

## PIE Nouns

### Nouns and Substantives

Noun stems in Proto-Indo-European belonged to a larger class of stems often called *substantives*. A substantive is any open-class stem which can be *declined*, that is, provided with endings which express *case* and *number*.

Included in the substantives are *nouns* (including names), *adjectives* and *participles* (adjectives formed from verbs: these also have aspect and voice).

### Gender

In addition to case and number, substantives also have the property of *gender*. Although there are three genders (masculine, feminine, neuter), it was only in late PIE that feminine nouns were systematically distinguished from masculines in their inflection. Nevertheless, feminine *adjectives* showed distinct inflectional forms.

The Anatolian languages continue the early situation and have only two genders (animate and neuter), but the remaining IE lgg. developed specific inflections correlated with feminine gender.

### Concord

Nouns possess gender *inherently*: their gender is a fixed grammatical property. On the other hand *adjectives* and *participles*, as well as certain *pronouns*, have their gender determined by the context in which they occur; this is known as *concord*.

For example, an adjective will normally have the same gender and number as the noun it modifies.

## Thematic and Athematic Inflection

As with verbs, the inflection of substantives depends in part on whether they are *thematic* (end in \*-e- or \*-o-) or *athematic*.

## Number

As in the verbal system there are three numbers in the inflection of PIE substantives: singular, dual, and plural.

## Case

There were **eight** cases in PIE: nominative, vocative, accusative, instrumental, dative, ablative, genitive and locative. These eight cases survive in Sanskrit, but in other lgg. the some of the cases have been lost and their functions taken over by other cases.

Case marking is a signal of the function of the noun in the sentence. For example, the subject of a verb is usually nominative while the object is usually accusative and the indirect object is typically dative.

*Zelda bet Mary five dollars that ...*

NOM          DAT          ACC

The vocative is used when addressing someone.

*'Zelda! Come here!' said Mary.*

VOC                                  NOM

The instrumental normally denotes that the noun is used in order to achieve the result denoted by the verb.

*Zelda broke the pot with a hammer.*

NOM                  ACC          INSTR

The genitive usually denotes the possessor, the locative the location and the ablative the source:

*Darleen's cat dropped the dead mouse from the backyard in the kitchen.*

GEN            NOM                            ACC                            ABL                            LOC

In English and in the modern IE lgg. many of the relations expressed by the cases are shown by prepositions. In the earliest IE lgg. the object of a preposition appeared in a case and the meaning was often determined by both the choice of preposition and the case of the noun that followed:

Gk:	παρὰ τοῦ Σωκράτους	παρὰ τὸν Σωκράτη	παρὰ τῷ Σωκράτει
	side      Socrates-GEN	side      Socrates-ACC	side      Socrates-DAT
	'from the side of Socrates'	'to the side of Socrates'	'at the side of Socrates'
	= 'from Socrates'	'to Socrates'	'by Socrates'

It is thought that in many instances prepositions were originally adverbs or nouns. It should be borne in mind that in PIE they probably *followed* the noun they governed, and therefore were in fact *postpositions*.

- \*apo            'from'
- \*en            'in'
- \*en-ter        'crossing (\*ter) in' > 'within, inside'
- \*epi/\*opi     'upon, by'
- \*kata/\*kmta 'down'
- \*kom          'with'
- \*ṅd<sup>h</sup>er, \*ṅd<sup>h</sup>os    'under'
- \*ni            'down, under'
- \*per, \*per-i 'around, through'
- \*prō, \*prō    'forward'
- \*uper         'above'
- \*upo         'below'

## Oblique vs. Direct cases

The nominative, accusative and vocative are known as the *direct* cases.

The remaining cases are as a group called *oblique*.

## Chart of substantival desinences

In the chart below if no ending is given in the neuter column the ending is identical to the one in the animate column.

	athematic		thematic	
	m. or f.	neuter	m. or f.	neuter
sg. nom.	*-s ~ *-Ø	*-Ø	*-o-s	*o-m
voc.	*-Ø	= <i>nom.</i>	*-e-Ø	= <i>nom.</i>
acc.	*-m	= <i>nom.</i>	*-o-m	= <i>nom.</i>
inst.	*-éh <sub>1</sub> ~ *-h <sub>1</sub>		*-o-h <sub>1</sub>	
dat.	*-éi		*-o-ei	
abl.	*-és ~ *-ós ~ *-s		*-e-Hat (→ *e-ad)	
gen.	= <i>abl.</i>		? *-o-sio	
loc.	*' -Ø, later *-i		*' -e-Ø, later *-e-i	
du. nom/acc/voc.	*-h <sub>1</sub> e ~ -h <sub>1</sub>	*-ih <sub>1</sub>	*-o-h <sub>1</sub>	
inst/dat/abl.	<i>unknown</i>		<i>unknown</i>	
gen/loc.	*? -ous		<i>unknown</i>	
pl. nom./voc.	*-es	*-h <sub>2</sub> ~ *-Ø	*-o-es	-e-h <sub>2</sub>
acc.	*-ns	= <i>nom.</i>	*-o-ns	= <i>nom.</i>
inst.	*-b <sup>h</sup> í		*-o-ois (→ *-ōis)	
dat./abl.	*-mós		*-o-mos or ?*-o-i-mos	
gen.	*-oHom		*-o-oHom	
loc.	*-sú		*-o-i-su	

Note that the theme vowel \*-o- does not show the same distribution as in the verb. Here \*-o- is replaced by \*-e- only in the nom.sg., abl.sg., loc.sg. and neut.pl.

## Szemerényi's Law

The normal animate nom.sg. ending was \*-s and the neuter plural \*-h<sub>2</sub>.

Noun stems ending in a vowel plus a consonantal resonant (\*r, \*l, \*m, \*n) or \*s (optionally followed by h<sub>2</sub>) were subject to **Szemerényi's Law**, according to which the the nom. sg. ending \*-s (as well as the neut. pl. ending \*-h<sub>2</sub>) was deleted and the last vowel of the stem lengthened:

Vr-s →  $\bar{V}r$ , Vl-s →  $\bar{V}l$ , Vm-s →  $\bar{V}m$ ,  $\bar{V}n$ -s →  $\bar{V}n$

Vr-h<sub>2</sub> →  $\bar{V}r$ , Vl-h<sub>2</sub> →  $\bar{V}l$ , Vm-h<sub>2</sub> →  $\bar{V}m$ ,  $\bar{V}n$ -h<sub>2</sub> →  $\bar{V}n$

\*ph<sub>2</sub>tér-s → \*ph<sub>2</sub>tér 'father' nsg.

\*uksén-s → \*uksén 'bull, ox' nsg.

\*néb<sup>h</sup>os-h<sub>2</sub> → néb<sup>h</sup>ōs 'clouds' npl. neut.

A laryngeal to the left of the final \*-s was also lost:

Vnh<sub>2</sub>-s →  $\bar{V}n$

\*g<sup>w</sup>én-h<sub>2</sub>-s → \*g<sup>w</sup>én 'woman' nsg.

Finally, a stem-final \*n was also lost after \*ō at the end of a word:

-on-s →  $\bar{o}$

\*kúón-s → kúón → k<sub>u</sub>ō 'dog' nsg.

## Locative Singular

Originally it appears that the locative sg. had no explicit ending, but in this case the accent of the noun shifted to the final syllable. In later PIE an inst. ending \*í (athematic) and \*e-i (thematic) developed. Then in most lgg. (except Oscan) \*-e-i changed to \*-o-i so as to regularize the distribution of the \*-o theme vowel.

## Accentuation

The direct case endings are unaccented.

The oblique case endings are accented, but lose the accent when attaching to a noun stem that is accented.

## **Basic Accentuation Principle of PIE**

This is part of a general accentual phenomenon in PIE: the leftmost accented morpheme in a word is the one that retains its accent.

## **Accent-Ablaut Types**

The shift in accent within the forms of an inflected substantive was correlated in most cases with a change in grade. Typically, unaccented morphemes reduce to their zero grade, and accented morphemes retain the full grade or extended grade.

The full system of alternations in accent placement and its connection to ablaut is still not completely understood, but the following types of stems are usually identified:

### **A. Monosyllabic stems**

#### **A1. ‘amphikinetic’ (no inherent accent)**

Direct cases: accented full grade

Oblique cases: unaccented zero grade: accent on the desinence

#### **A2. ‘acrostatic’ (inherent accent)**

The stem is always accented, but the direct cases and oblique cases show different grades, e.g. \*é vs. \*é or \*ó vs. \*é.

### **B. Polysyllabic stems**

#### **B1. ‘acrostatic’ (inherent accent)**

similar to A2

#### **B2. ‘amphikinetic’ (no inherent accent)**

Direct cases: accent on the leftmost syllable of the stem

Oblique cases: accent on the ending

### B3. 'hysterokinetic'

Direct cases: accent on the rightmost syllable of the stem (all preceding syllables of the stem are fixed in the zero-grade)

Oblique cases: accent on the ending

### B4. 'proterokinetic'

Direct cases: accent on the *second-to-last* (penultimate) *syllable of the stem*

Oblique cases: accent on the *rightmost syllable of the stem*.

### Examples:

#### A1. Acrodynamic monosyllabic

\*h<sub>2</sub>ént- ~ \*h<sub>2</sub>nt̥- 'forehead' m.

\*h<sub>2</sub>nér- ~ \*h<sub>2</sub>nr- 'man' m.

\*diéu- ~ \*diu̯- 'sky, sky god' m.

\*uréh<sub>2</sub>d- ~ \*urh<sub>2</sub>d- 'root' f.

\*kér- ~ \*krd- 'heart' n.

\*Hiáĝ- ~ \*Hiĝ- 'sacrifice'

\*iéug- ~ \*iug- 'yoke'

#### A2. Acrostatic monosyllabic (Fortson's 'root nouns')

\*dóm- ~ \*dém- 'house' f.

\*nók<sup>w</sup>t- ~ \*nék<sup>w</sup>t- 'night' f.

\*h<sub>2</sub>óst- ~ \*h<sub>2</sub>ést- 'bone' n.

\*mém̥s- ~ \*mém̥s- 'meat' n.

\*pód- ~ \*ped- 'foot' m. (but nsg. is \*pód-s)

#### B1. Acrostatic polysyllabic

\*méh<sub>1</sub>ns̥- ~ \*méh<sub>1</sub>ns̥- 'moon' f.

\*h<sub>2</sub>óui- ~ \*h<sub>2</sub>éui- 'sheep' n.

\*h<sub>1</sub>néh<sub>3</sub>mn- ~ \*h<sub>1</sub>néh<sub>3</sub>mn- 'name' n.

\*H<sub>1</sub>ék<sup>w</sup>r- ~ \*H<sub>1</sub>ék<sup>w</sup>n- ‘liver’ n.  
\*ós-r- ~ \*és-n- ‘autum’ n.  
\*u<sub>1</sub>ástu- ~ \*u<sub>1</sub>ástu- ‘settlement’ n.  
\*krótu- ~ \*krétu- ‘insight, intelligence’

## B2. Amphikinetic polysyllabic

\*póntoh<sub>2</sub>- ~ \*p<sub>ṅ</sub>th<sub>2</sub>- ‘path’ m.  
\*léimon- ~ \*limn- ‘lake’ f.  
\*d<sup>h</sup>éġ<sup>h</sup>ōm- ~ \*(d<sup>h</sup>)ġ<sup>h</sup>m- ‘earth’ f. (zero-grade leads to ‘thorn’ cluster:  
    \*d<sup>h</sup> lost in oblique cases, or metathesized in \*ġ<sup>h</sup>d<sup>h</sup>sém loc.sg.)  
\*u<sub>1</sub>édōr- ~ udn- ‘waters’ n.  
\*h<sub>2</sub>éusos ~ \*h<sub>2</sub>uss- ‘dawn’

## B3. Hysterokinetic polysyllabic

\*ph<sub>2</sub>tér- ~ \*ph<sub>2</sub>tr- ‘father’ m.  
\*h<sub>2</sub>stér- ~ \*h<sub>2</sub>str- ‘star’ m.  
\*d<sup>h</sup>ugh<sub>2</sub>tér- ~ \*d<sup>h</sup>ugh<sub>2</sub>tr- ‘daughter’ f.  
\*uk<sup>(w)</sup>sén- ~ \*uk<sup>(w)</sup>sn- ‘bull, ox’ m. (NB. NE pl. ox-en)  
\*d<sub>ṅ</sub>ġ<sup>h</sup>uéh<sub>2</sub> ~ \*d<sub>ṅ</sub>ġ<sup>h</sup>uh<sub>2</sub>- ‘tongue’ f.

## B4. Proterokinetic: quite common, including derived nouns with certain suffixes

deverbal nouns ending in \*-tei- (f.) denoting acts

\*d<sup>h</sup>éh<sub>1</sub>-ti- ~ \*d<sup>h</sup>h<sub>2</sub>-túi- ‘act of putting’  
\*g<sup>w</sup>ém-ti- ~ \*g<sup>w</sup>m-túi- ‘act of walking: step’  
\*mén-ti- ~ \*mn-túi- ‘thought’

deverbal nouns ending in \*-teu- (m.)

\*ġéus-tu- ~ \*ġus-téu- ‘taste’



most deverbal nouns ending in \*-men- (n.)

\*séh<sub>1</sub>-mn- ~ \*sh<sub>1</sub>-mén- ‘seed’

\*b<sup>h</sup>léḡ<sup>h</sup>-mn- ~ \*b<sup>h</sup>lḡ<sup>h</sup>-mén- ‘sacred formula’

most feminine stems ending in \*-eh<sub>2</sub>- (unless derived from thematic stems)

\*g<sup>w</sup>én-h<sub>2</sub>- ~ \*g<sup>w</sup>n-éh<sub>2</sub>- ‘woman’

\*h<sub>1</sub>uid<sup>h</sup>éu-h<sub>2</sub>- ~ h<sub>1</sub>uid<sup>h</sup>u-éh<sub>2</sub>- ‘woman’

many neuter stems ending in \*-r- ~ \*-én- or \*-l- ~ ~ \*-én-

\*uód-r̥ ~ ud-én- ‘water’

\*sóh<sub>2</sub>u-l̥ ~ \*sh<sub>2</sub>u-én- ‘sun’

\*péh<sub>2</sub>u-r̥ ~ \*péh<sub>2</sub>u-én- ‘fire’ n.

Various neuter stems in \*-éi- ~ \*-i or \*-éu- ~ \*-u

(perh. orginially acrostatic, as Forston says in his book)

\*mór-i- ~ \*mr-éi- ‘sea’ n.

\*ḡón-u ~ \*ḡn-éu- ‘knee’ n.

\*dór-u ~ \*dr-éu- ‘tree’ n.

\*h<sub>2</sub>ou-i ~ \*h<sub>2</sub>u-éi- ‘life force’ n.

## Accentuation of Thematic Nouns

Thematic noun stems were of two types:

- C1. accented on the initial syllable of the root
- C2. accented on the theme vowel.

The accent did not move: it was fixed on the same syllable in every form.

### C1. Initial syllable root-accented thematic

\*éku-o- 'horse' m.

\*uérĝ-o- 'work' n.

\*h<sub>2</sub>u<sub>o</sub>l̥n-e-h<sub>2</sub>- 'wool' f.

### C2. Theme-vowel-accented

\*deiu-ó- 'god' m.

\*snus-ó- 'daughter-in-law' f.

\*iug-ó- 'yoke' n.

\*d<sup>h</sup>oHn-é-h<sub>2</sub>- 'grain' f.

In late PIE a new inflectional type, normally feminine gender, emerged through suffixing \*-h<sub>2</sub> (seen in old fem. nouns like \*g<sup>w</sup>én-h<sub>2</sub>- ~ \*g<sup>w</sup>n-éh<sub>2</sub> 'woman') to regular thematic stems. However, on analogy with the full grade of the \*-eh<sub>2</sub> suffix (as in \*g<sup>w</sup>n-éh<sub>2</sub>) the theme vowel was fixed as \*-e-. This gave rise to a new inflectional type in 'thematic' \*-eh<sub>2</sub>- (> \*-ā). These too showed either fixed accent on the first syllable of the root, or fixed accent on the theme vowel \*-é-(h<sub>2</sub>-).

## Neuter Plurals and Collectives

Originally neuter nouns did not have plurals. Instead, the concept of plurality for neuters could only be expressed through deriving a new ‘collective’ noun stem with the suffix  $*-h_2$ . (This is like the English suffix *-age* which can form jocular collectives like ‘*babe-age*’ = ‘lots of babes’ (construed as a single object).)

$*k^wék^wl-o-$  ‘wheel’ m.

$*k^wék^wl-é-h_2$  ‘wheel-age’ = ‘set of wheels’

Because the collectives had fixed accent on the theme  $*-é-h_2$ , when the  $*-h_2$  was reinterpreted as the *plural* ending for neuter nouns, the result was that some nouns also showed a pattern of shifting the accent from the singular to the plural (not just from the direct cases to the oblique cases).

	A2	A1	B1	B2
sg. nom.	nók <sup>w</sup> t-s	uréh <sub>2</sub> d-s	méh <sub>1</sub> ŋs-s → méh <sub>1</sub> ŋs	léimon-s → léimō
voc.	nók <sup>w</sup> t-∅	uréh <sub>2</sub> d-∅	méh <sub>1</sub> ŋs-∅	léimon-∅
acc.	nók <sup>w</sup> t-ṃ	uréh <sub>2</sub> d-ṃ	méh <sub>1</sub> ŋs-ṃ	léimon-ṃ
inst.	nek <sup>w</sup> t-h <sub>1</sub>	urh <sub>2</sub> d-éh <sub>1</sub>	méh <sub>1</sub> ŋs-h <sub>1</sub>	limn-éh <sub>1</sub>
dat.	nek <sup>w</sup> t-ei	urh <sub>2</sub> d-éi	méh <sub>1</sub> ŋs-ei	limn-éi
abl/gen.	nek <sup>w</sup> t-s	urh <sub>2</sub> d-és	méh <sub>1</sub> ŋs-os	limn-és
loc.	nek <sup>w</sup> t-i	uréh <sub>2</sub> d-i	méh <sub>1</sub> ŋs-i	limén-i
du. direct	nók <sup>w</sup> t-h <sub>1</sub> e	uréh <sub>2</sub> d-h <sub>1</sub> e	méh <sub>1</sub> ŋs-h <sub>1</sub> e	léimon-h <sub>1</sub> e
pl. nom/voc.	nók <sup>w</sup> t-es	uréh <sub>2</sub> d-es	méh <sub>1</sub> ŋs-es	léimon-es
acc.	nók <sup>w</sup> t-ŋs	uréh <sub>2</sub> d-ŋs	méh <sub>1</sub> ŋs-ŋs	léimon-ŋs
inst.	nók <sup>w</sup> t-b <sup>h</sup> i	urh <sub>2</sub> d-b <sup>h</sup> í	méh <sub>1</sub> ŋs-b <sup>h</sup> i	limṃ-b <sup>h</sup> í
dat/abl.	nek <sup>w</sup> t-mos	urh <sub>2</sub> d-mós	méh <sub>1</sub> ŋs-mos	limṃ-mós
gen.	nek <sup>w</sup> t-oHom	urh <sub>2</sub> d-óHom	méh <sub>1</sub> ŋs-oHom	limn-óHom
loc.	nek <sup>w</sup> t-su	urh <sub>2</sub> d-sú	méh <sub>1</sub> ŋs-su → méh <sub>1</sub> ŋsu	limṃ-sú

	B3	B4	C1	C2
sg. nom.	$h_2stér-s \rightarrow h_2stér'$	mén-ti-s	$h_2éêgr-o-s$	nisd-ó-s
voc.	$h_2stér-\emptyset$	mén-ti- $\emptyset$	$h_2éêgr-e-\emptyset$	nisd-é- $\emptyset$
acc.	$h_2stér-m̄$	mén-ti-m	$h_2éêgr-o-m$	nisd-ó-m
inst.	$h_2str-éh_1$	$m̄n̄-tí-h_1$	$h_2éêgr-o-h_1$	nisd-ó-h <sub>1</sub>
dat.	$h_2str-éi$	$m̄n̄-téi-ei$	$h_2éêgr-o-ei$	nisd-ó-ei
abl.	$h_2str-és$	$m̄n̄-téi-s$	$h_2éêgr-e-ad$	nisd-é-ad
gen.	id.	id.	$h_2éêgr-o-sio$	nisd-ó-sio
loc.	$h_2stér-i$	$m̄n̄-téi-i \rightarrow m̄n̄-téi'$	$h_2éêgr-e-i$	nisd-é-i
du. direct	$h_2stér-h_1e$	mén-ti-h <sub>1</sub>	$h_2éêgr-o-h_1$	nisd-o-h <sub>1</sub>
pl. nom/voc.	$h_2stér-es$	mén-tei-es	$h_2éêgr-o-es$	nisd-ó-es
acc.	$h_2stér-n̄s$	mén-ti-ns	$h_2éêgr-o-ns$	nisd-ó-ns
inst.	$h_2str-b^{h_1}$	$m̄n̄-ti-b^{h_1}$	$h_2éêgr-ōis$	nisd-ōis
dat/abl.	$h_2str-mós$	$m̄n̄-tí-mos$	$h_2éêgr-o-(i)mos$	nisd-ó-(i)mos
gen.	$h_2str-óHom$	$m̄n̄-téi-oHom$	$h_2éêgr-o-oHom$	nisd-ó-oHom
loc.	$h_2str-sú$	$m̄n̄-tí-su$	$h_2éêgr-o-isu$	nisd-ó-isu

	A1	B1	B4
sg. direct	ḱér-Ø	*h <sub>1</sub> néh <sub>3</sub> -mṇ-Ø	dór-u-Ø
inst.	ḱrd-éh <sub>1</sub>	*h <sub>1</sub> néh <sub>3</sub> -mṇ-h <sub>2</sub>	dr-ú-h <sub>2</sub>
	etc.	etc.	etc.
loc.	ḱérdi	*h <sub>1</sub> néh <sub>3</sub> -mn-i	dr-eú-i
du. direct	ḱérd-ih <sub>1</sub>	*h <sub>1</sub> néh <sub>3</sub> -mn-ih <sub>1</sub>	dór-ṽ-ih <sub>1</sub>
pl. direct	ḱérd-h <sub>2</sub>	—	dór-u-h <sub>2</sub>
inst.	ḱrd-b <sup>h</sup> i	—	dr-ú-b <sup>h</sup> i
gen.	ḱrd-óHom	—	dr-éu-oHom
	etc.		

	C1	C2	A2 (in *-es)
sg. direct	uérġ-o-m	ṽug-ó-m	néb <sup>h</sup> -os-Ø
inst.	uérġ-o-h <sub>1</sub>	ṽug-ó-h <sub>1</sub>	néb <sup>h</sup> -es-h <sub>1</sub>
	etc.	etc.	etc.
loc.	uérġ-e-i	ṽug-é-i	néb <sup>h</sup> -es-i
du. direct	uérġ-ó-ih <sub>1</sub>	ṽug-ó-ih <sub>1</sub>	néb <sup>h</sup> -es-ih <sub>1</sub>
pl. direct	uérġ-e-h <sub>2</sub>	ṽug-é-h <sub>2</sub>	néb <sup>h</sup> -os-h <sub>2</sub> → néb <sup>h</sup> -ōs
inst.	uérġ-ōis	ṽug-óis	néb <sup>h</sup> -es-b <sup>h</sup> i
gen.	uérġ-o-oHom	ṽug-ó-oHom	néb <sup>h</sup> -es-oHom
	etc.		

## Adjectives

Adjective stems are declined like noun stems, with the exception that adjectives have a specific feminine form.

For athematic stems, the feminine form is made by adding the suffix  $*-ieh_2-$ . The resulting stem is proterokinetic (type B4).

For thematic stems, the feminine form is made by adding the suffix  $*-h_2-$ .

Most adjective stems fall into the following categories:

**a. thematic adjective stems** (m.n.  $*-o-$ , f.  $*-o-h_2-$  or m.n.  $*-ó-$ , f.  $*-ó-h_2-$ )

**b. u-stems** (proterokinetic) (m.n.  $-éu-$  ~  $*-ú-$  ~  $-u-$  ~ , f.  $*-éuih_2-$  ~  $*uiéh_2-$ )

**c. active participles of athematic verbs** (hysterokinetic) (m.n.  $*-ónt-$  ~  $*-nt-$ , f.  $*-óntih_2-$  ~  $*-ntiéh_2-$ )

**d. active participles of thematic verbs** (m.n.  $*-ónt-$ , f.  $*-óntih_2-$ )

**e. perfect participles** (amphikinetic in early PIE, mostly hysterokinetic in late PIE) (m.n.  $*-uós-$  ~  $*-us-$ , f.  $*uósih_2$  ~  $*usiéh_2$ )

## Adjective Paradigms

		mn. *ténh <sub>2</sub> -u- ~ *tṅh <sub>2</sub> -éu-, f. *tṅh <sub>2</sub> -éu-ih <sub>2</sub> - ~ *tṅh <sub>2</sub> -u-íéh <sub>2</sub> - ‘thin’	
		m. (n.)	f.
sg.	nom.	ténh <sub>2</sub> -u-s (-Ø)	tṅh <sub>2</sub> -éu-ih <sub>2</sub> -Ø
	acc.	ténh <sub>2</sub> -u-m (-Ø)	tṅh <sub>2</sub> -éu-ih <sub>2</sub> -ṁ
	inst.	tṅh <sub>2</sub> -ú-h <sub>1</sub>	tṅh <sub>2</sub> -u-íéh <sub>2</sub> -h <sub>1</sub>
	dat.	tṅh <sub>2</sub> -éu-ei	tṅh <sub>2</sub> -u-íéh <sub>2</sub> -ei
	abl./gen.	tṅh <sub>2</sub> -éu-s	tṅh <sub>2</sub> -u-íéh <sub>2</sub> -s
	loc.	tṅh <sub>2</sub> -éu-i	tṅh <sub>2</sub> -u-íéh <sub>2</sub> -i
pl.	nom./voc.	ténh <sub>2</sub> -eu-es (ténh <sub>2</sub> -u-h <sub>2</sub> )	tṅh <sub>2</sub> -éu-ih <sub>2</sub> -es
	acc.	ténh <sub>2</sub> -eu-ṅs (ténh <sub>2</sub> -u-h <sub>2</sub> )	tṅh <sub>2</sub> -éu-ih <sub>2</sub> -ṅs
	inst.	tṅh <sub>2</sub> -ú-b <sup>h</sup> i	tṅh <sub>2</sub> -u-íéh <sub>2</sub> -b <sup>h</sup> i
	dat/abl.	tṅh <sub>2</sub> -ú-mos	tṅh <sub>2</sub> -u-íéh <sub>2</sub> -mos
	gen.	tṅh <sub>2</sub> -éu-oHom	tṅh <sub>2</sub> -u-íéh <sub>2</sub> -oHom
	loc.	tṅh <sub>2</sub> -ú-su	tṅh <sub>2</sub> -u-íéh <sub>2</sub> -su

		mn. *pḷh <sub>1</sub> n-ó/é- f. *pḷh <sub>1</sub> n-é-h <sub>2</sub> - ‘full’	
		m. (n.)	f.
sg.	nom.	pḷh <sub>1</sub> n-ó-s (-m)	pḷh <sub>1</sub> n-é-h <sub>2</sub> -Ø
	acc.	pḷh <sub>1</sub> n-ó-m (-m)	pḷh <sub>1</sub> n-é-h <sub>2</sub> -m
	inst.	pḷh <sub>1</sub> n-ó-h <sub>1</sub>	pḷh <sub>1</sub> n-é-h <sub>2</sub> -h <sub>1</sub>
	dat.	pḷh <sub>1</sub> n-ó-ei	pḷh <sub>1</sub> n-é-h <sub>2</sub> -ei
	abl.	pḷh <sub>1</sub> n-é-Had	id.
	gen.	pḷh <sub>1</sub> n-ó-sio	pḷh <sub>1</sub> n-é-h <sub>2</sub> -s
	loc.	pḷh <sub>1</sub> n-ó-i	pḷh <sub>1</sub> n-é-h <sub>2</sub> -i
pl.	nom./voc.	pḷh <sub>1</sub> n-ó-es (pḷh <sub>1</sub> n-é-h <sub>2</sub> )	pḷh <sub>1</sub> n-é-h <sub>2</sub> -es
	acc.	pḷh <sub>1</sub> n-ó-ṅs (pḷh <sub>1</sub> n-é-h <sub>2</sub> )	pḷh <sub>1</sub> n-é-h <sub>2</sub> -ṅs
	inst.	pḷh <sub>1</sub> n-óis	pḷh <sub>1</sub> n-é-h <sub>2</sub> -b <sup>h</sup> i
	dat/abl.	pḷh <sub>1</sub> n-ó-(i)mos	pḷh <sub>1</sub> n-é-h <sub>2</sub> -mos
	gen.	pḷh <sub>1</sub> n-ó-oHom	pḷh <sub>1</sub> n-é-h <sub>2</sub> -oHom
	loc.	pḷh <sub>1</sub> n-ó-isu	pḷh <sub>1</sub> n-é-h <sub>2</sub> -su

## Numbers

‘one’	m. (n.)	f.	
nom.	sém-s → sé̇m (sém-Ø)	sém-ih <sub>2</sub>	
voc.	sém-Ø	sém-i	
acc.	sém-m → sé̇m (sém-Ø)	sém-ih <sub>2</sub> -m̄	
inst.	sm-éh <sub>1</sub>	sm̄-iéh <sub>2</sub> -h <sub>1</sub>	
dat.	sm-éi	sm̄-iéh <sub>2</sub> -ei	
abl/gen.	sm-és	sm̄-iéh <sub>2</sub> -s	
loc.	sém-i	sm̄-iéh <sub>2</sub> -i	
‘two’	m. (n.)	f.	
dir. dual	du-ó-h <sub>1</sub> (du-ó-ih <sub>1</sub> )	? *du-é-h <sub>2</sub> -ih <sub>1</sub>	*duis ‘twice’
‘three’	m. (n.)	f.	
nom.voc. pl.	tréi-es (trí-h <sub>2</sub> )	tisr-es	*tris ‘thrice’
acc.	trí-ns (trí-h <sub>2</sub> )	tisr-ns	
inst.	tri-b <sup>h</sup> í	tisr̄-b <sup>h</sup> í	
dat/abl.	tri-mós	tisr̄-mós	
gen.	tri-óHom	tisr-óHom	
loc.	tri-sú	tisr̄-sú	
‘four’	m. (n.)		
nom.voc.pl.	k <sup>w</sup> <sub>e</sub> t-ur̄-es (k <sup>w</sup> <sub>e</sub> t-ur̄-Ø)	? k <sup>w</sup> ét-esr-es	
acc.	k <sup>w</sup> <sub>e</sub> t-ur̄-ns (k <sup>w</sup> <sub>e</sub> t-ur̄-Ø)	? k <sup>w</sup> ét-esr-ns	
inst.	k <sup>w</sup> <sub>e</sub> t-ur̄-b <sup>h</sup> í	k <sup>w</sup> et-esr̄-b <sup>h</sup> í	
dat/abl.	k <sup>w</sup> <sub>e</sub> t-ur̄-mós	k <sup>w</sup> et-esr̄-mós	
gen.	k <sup>w</sup> <sub>e</sub> t-ur-óHom	k <sup>w</sup> et-esr-óHom	
loc.	k <sup>w</sup> <sub>e</sub> t-ur̄-sú	k <sup>w</sup> et-esr̄-sú	

\*pénk<sup>w</sup>e ‘five’, \*suéks ‘six’, \*septm̄ ‘seven’, \*októu ‘eight’, \*h<sub>1</sub>néu ‘nine’

\*dékm̄t (→ \*dékm̄d) ‘ten’

\*dui-dk̄mt-ih<sub>1</sub> ‘two tens’ > \*uí-k̄mt-ih<sub>1</sub> ‘twenty’

\*dk̄mt-ó-m > \*k̄mt-ó-m ‘hundred’



## Demonstrative pronoun

	m. (n.)	f.
sg. nom.	s-ó (tó-t → tód)	s-é-h <sub>2</sub>
acc.	t-ó-m (tó-t → tód)	t-é-h <sub>2</sub> -m
inst.	ton-ó-h <sub>1</sub> ?	t-é-h <sub>2</sub> -h <sub>1</sub>
dat.	tósm-ei	tós-ieh <sub>2</sub> -ei
abl.	tósm-e-Hat (→ tósmead)	tós-ieh <sub>2</sub> -s
gen.	t-ó-sio	tós-ieh <sub>2</sub> -s
loc.	tósm-i	tós-ieh <sub>2</sub> -i
du. direct	t-ó-h <sub>1</sub>	??
pl. nom.	t-ó-i	t-é-h <sub>2</sub> -es
acc.	t-ó-ns	t-é-h <sub>2</sub> -ns
inst.	tōis	t-é-h <sub>2</sub> -b <sup>h</sup> i
dat/abl.	t-ó-i-mos	t-é-h <sub>2</sub> -mos
gen.	t-ó-i-s-oHom	t-é-h <sub>2</sub> -s-oHom
loc.	t-ó-i-su	t-é-h <sub>2</sub> -su

## Personal Pronouns

	‘I’/‘we’	‘you’	‘self’	‘he’ (‘it’)	‘she’
sg. nom.	éġh <sub>2</sub> (? éġ-oh <sub>2</sub> )	túh <sub>2</sub>		éi (ít → íd)	íh <sub>2</sub>
acc.	m̄mé ~ me	tuxé ~ te	suxé ~ se	í-m (ít → íd)	íh <sub>2</sub> -m̄
inst.	méme ~ moi	téuxé ~ toi	séuxé ~ soi	í-h <sub>1</sub>	??
dat.	méġ <sup>h</sup> ie ~ moi	téb <sup>h</sup> ie ~ toi	séb <sup>h</sup> ie ~ soi	ésm-ei	és-ieh <sub>2</sub> -ei
abl.				ésm-e-Hat (→ -ad)	és-ieh <sub>2</sub> -s
gen.	méne			és-sġo (→ ésġo)	id.
loc.				és-mi	és-ieh <sub>2</sub> -i
dual nom.	uxé (? uxé-h <sub>1</sub> )	ġú (?)		??	??
acc.	ŋ <sub>3</sub> mé ~ noh <sub>3</sub>	uh <sub>3</sub> uxé ~ uxoh <sub>3</sub>			
pl. nom.	uxé-i	ġú		éġ-es (í-h <sub>2</sub> )	íh <sub>2</sub> -es (?)
acc.	ŋsmé ~ nos	usuxé ~ uos		í-ns (í-h <sub>2</sub> )	íh <sub>2</sub> -ŋs (?)
inst.	???	???		éġ-b <sup>h</sup> i	íh <sub>2</sub> -b <sup>h</sup> i
dat/abl.				éġ-mos	íh <sub>2</sub> -mos
gen.				éġ-s-oHom	íh <sub>2</sub> -s-oHom
loc.				éġ-su	íh <sub>2</sub> -su

## Other pronouns

‘my’: \*moġ-o- ~ \*meġ-o; ‘your’ (sg.) \*teux-o- ~ \*tux-o-, ‘one’s own’: \*seux-o- ~ \*sux-o-

‘that one’: \*en-o-

‘other, another’: \*aliġ-o-

## demonstrative pronouns

\*éi- m., \*ih<sub>2</sub>- f., \*id n.

‘this one’ | L is, eā, id, NE it, NHG er ‘he’ (< \*éi-s)

\*so- m., \*seh<sub>2</sub>- (> \*sā-) f., \*tód n.

‘that one’ | NE that (< \*tód), Gk ó, ἡ, τό ‘he, she, it’ (> ‘the’)

\*kī-s

‘this one’ | NE he, Lat cis (> Fr -ci), H ki

\*itero-s

‘another one’ | L iterum

\*ith<sub>2</sub>

‘thus’ | L ita

\*id<sup>h</sup>h<sub>2</sub>

‘here’ | L ibī

\*tór

‘there’ | NE there

\*todéh<sub>2</sub> (> \*todá)

‘then’ | Skt tadá, Lith tadà

\*téh<sub>2</sub>uot- (> \*táuot-)

‘so many, so long’ | TB tot

### interrogative pronouns

*k <sup>w</sup> ó-s	‘who’   NE who (< OE hwā)
*k <sup>w</sup> i-s	‘who’   L quis (> Sp/Fr qui), Gk <i>τις</i> , H <i>kuis</i>
*k <sup>w</sup> ó-d	‘what’   L quod, NE what (< OE hwæt)
*k <sup>w</sup> i-d	‘what, what one’   L quid
*k <sup>w</sup> ótero-s	‘which (of two)’   L uter, NE whether (< OE hwæðer)
*k <sup>w</sup> óm	‘when’   L cum ‘when’
*k <sup>w</sup> odéh <sub>2</sub> (> *k <sup>w</sup> odǎ)	‘when’   Skt <i>kadā</i>
*k <sup>w</sup> ór	‘where’   L quōr, NE where (< OE hwær)
*k <sup>w</sup> u ~ *k <sup>w</sup> ú (→ *ku, kú)	‘where’   L ubi (> Fr où), H <i>ku-wapi</i> , OCS <i>kŭde</i> > R <i>gde</i>
*k <sup>w</sup> óti ~ *k <sup>w</sup> éti	‘how much, how many’   L quot, Gk <i>πόσος</i>
*k <sup>w</sup> oiHo-s	‘pertaining to whom/what’   L cūius ‘of who, what’ gsg. > Sp <i>cuyo</i>

### relative pronouns

*i <sup>o</sup> -s m., *i <sup>o</sup> -éh <sub>2</sub> (> *i <sup>o</sup> ǎ), *i <sup>o</sup> -ód	‘who, what, that’   <i>ός, ἧ, ὅ</i> , Skt <i>yás, yá, yád</i>
----------------------------------------------------------------------------------------------------	---------------------------------------------------------------

### conjunctions

*-k <sup>w</sup> e	‘and’   L -que, H -ki, Skt -ca, Gk <i>τε</i>
*-i <sup>o</sup>	‘and’   H -ya
*eti	‘and, in addition’   L et (> Fr <i>et</i> , Sp <i>y</i> )
*-uē	‘or’   L -ve, Gk <i>ἢ</i> (> <i>ἢ</i> > <i>ἢ</i> )
*ne	‘not’   NE <i>no</i> , L <i>ne-</i> (> Fr <i>ne</i> ), Hit <i>natta</i>
*mē	‘not’   Gk <i>μή</i> , Skt <i>mā</i>

## Nominal Derivation

### Heteroclitite stems

These stems had different consonants in the direct case stem vs. the oblique case stem.  
The best-known examples are the neuter \*-r/-n stems:

\*u<sub>2</sub>ód-r̥ ~ ud-én- ‘water’ n.

\*péh<sub>2</sub>u<sub>2</sub>-r̥ ~ \*ph<sub>2</sub>u<sub>2</sub>-én- ‘fire’ n.

\*H<sub>1</sub>ĭék<sup>w</sup>-r- ~ \*H<sub>1</sub>ĭék<sup>w</sup>-n- ‘liver’ n.

\*h<sub>1</sub>ésh<sub>2</sub>-r- ~ \*h<sub>1</sub>sh<sub>2</sub>-én- ‘blood’ n.

\*ós-r- ~ \*és-n- ‘autum’ n.

There is also an \*-l/-n stem:

\*sóh<sub>2</sub>u<sub>2</sub>-l̥ ~ \*sh<sub>2</sub>u<sub>2</sub>-én- ‘sun’

**Abstract nouns** in \*-men ~ \*m̥n̥

**Hoffman suffix** indicating possession: \*-Hon ~ \*-Hn-

\*h<sub>2</sub>iu-Hon- ~ \*h<sub>2</sub>iu-Hn- ‘having life-force’

**Agent nouns** in \*-tér and \*-tor:

\*dh<sub>3</sub>-tér- ‘giver’ (δοτέρ-) ~ \*déh<sub>3</sub>-tor- ‘giver’ (δώτορ-)

**Neuter stems** in \*-os ~ \*-es (accent fixed on the root)

\*néb<sup>h</sup>-os/-es- ‘cloud’

\*ġén-os/-es- ‘birth’

**Possessive suffix** \*-u<sub>2</sub>ent-:

\*b<sup>h</sup>aġ-o-u<sub>2</sub>ent- ‘having a share’ > ‘wealthy’

