or plural forms)	
Genitive	-(<i>n</i>) <i>mí</i> (<i>kúsinmí</i>)	-(<i>n</i>) <i>mí</i> (<i>iwínšmí</i>)	- <i>inamí</i> (<i>awínšinaman</i>)	- <i>maaní</i> (<i>awínšmaamí</i>)
Benefactive	- <i>ay</i> (<i>kúsiyay</i>)	-(<i>n</i>) <i>míyay</i> (<i>iwínšmíyay</i>)	- <i>inamíyay</i> (<i>awínšinamíyay</i>)	- <i>maamíyay</i> (<i>awínšmaamíyay</i>)
Dative	- <i>yaw</i> (<i>kúsiyaw</i>)	-(<i>n</i>) <i>míyaw</i> (<i>iwínšmíyaw</i>)	- <i>inamíyaw</i> (<i>awínšinamíyaw</i>)	- <i>maamíyaw</i> (<i>awínšmaamíyaw</i>)
Allative	- <i>kan</i> (<i>kúsikan</i>)	-(<i>n</i>) <i>míkan</i> (<i>iwínšmíkan</i>)	- <i>inamíkan</i> (<i>awínšinamíkan</i>)	- <i>maamíkan</i> (<i>awínšmaamíkan</i>)
Ablative	- <i>kni</i> (<i>kúsikni</i>)	-(<i>n</i>) <i>míkni</i> (<i>iwínšmíkni</i>)	- <i>inamíkni</i> (<i>awínšinamíkni</i>)	- <i>maamíkni</i> (<i>awínšmaamíkni</i>)
Instrumental	- <i>ki</i> (<i>kúsiki</i>)	-(<i>n</i>) <i>míki</i> (<i>iwínšmíki</i>)	- <i>inamíki</i> (<i>awínšinamíki</i>)	- <i>maamíki</i> (<i>awínšmaamíki</i>)
Locative	- <i>pa</i> (<i>kúsiipa</i>)	-(<i>n</i>) <i>mípa</i> (<i>iwínšmípa</i>)	- <i>inamípa</i> (<i>awínšinamípa</i>)	- <i>maamípa</i> (<i>awínšmaamípa</i>)

Case: syntactically relevant

łshnawáy i'aní kuumanák íchi íkuuk myánashmaman.

poor 3sS-make.pf those.acc.pl nowadays child.acc.pl

‘She has deprived those children today (of important knowledge).’

Athabaskan verbal inflection classes

- gh-, n-, s- conjugations

O+h+'q 'hire O'

1s	<u>gh</u> iih'ǎ' R	'I hired her'
2s	Edna <u>gh</u> iinh'ǎ'q? R	'did you hire Edna?'
3s	Andreas Edna <u>gh</u> iih'ǎ'q? R	'did Andreas hire Edna?'
1p	khqhdì ts' <u>gh</u> iih'ǎ' R	'we already hired her'
2p	Edna <u>gh</u> aah'ǎ'q? R	'did you (pl.) hire Edna?'
3p	Edna gh <u>gh</u> iih'ǎ' R	'they hired Edna'

O+’*q* ‘handle compact O’, ***P***+*ghà# (n)* ‘give to P’

1s	sadzèè’ mà̀n <u>i</u> is’q R	‘I gave him a watch’
2s	mà̀n <u>i</u> in’q q? R	‘did you give it to him?’
3s	sadzèè’ yà̀n <u>i</u> i’q R	‘she gave him a watch’
1p	sadzèè’ mà̀ts’ <u>i</u> iii’q R	‘we gave him a watch’
2p	mà̀n <u>a</u> h’q q? R	‘did you (pl.) give it to him?’
3p	sadzèè’ mà̀gh <u>n</u> ii’q R	‘they gave him a watch’

-t'ès/t'ẹ 'roast', *O+h-* causative

1s	siiht'ẹ	'I roasted it'
2s	sinht'ẹ	'you roasted it'
3s	utsùn seht'ẹ	'he roasted meat'
1p	ts'eht'ẹ	'we roasted it'
2p	saht'ẹ	'you (pl.) roasted it'
3p	gheht'ẹ	'they roasted it'

Latin nouns again

(8.7) *o*-declension

SG	NOM	<i>hort-us</i>
	ACC	<i>hort-um</i>
	GEN	<i>hort-ī</i>
	DAT	<i>hort-ō</i>
	ABL	<i>hort-ō</i>
PL	NOM	<i>hort-ī</i>
	ACC	<i>hort-ōs</i>
	GEN	<i>hort-ōrum</i>
	DAT	<i>hort-īs</i>
	ABL	<i>hort-īs</i>

- HS: “one form can be used to predict another” (member of inflection class)
- sets of word schemas for inflection classes, “paradigm rules”

(8.20) {[/Xus/NOM.SG], [/Xī/GEN.SG], [/Xō/DAT.SG], [/Xum/ACC.SG],
[/Xō/ABL.SG], [/Xī/NOM.PL], [/Xōrum/GEN.PL], [/Xīs/DAT.PL],
[/Xōs/ACC.PL], [/Xīs/ABL.PL]}

Inflection class shift

- Later Latin
 - many u-declension nouns > o-declension
 - no o-declension nouns > u-declension
- How is this possible?
 - some forms same in both inflection classes
 - maybe e.g. gen. sg. of u-declension forgotten
 - use o-declension paradigm rule to form gen. sg.
 - HS 167: “Latin always had many more o-declension nouns than the u-declension nouns, so that the o-declension rule was stronger.” (effect of type frequency)
- Value of paradigmatic approach. why?
 - not just some but all forms shifted
 - provides evidence for “paradigm rules”

“Gender class” vs. “inflection class” vs. “noun class”

- HS 162: “we need to make a principled distinction between inflection class and gender”. Only in IE languages?
- Ath n-, w-, d- noun classes
 - n- round
 - w- areal
 - d- wooden
- Ath classificatory verbs and noun classes
 - -te rigid
 - -’a general 3D (“compact”)

Italian inflection classes

- Independent of gender

(8.14) Two Italian inflection classes

SG SUFFIX	PL SUFFIX	EXAMPLE	MEANING	AGR SUFFIXES
-o	-i	<i>giardino/giardini</i>	'garden(s)'	-o/-i (masc.)
-a	-e	<i>casa/case</i>	'house'	-a/-e (fem.)
-o	-i	<i>mano/mani</i>	'hand'	-a/-e (fem.)
-a	-i	<i>poeta/poeti</i>	'poet'	-o/-i (masc.)

(8.15) Italian gender agreement (adjectives agree with nouns)

- il giardin-o nuov-o* 'the new garden'
- la cas-a nuov-a* 'the new house'
- la man-o rugos-a* 'the wrinkled hand'
- il poet-a mort-o* 'the dead poet'

Inflection class shift in Ancient Greek

4. Consider the following three inflection classes of Ancient Greek (only singular forms are given). Class (i) consists of feminines (like the Latin class of *insula* 'island'), class (ii) consists of masculines denoting men (like the Latin class of *poeta* 'poet') and class (iii) mostly consists of masculines. The nouns of class (ii) originally inflected just like class (i). What may have motivated the change?

	(i)	(ii)	(iii)
NOM	<i>hēmērā</i>	<i>neaníās</i>	<i>phílos</i>
ACC	<i>hēmērān</i>	<i>neaníān</i>	<i>phílon</i>
GEN	<i>hēmérās</i>	<i>neaníou</i>	<i>phílou</i>
DAT	<i>hēmérāi</i>	<i>neaníāi</i>	<i>phílōi</i>
	'day'	'young man'	'friend'

“Priscianic formation”

- “a member of an inflectional paradigm is formed from another member of the paradigm to which it need not be closely related semantically” (HS 173)

Latin	INFINITIVE	PAST PASS. PART.	FUTURE ACT. PART.	
	<i>laudāre</i>	<i>laudātus</i>	<i>laudātūrus</i>	‘praise’
	<i>monēre</i>	<i>monitus</i>	<i>monitūrus</i>	‘warn’
	<i>dūcere</i>	<i>ductus</i>	<i>ductūrus</i>	‘lead’
	<i>vehere</i>	<i>vectus</i>	<i>vectūrus</i>	‘carry’
	<i>mittere</i>	<i>missus</i>	<i>missūrus</i>	‘send’
	<i>haerere</i>	<i>haesus</i>	<i>haesūrus</i>	‘stick’
	<i>premere</i>	<i>pressus</i>	<i>pressūrus</i>	‘press’
	<i>ferre</i>	<i>lātus</i>	<i>lātūrus</i>	‘bear’

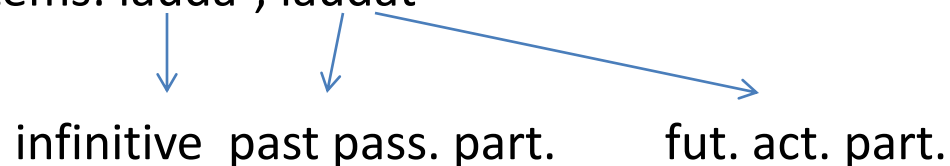
- ‘We could say here that each lexeme is associated with a set of three stems (e.g. *laudā-*, *laudāt-*, *laudātūr-*).’

- Or posit word schemata $[/XY/PST.PASS.PART] \leftrightarrow [/XūrY/FUT.ACT.PART]$

$$/Xus/_{pst.pass.part} \leftrightarrow /Xūrus/_{fut.act.part}$$

- “A description in terms of Priscianic formation is equivalent to a description in terms of stem sets for most purposes, and most linguists have continued to describe examples like [the Latin infinitive, past participle, future active participle] in terms of stem sets.”

- i.e., instead of 3 stems, 2 stems: laudā-, laudāt-



-

Tümpisa Shoshoni

- How to describe?

NOMINATIVE	OBJECTIVE	POSSESSIVE	
<i>mupin</i>	<i>mupitta</i>	<i>mupittan</i>	'nose'
<i>tümpi</i>	<i>tümpitta</i>	<i>tümpittan</i>	'rock'
<i>nüümü</i>	<i>nüümi</i>	<i>nüümin</i>	'person'
<i>piammütsi</i>	<i>piammütsia</i>	<i>piammütsian</i>	'baby'
<i>kahni</i>	<i>kahni</i>	<i>kahnin</i>	'house'

- $/X/_{\text{objective}} \leftrightarrow /Xn/_{\text{possessive}}$
- or nominative stem, non-nominative stem; add –
n to non-nominative stem to form possessive
 - “such an analysis is perhaps less attractive” (than word schemata)
 - why? “non-nominative stem”

Syncretism

- Word-forms in an inflectional paradigm may be *systematically* homophonous (syncretic)
 - must be homophonous across *multiple inflection classes*

3s vs. 2p; 1p vs. 3p

spielen 'to play'

<i>ich</i>	spiele	<i>wir</i>	spielen
<i>du</i>	spielst	<i>ihr</i>	<i>spielt</i>
<i>er/sie</i>	<i>spielt</i>	<i>sie</i>	spielen

cf. geben 'to give'

gebe	geben
gibst	gebt
gibt	geben

cf. sein 'to be'

bin	<u>sind</u>
bist	<i>seid</i>
ist	<u>sind</u>

1p and 3p are syncretic; 3s and 2p are sometimes homophonous

the syncretic forms can be used to satisfy possibly conflicting
syntactic requirements (agreement)

Entweder wir oder sie spielen gegen Bulgarien.

*Either we or **they** play against Bulgaria.*

*Entweder er oder ihr spielt gegen Bulgarien.

*Either he or **you(pl)** play against Bulgaria.*

I am we are
you are you pl. are
he/she/it is they are

Do any of these work?

Either we or you ____ crazy.

Either he or they ____ crazy.

Either you or I ____ crazy.

“Rules of referral”

encode systematic syncretism

Old Church Slavonic nouns

(8.38)	<i>ŭ</i> -class			<i>a</i> -class			<i>ĭ</i> -class		
	SG	DU	PL	SG	DU	PL	SG	DU	PL
NOM	-ŭ	-a	-i	-a	-ě	-y	-ĭ	-i	-i
ACC	-ŭ	-a	-y	-o	-ě	-y	-ĭ	-i	-i
GEN	-a	-u	-ŭ	-y	-u	-ŭ	-i	-ĭju	-ĭjĭ
LOC	-ě	-u	-ěxŭ	-ě	-u	-axŭ	-i	-ĭju	-ĭxŭ
DAT	-u	-oma	-omŭ	-ě	-ama	-amŭ	-i	-ĭma	-ĭmŭ
INST	-omĭ	-oma	-y	-ojo	-ama	-ami	-ĭ	-ĭma	-ĭmĭ

- “several forms in the paradigm are identical”

$$(8.39) \left[\begin{array}{l} /X/N \\ \text{'NOM.DU'} \end{array} \right] \leftrightarrow \left[\begin{array}{l} /X/N \\ \text{'ACC.DU'} \end{array} \right]$$

Modern Greek noun inflection classes

(8.21)

		<i>os</i> -declension	<i>as</i> -declension	<i>us</i> -declension
SG	NOM	<i>nomos</i>	<i>pateras</i>	<i>papus</i>
	ACC	<i>nomo</i>	<i>patera</i>	<i>papu</i>
	GEN	<i>nomu</i>	<i>patera</i>	<i>papu</i>
PL	NOM	<i>nomi</i>	<i>pateres</i>	<i>papuðes</i>
	ACC	<i>nomus</i>	<i>pateres</i>	<i>papuðes</i>
	GEN	<i>nomon</i>	<i>pateron</i>	<i>papuðon</i>
		'law (masc.)'	'father (masc.)'	'grandfather (masc.)'

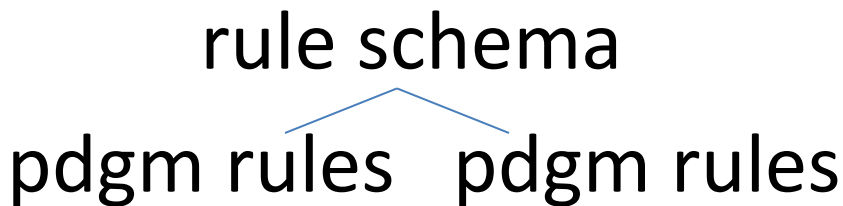
- (8.22) a. Paradigm rule for the *os*-declension
 { [/Xos/NOM.SG], [/Xo/ACC.SG], [/Xu/GEN.SG],
 [/Xi/NOM.PL], [/Xus/ACC.PL], [/Xon/GEN.PL] }
- b. Paradigm rule for the *as*-declension
 { [/Xas/NOM.SG], [/Xa/ACC.SG], [/Xa/GEN.SG],
 [/Xes/NOM.PL], [/Xes/ACC.PL], [/Xon/GEN.PL] }

		<i>a</i> -declension	<i>i1</i> -declension	<i>i2</i> -declension	<i>u</i> -declension
SG	NOM	<i>imera</i>	<i>texni</i>	<i>poli</i>	<i>maimu</i>
	ACC	<i>imera</i>	<i>texni</i>	<i>poli</i>	<i>maimu</i>
	GEN	<i>imeras</i>	<i>texnis</i>	<i>poleos</i>	<i>maimus</i>
PL	NOM	<i>imeres</i>	<i>texnes</i>	<i>polis</i>	<i>maimuðes</i>
	ACC	<i>imeres</i>	<i>texnes</i>	<i>polis</i>	<i>maimuðes</i>
	GEN	<i>imeron</i>	<i>texnon</i>	<i>poleon</i>	<i>maimuðon</i>
		'day (fem.)'	'art, skill (fem.)'	'town (fem.)'	'monkey (fem.)'

- (8.23) a. Paradigm rule for the *a*-declension
 { [/Xa/NOM.SG], [/Xa/ACC.SG], [/Xas/GEN.SG],
 [/Xes/NOM.PL], [/Xes/ACC.PL], [/Xon/GEN.PL] }
- b. Paradigm rule for the *i1*-declension
 { [/Xi/NOM.SG], [/Xi/ACC.SG], [/Xis/GEN.SG],
 [/Xes/NOM.PL], [/Xes/ACC.PL], [/Xon/GEN.PL] }

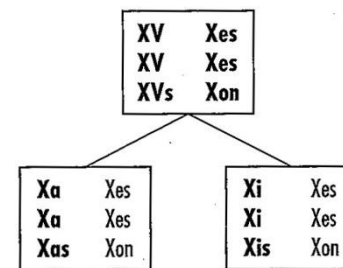
“Rule-schema”

- Paradigm rules
- Rule schema
 - Expresses generalizations over paradigm rules, across inflection classes
- “Inheritance hierarchy”



- (8.23) a. Paradigm rule for the *a*-declension
 { [/Xa/NOM.SG], [/Xa/ACC.SG], [/Xas/GEN.SG],
 [/Xes/NOM.PL], [/Xes/ACC.PL], [/Xon/GEN.PL] }
- b. Paradigm rule for the *i*l-declension
 { [/Xi/NOM.SG], [/Xi/ACC.SG], [/Xis/GEN.SG],
 [/Xes/NOM.PL], [/Xes/ACC.PL], [/Xon/GEN.PL] }

- (8.24) Rule schema for (8.23a–b)
 { [/XV/NOM.SG], [/XV/ACC.SG], [/XVs/GEN.SG],
 [/Xes/NOM.PL], [/Xes/ACC.PL], [/Xon/GEN.PL] }



The full inheritance hierarchy for modern Greek nouns

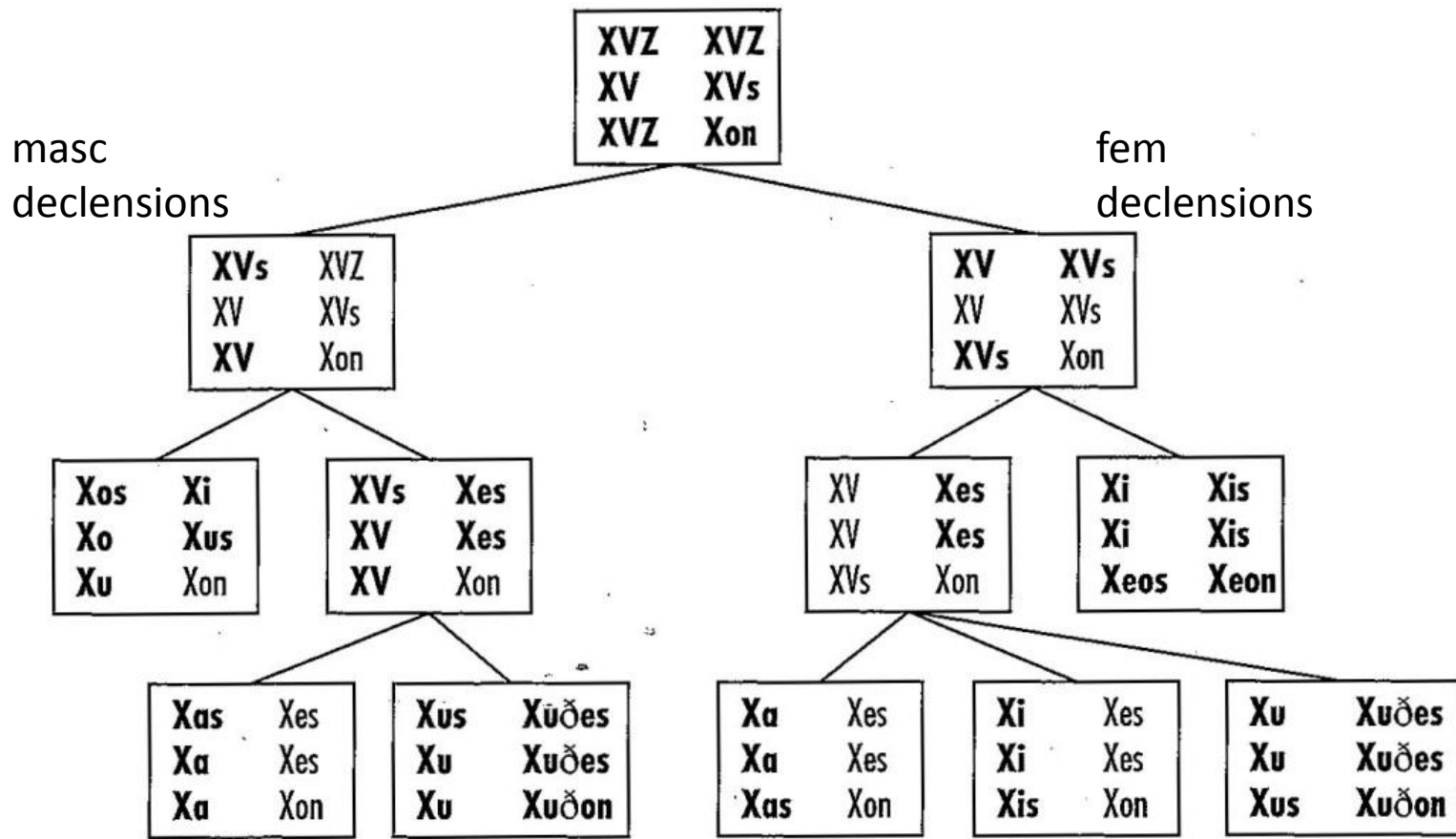


Figure 8.2 An inheritance hierarchy for seven Modern Greek declension classes

Value of inheritance hierarchy

- Contributes to general, streamlined description
- ‘help us to see that inflection classes can be related to each other to greater or lesser degrees’ (HS 171)
- Help understand change in form of inflection class over time

The full inheritance hierarchy for modern Greek nouns

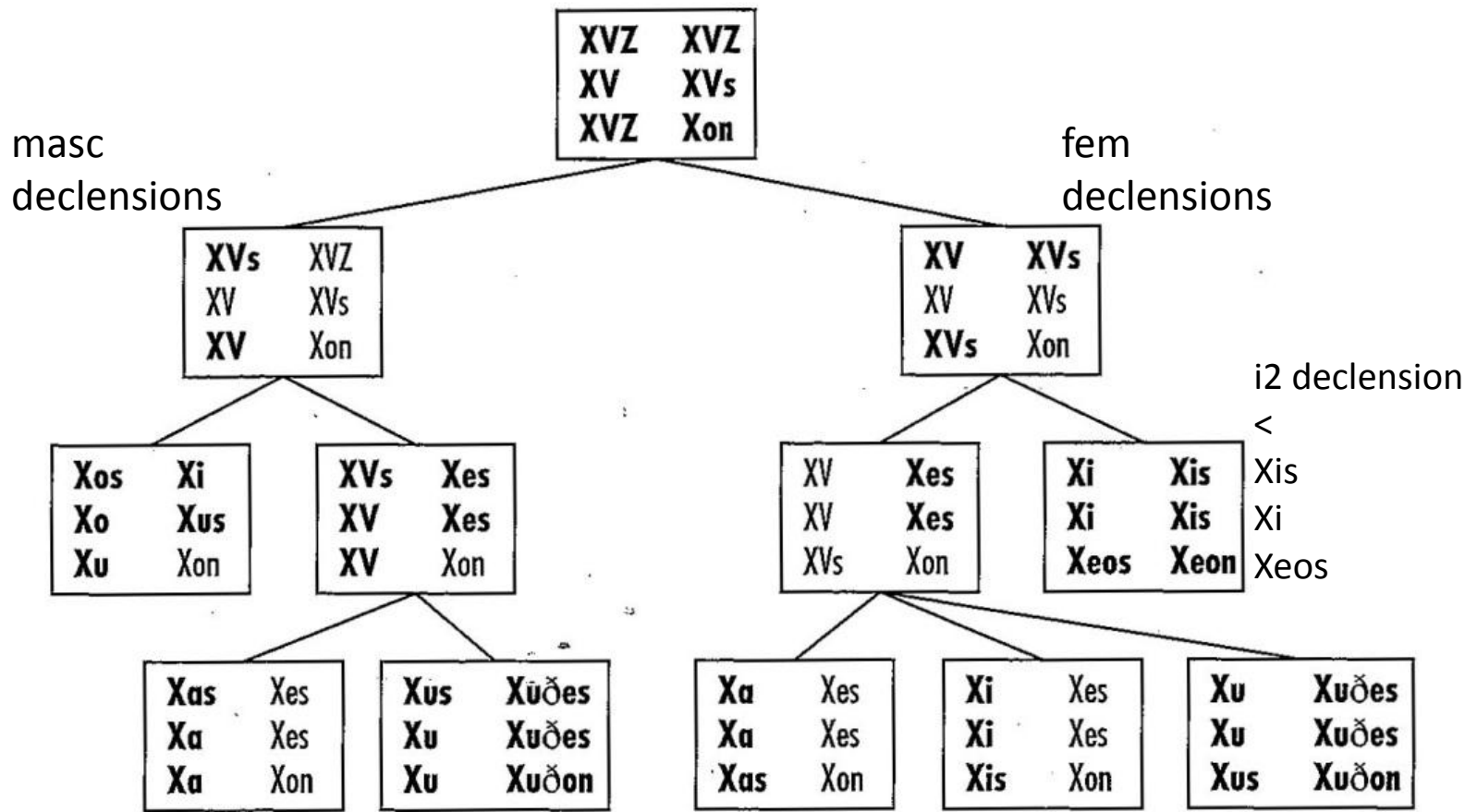


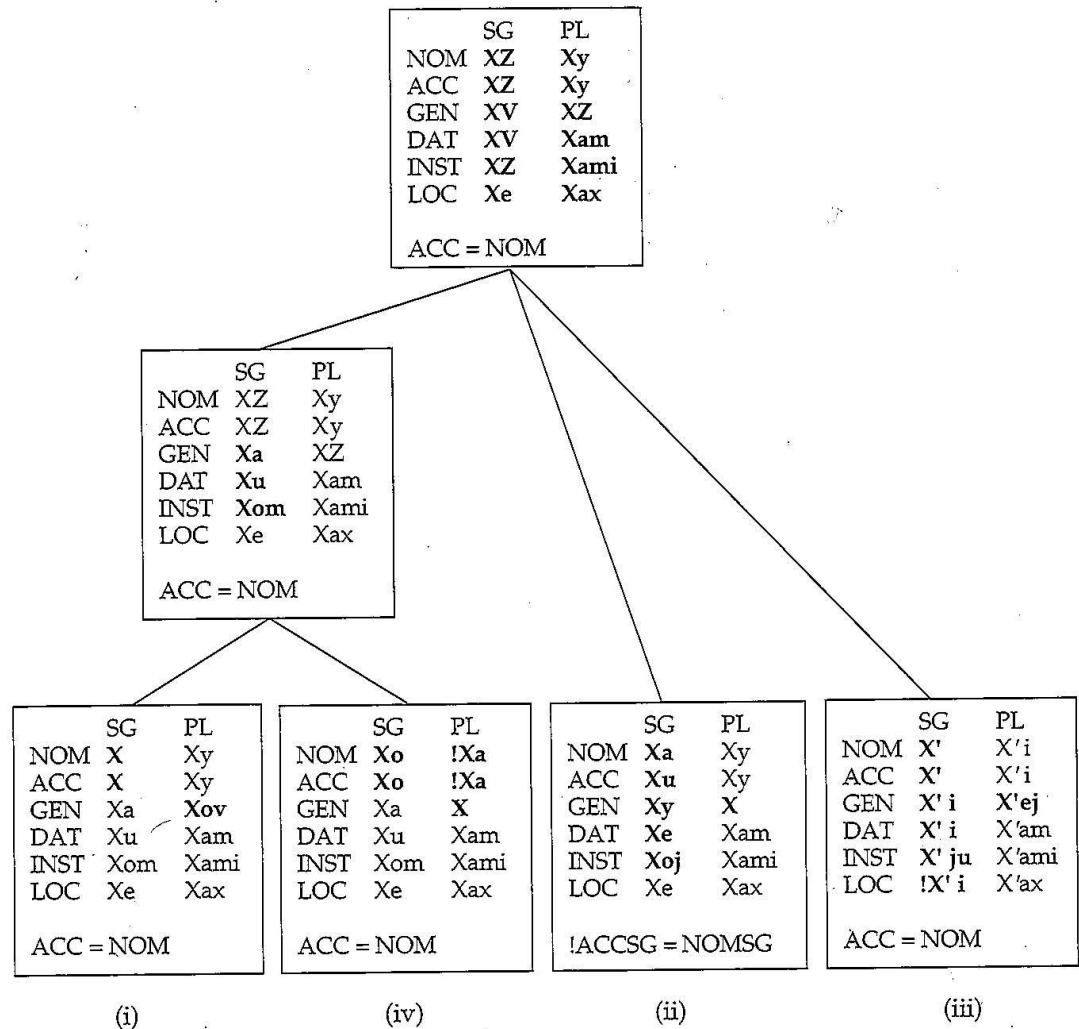
Figure 8.2 An inheritance hierarchy for seven Modern Greek declension classes

5. Consider the following four inflection classes of Russian nouns, and try to set up an inheritance hierarchy corresponding to Figure 8.2. (see Corbett and Fraser 1993). (Note that <y> and <i> stand for the same phoneme. Also, note that the spelling obscures the stem shape in (iii), and the following all stand for the phoneme /tʲ/: <tʹ>, <tj>, and plain <t> when followed by <e> or <i>.)

	(i)	(ii)	(iii)	(iv)
	'law'	'room'	'bone'	'swamp'
NOM.SG	<i>zakon</i>	<i>komnata</i>	<i>kostʹ</i>	<i>boloto</i>
ACC.SG	<i>zakon</i>	<i>komnatu</i>	<i>kostʹ</i>	<i>boloto</i>
GEN.SG	<i>zakona</i>	<i>komnaty</i>	<i>kosti</i>	<i>bolota</i>
DAT.SG	<i>zakonu</i>	<i>komnate</i>	<i>kosti</i>	<i>bolotu</i>
INST.SG	<i>zakonom</i>	<i>komnatoj</i>	<i>kostʹju</i>	<i>bolotom</i>
LOC.SG	<i>zakone</i>	<i>komnate</i>	<i>kosti</i>	<i>bolote</i>
NOM.PL	<i>zakony</i>	<i>komnaty</i>	<i>kosti</i>	<i>bolota</i>
ACC.PL	<i>zakony</i>	<i>komnaty</i>	<i>kosti</i>	<i>bolota</i>
GEN.PL	<i>zakonov</i>	<i>komnat</i>	<i>kostej</i>	<i>bolot</i>
DAT.PL	<i>zakonam</i>	<i>komnatam</i>	<i>kostjam</i>	<i>bolotam</i>
INST.PL	<i>zakonami</i>	<i>komnatami</i>	<i>kostjami</i>	<i>bolotami</i>
LOC.PL	<i>zakonax</i>	<i>komnatax</i>	<i>kostjax</i>	<i>bolotax</i>

The following is an inheritance hierarchy for Russian nominal inflection classes. Inflectional information that is shared by most or all of the classes is introduced at the highest node in the hierarchy (e.g. dative, instrumental and locative plural forms), and more specific information is introduced at lower nodes (e.g. the genitive plural form). In a few instances information at lower nodes overrides the inherited information (e.g. nominative plural form in (iv)).

HS analysis



Latvian Nominal Declension

- What are inflection classes?
 - Paradigm rules?
 - Rule schemata?
 - Inheritance hierarchy?
- Any syncretism?
 - Rules of referral?

	‘father’ tæ:v M1	‘father’ tæ:va M1alt	‘swan’ gulbi M2	‘market’ tirgu M3	‘sister’ ma:sa F1	‘land’ zeme F2	‘cow’ guɔv F3	‘cow’ guɔvi F3-alt
nom. sg.	-s	V→0, -s	-s	-s			-s	V→0, -s
loc. sg.	-a:	-:	-:	-:	-:	-:	-i:	-:
acc. sg.	-u	-u ²			-u ²	-i ⁴	-i	
dat. sg.	-am	-m	-m	-m	-y	-y	-iy	-y
gen. sg.	-a		-a	-s	-s	-s	-s	V→0, -s
nom. pl.	-i	V→0, -i	-i ³	-i ¹	-s	-s	-is	-s
loc. pl.	-uɔs	-uɔs ²	-uɔs ³	-uɔs	-:s	-:s	-i:s	-:s
acc. pl.	-us	-us ²	-us ³	-us ¹	-s	-s	-is	-s
dat. pl.	-iæm	-iæm ²	-iæm ³	-iæm ¹	-:m	-:m	-i:m	-:m
gen. pl.	-u	-u ²	-u ³	-u ¹	-u ²	-u ⁵	-yu	-u ³

¹u→0/___i,u

²a→0/___u, i

³i→y/___i,u

⁴e→0/___i

⁵e→y/___u

Paradigm rules

		nom.sg	loc.sg	acc.sg	dat.sg	gen.sg	nom.pl	loc.pl	acc.pl	dat.pl	gen.pl
M1	X	Xs	Xa:	Xu	Xam	Xa	Xi	Xuɔs	Xus	Xiæm	Xu
M2	X	Xs	X:	X	Xm	Xa	Xi	Xuɔs	Xus	Xiæm	Xu
M3	X	Xs	X:	X	Xm	Xs	Xi	Xuɔs	Xus	Xiæm	Xu
F1	X	X	X:	Xu	Xy	Xs	Xs	X:s	Xs	X:m	Xu
F2	X	X	X:	Xi	Xy	Xs	Xs	X:s	Xs	X:m	Xu
F3	X	Xs	Xi:	Xi	Xiy	Xs	Xis	Xi:s	Xis	Xi:m	Xyu
F3(alt)	XV	Xs	XV:	XV	XVy	Xs	XVs	XV:s	XVs	XV:m	XVu

Rule schemata, inheritance hierarchy

XZ	XY
XZ:	XVVs
XZ	XZs
XZ	XVVm
XZ	Xu

Y = {C,V}
 Z = ({C,V})

M:
 Xs Xi
 XV: Xuɔs
 XZ Xus
 XZm Xiæm
 XZ Xu

F:
 XZ Xs
 X: X:s
 XZ Xs
 Xy X:m
 Xs Xu

M1:
 Xs Xi
 Xa: Xuɔs
 Xu Xus
 Xam Xiæm
 Xa Xu

M2,3:
 Xs Xi
 X: Xuɔs
 X Xus
 Xm Xiæm
 XY Xu

F1,2:
 X Xs
 X: X:s
 XV Xs
 Xy X:m
 Xs Xu

F3alt:
 Xs XVs
 XV: XV:s
 XVS XVs
 XVy XV:m
 Xs XVu

Defective lexemes

- lack certain inflections/word-forms (that exist for other lexemes)
 - EXAMPLE: Russian *pobedit* ‘win, defeat’ has no future tense
 - EXAMPLE: there is no (certain) past tense of *abide*, (*slink*, *sneak*)
- defective lexemes are relatively rare, often remnant from old unproductive paradigms that haven’t been regularized or eliminated:

Imperfections

periphrasis

- where a given form of a lexeme is expressed using a phrase (instead of an affix/morphological pattern)
- EXAMPLE: **beautiful-er, more beautiful, ...more intelligent, more active*
- (these would be defective lexemes except that there is a *pattern* of periphrasis)

categoryal periphrasis

- when an entire would-be inflectional category (future tense, conditional, etc.) is formed using a phrase (separate words) instead of morphological patterns:
- English future tense: *I will go,...* also *I am going to go...*; English has no future tense morpheme or morphological pattern, though we have past tense morphological patterns (*go/went, walk/walked, spend/spent...*);
 - cf. *French*: *je passais* (past imperfect), *je passe* (present), *je passerai* (future)
- English conditional: *I would go, ...* cf. *French je passerais*
- French “imminent” future: *je vais aller, tu vas parler, elle va danser,...*

French periphrasis

(orthographic)

	<i>present</i>	<i>future</i>	<i>imperfect past</i>	<i>perfect past</i>	<i>imminent future</i>
<i>1sg</i>	parle	parlerais	parlais	ai parlé	vais parlé
<i>2sg</i>	parles	parlerais	parlais	as parlé	vas parlé
<i>3sg</i>	parle	parlerai	parlait	a parlé	va parlé
<i>1pl</i>	parlons	parlerons	parlions	avons parlé	allons parlé
<i>2pl</i>	parlez	parlerez	parliez	avez parlé	allez parlé
<i>3pl</i>	parlent	parleront	parlaient	ont parlé	vont parlé