A GRAMMAR OF MODERN INDO-EUROPEAN

First Edition

Language and Culture

Writing System and Phonology

Morphology

Syntax

DNGHŪ

Carlos Quiles

Modesnḯ Sindhueurōpáī Grbhmńtikā

Apo Górilos Kūriakī[1] eti aliōs áugtores

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PREFACE

This first edition of Dnghu's *A Grammar of Modern Indo-European*, is a renewed effort to systematize the reconstructed phonology and morphology of the Proto-Indo-European language into a modern European language, after the free online publication of *Europaio: A Brief Grammar of the European Language* in 2006.

Modern Indo-European is, unlike Latin, Germanic or Slavic, common to most Europeans, and not only to some of them. Unlike Lingua Ignota, Solresol, Volapük, Esperanto, Quenya, Klingon, Lojban and the thousand invented languages which have been created since humans are able to speak, Proto-Indo-European is natural, i.e. it evolved from an older language – Middle PIE or IE II, of which we have some basic knowledge –, and is believed to have been spoken by prehistoric communities at some time roughly between 3000 and 2500 BC, having itself evolved into different dialects by 2500 BC – spoken until the split up of proto-languages in 2000 BC –, either from IE IIIa, like Proto-Greek and Proto-Indo-Iranian, or from IE IIIb, like Europe's Indo-European.

Proto-Indo-European has been reconstructed in the past two centuries (more or less successfully) by hundreds of linguists, having obtained a rough phonological, morphological, and syntactical system, equivalent to what Jews had of Old Hebrew before reconstructing a system for its modern use in Israel. Instead of some inscriptions and oral transmitted tales for the language to be revived, we have a complete reconstructed grammatical system, as well as hundreds of living languages to be used as examples to revive a common Modern Indo-European.

This grammar still focuses on the European Union – and thus the main Proto-Indo-European dialect of Europe, **Europe's Indo-European** –, although it remains clearly usable as a basic approach for the other known PIE dialects spoken at the time, like Proto-Anatolian for Turkey, Proto-Greek for Greece and Proto-Indo-Iranian for Western and Southern Asia, respectively. In this sense, Proto-European might be the best *lingua franca* for the Americas, while Proto-Aryan is probably the best for Asia.

The former Dean of the University of Huelva, Classical Languages' philologist and Latin expert, considers the Proto-Indo-European language reconstruction an invention; Spanish Indo-Europeanist Bernabé has left its work on IE studies to dedicate himself to "something more serious"; Francisco Villar, professor of Greek and Latin at the University of Salamanca, deems a complete reconstruction of PIE impossible; his opinion is not rare, since he supports the glottalic theory, the Armenian Homeland hypothesis, and also the use of Latin instead of English within the EU. The work of Elst, Talageri and others defending the 'Indigenous Indo-Aryan' viewpoint by N. Kazanas, and their support of an unreconstructible and hypothetical PIE nearest to Vedic Sanskrit opens still more the gap between the

mainstream reconstruction and minority views supported by nationalist positions. Also, among convinced Indo-Europeanists, there seems to be no possible consensus between the different 'schools' as to whether PIE distinguished between **ŏ** and **ă** (as Gk., Lat. or Cel.) or if those vowels were all initial **ă**, as in the other attested dialects (Villar), or if the Preterites were only one tense (as Latin *praeteritum*) with different formations, or if there were actually an Aorist and a Perfect.

Furthermore, José Antonio Pascual, a member of the Royal Spanish Academy (RAE), considers that "it is not necessary to be a great sociologist to know that 500 million people won't agree to adopt Modern Indo-European in the EU" (Spa. journal *El Mundo*, 8th April 2007). Of course not, as they won't agree on any possible question – not even on using English, which we use in fact –, and still the national and EU's Institutions work, adopting decisions by majorities, not awaiting consensus for any question. And it was probably not necessary to be a great sociologist a hundred years ago to see e.g. that the revival of Hebrew under a modern language system (an "invention" then) was a utopia, and that Esperanto, the 'easy' and 'neutral' IAL, was going to succeed by their first World Congress in 1905.

Such learned opinions are only that, opinions, just as if Hebrew and Semitic experts had been questioned a hundred years ago about a possible revival of Biblical Hebrew in a hypothetic new Israel.

Whether MIE's success is more or less probable (and why) is not really important for our current work, but a hypothesis which might be dealt with by sociology, anthropology, political science, economics and even psychology, not to talk about chance. Whether the different existing social movements, such as Pan-Latinism, Pan-Americanism, Pan-Sanskritism, Pan-Arabism, Pan-Iranism, Pan-Slavism, Pan-Hispanism, *Francophonie*, Anglospherism, Atlanticism, and the hundred different pan-nationalist positions held by different sectors of societies – as well as the different groups supporting anti-globalization, anti-neoliberalism, anti-capitalism, anti-communism, anti-occidentalism, etc. – will accept or reject this project remains unclear.

What we do know now is that the idea of reviving Europe's Indo-European as a modern language for Europe and international organizations is not madness, that it is not something new, that it doesn't mean a revolution – as the use of Spanglish, Syndarin or Interlingua – nor an involution – as regionalism, nationalism, or the come back to French, German or Latin predominance –, but merely one of the many different ways in which the European Union linguistic policy could evolve, and maybe one way to unite different peoples from different cultures, languages and religions (from the Americas to East Asia) for the sake of stable means of communication. Just that tiny possibility is enough for us to "lose" some years trying to give our best making the main Proto-Indo-European dialects as usable and as known as possible.

PREFACE TO THE FIRST EDITION

According to Dutch sociologist Abram de Swaan, every language in the world fits into one of four categories according to the ways it enters into (what he calls) the *global language system*.

- **Central**: About a hundred languages in the world belong here, widely used and comprising about 95% of humankind.
- **Supercentral**: Each of these serves to connect speakers of central languages. There are only twelve supercentral languages, and they are **Arabic, Chinese, English, French, German, Hindi, Japanese, Malay, Portuguese, Russian, Spanish** and **Swahili**.
- **Hypercentral**: The lone hypercentral language at present is English. It not only connects central languages (which is why it is on the previous level) but serves to connect supercentral languages as well. Both Spanish and Russian are supercentral languages used by speakers of many languages, but when a Spaniard and a Russian want to communicate, they will usually do it in English.
- **Peripheral**: All the thousands of other languages on the globe occupy a peripheral position because they are hardly or not at all used to connect any other languages. In other words, they are mostly not perceived as useful in a multilingual situation and therefore not worth anyone's effort to learn.

De Swaan points out that the admission of new member states to the European Union brings with it the addition of more languages, making the polyglot identity of the EU ever more unwieldy and expensive. On the other hand, it is clearly politically impossible to settle on a single language for all the EU's institutions. It has proved easier for the EU to agree on a common currency than a common language.

Of the EU's current languages, at least 14 are what we might call a 'robust' language, whose speakers are hardly likely to surrender its rights. Five of them (English, French, German, Portuguese and Spanish) are supercentral languages that are already widely used in international communication, and the rest are all central.

In the ongoing activity of the EU's institutions, there are inevitably shortcuts taken - English, French and German are widely used as 'working languages' for informal discussions. But at the formal level all the EU's official languages (i.e. the language of each member state) are declared equal.

Using all these languages is very expensive and highly inefficient. There are now 23 official languages: **Bulgarian**, **Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Greek, Hungarian, Irish Gaelic, Italian, Latvian, Lithuanian, Maltese, Polish, Portuguese, Romanian, Slovak, Slovene, Spanish** and **Swedish**, and three *semiofficial* (?): **Catalan**, **Basque** and **Galician**. This means that all official documents must be translated into all the members'

recognized languages, and representatives of each member state have a right to expect a speech in their language to be interpreted. And each member state has the right to hear ongoing proceedings interpreted into its own language.

Since each of the twenty one languages needs to be interpreted/translated into all the rest of the twenty, 23 x 22 (minus one, because a language doesn't need to be translated into itself) comes to a total of **506** combinations (not taking on accound the '*semiofficial*' languages). So interpreters/translators have to be found for ALL combinations.

In the old Common Market days the costs of using the official languages Dutch, English, French, and German could be borne, and interpreters and translators could be readily found. But as each new member is admitted, the costs and practical difficulties are rapidly becoming intolerably burdensome.

The crucial point here is that each time a new language is added, the total number of combinations isn't additive but multiplies: 506 + one language is not 507 but 552, i.e. 24 x 23, since every language has to be translated/interpreted into all the others (except itself).

It is not hard to see that the celebration of linguistic diversity in the EU only lightly disguises the logistical nightmare that is developing. The EU is now preparing for more languages to come: **Romanian** and **Bulgarian** have been recently added, with the incorporation of these two countries to the EU; **Albanian**, **Macedonian**, **Serbian**, **Bosnian** and **Croatian** (the three formerly known as Serbo-Croatian, but further differentiated after the Yugoslavian wars) if they are admitted to the EU as expected; and many other regional languages, following the example of Irish Gaelic, and the three *semi-official* Spanish languages: **Alsatian**, **Breton**, **Corsican**, **Welsh**, **Luxemburgish** and **Sami** are likely candidates to follow, as well as **Scottish Gaelic**, **Occitan**, **Low Saxon**, **Venetian**, **Piedmontese, Ligurian, Emilian**, **Sardinian**, **Neapolitan**, **Sicilian**, **Asturian, Aragonese**, **Frisian**, **Kashubian**, **Romany**, **Rusin**, and many others, depending on the political pressure their speakers and cultural communities can put on EU institutions. It will probably not be long before **Turkish**, and with it **Kurdish** (and possibly **Armenian**, **Aramaic** and **Georgian** too), or maybe **Ukrainian**, **Russian** and **Belarusian**, are other official languages, not to talk about the *eternal candidates*' languages, **Norwegian** (in at least two of its language systems, ***Bokmål*** and ***Nynorsk***), **Icelandic**, **Romansh**, **Monegasque** (Monaco) and **Emilian-Romagnolo** (San Marino), and this could bring the number of EU languages over 40. The number of possible combinations are at best above 1000, which doesn't seem within the reach of any organization, no matter how well-meaning.

Many EU administrators feel that to a great extent this diversity can be canceled out by ever-increasing reliance on the computer translation that is already in heavy use. It is certainly true that if we couldn't count on computers to do a lot of the translation 'heavy lifting', even the most idealistic administrator would never even dream of saddling an organization with an enterprise that would

quickly absorb a major part of its finances and energy. But no machine has yet been invented *or probably ever will be* that is able to produce a translation without, at the very least, a final editing by a human translator or interpreter.

The rapidly increasing profusion of languages in the EU is quickly becoming intolerably clumsy and prohibitively expensive. And this doesn't even count the additional expense caused by printing in the Greek alphabet and soon in the Cyrillic (Bulgarian and Serbian). Everyone agrees that all languages must have their 'place in the sun' and their diversity celebrated. But common sense suggests that the EU is going to be forced to settle on a very small number of working languages, perhaps only one, and the linguistic future of the EU has become the subject of intense debate.

Only in public numbers, the EU official translation/interpretation costs amount to more than 1.230 M€, and it comes to more than 13% of today's administrative expenditure of the EU institutions. There are also indirect costs of linguistic programmes aimed at promoting the learning of three or more languages since the *Year of Languages* (2001), which also means hundreds of millions of Euros, which haven't been counted in the EU's budget as linguistic expenditure, but are usually included in budget sections such as Cohesion or Citizenship. It is hard to imagine the huge amount of money (real or potential) lost by EU citizens and companies each day because of communication problems, not only because they *can't* speak a third party's language, but because they *won't* speak it, even if they can.

Preserving the strict equality is the EU's lifeblood, and it is a very disturbing thought that the strongest candidate for a *one-language EU* is the one with an established dominance in the world, **English**, which is actually only spoken by a minority within Europe. Latin and Artificial languages (as Esperanto, Ido or Interlingua) have been proposed as alternatives, but neither the first, because it is only related to romance languages, nor the second, because they are (too) artificial (invented by one person or a small group at best), solve the linguistic theoretical problems, not to talk about the practical ones.

The **Indo-European** language that we present in this work, on the contrary, faces not only the addressed theoretical problems - mainly related to cultural heritage and sociopolitical proud - but brings also a practical solution for the European Union, without which there can be no real integration. European nations are not prepared to give up some of their powers to a greater political entity, unless they don't have to give up some fundamental rights. Among them, the linguistic ones have proven harder to deal with than it initially expected, as they are raise very strong national or regional feelings.

Indo-European is already the grandmother of the majority of Europeans. The first language of more than 97% of EU citizens is Indo-European, and the rest can generally speak at least one of them as second language. Adopting Indo-European as the main official language for the EU will not mean giving up linguistic rights, but enhancing them, as every other official language will have then the same status

under their common ancestor; it won't mean losing the own culture for the sake of unity, but recovering it altogether for the same purpose; and, above all, it will not mean choosing a *lingua franca* to communicate with foreigners within an international organization, but accepting a National Language to communicate with other nationals within the same country.

NOTE. The above information is mainly copied (literally, adjusted or modified) from two of Mr. William Z. Shetter *Language Miniatures*, which can be found in his website:

- *http://home.bluemarble.net/~langmin/miniatures/Qvalue.htm*
- *http://home.bluemarble.net/~langmin/miniatures/eulangs.htm*

- EU official expenditure numbers can be consulted here:
  - *http://europa.eu.int/rapid/pressReleasesAction.do?reference=MEMO/05/10&type=HTML&aged=0&language=EN&guiLanguage=en*
  - *http://europa.eu.int/comm/budget/library/publications/budget_in_fig/dep_eu_budg_2007_en.pdf*
- Official information about EU languages can be found at:
  - *http://europa.eu.int/comm/education/policies/lang/languages/index_en.html*
  - *http://europa.eu.int/comm/education/policies/lang/languages/langmin/euromosaic/index_en.html*

WHAT'S NEW IN THIS EDITION

This is *A Grammar of Modern Indo-European, First Edition*, with Modern Indo-European Language Grammatical system in ***Pre-Version 4,*** still in *βeta* phase – i.e., still adjusting some important linguistic questions, and lots of minor mistakes, thanks to the contributions of experts and readers.

NOTE. A **version number** (**N**) is given to full revisions of the grammar, and each minor correction published must be given a different number to be later identified, usually ranging from N.01 to N.99. This book includes a full correction of version 3, but is still *Pre-Version 4*, which means the correction was not finished, and it its therefore still 3.xx. Full revisions are driven from beginning to end, so there should be a comment marking the end of the revised material. Since version 3.8x that note is already in the Etymological Notes section.

"*Europe's Indo-European*" version 4 continues "*Modern Indo-European*" version 3 (first printed edition, since June 2007), and this in turn version 2, which began in March 2007, changing most features of the old "*Europaio*"/"*Sindhueuropaiom*" concept of version 1 (*Europaio: A Brief Grammar of the European Language*, 2005-2006), in some cases coming back to features of *Indo-European* 0.x (2004-2005).

1. The artificial distinction in "*Europaiom*" and "*Sindhueuropaiom*" systems (each based on different dialectal features) brings more headaches than advantages to our Proto-Indo-European revival project; from now on, only a unified "*Modern Indo-European*", based on Europe's Indo-European (or *Proto-European*) is promoted. "*Sindhueuropaiom*" (i.e. Proto-Indo-European) became thus a theoretical project for using the phonetical reconstructions of Late PIE.

2. Unlike the first simplified *Europaio* grammar, this one goes deep into the roots of the specific Indo-European words and forms chosen for the modern language. Instead of just showing the final output, expecting readers to accept the supposed research behind the selections, we let them explore the details of our choices – and sometimes the specifics of the linguistic reconstruction –, thus sacrificing simplicity for the sake of thorough approach to modern IE vocabulary.

3. The old Latin-only alphabet has been expanded to include Greek and Cyrillic writing systems, as well as a stub of possible Armenian, Arabo-Persian and Devanagari (abugida) systems. The objective is not to define them completely (as with the Latin alphabet), but merely to show other possible writing systems for Modern Indo-European, Modern Anatolian, Modern Aryan, and Modern Hellenic.

4. The traditional phonetic distinction of palatovelars was reintroduced for a more accurate phonetic reconstruction of Late PIE, because of the opposition found (especially among Balto-Slavic experts) against our simplified writing system. Whether satemization was a dialectal and phonological trend

restricted to some phonetic environments (PIE ***k***- before some sounds, as with Latin *c*- before -*e* and -*i*), seemed to us not so important as the fact that more people feel comfortable with an exact – although more difficult – phonetic reconstruction. From versions 3.xx onwards, however, a more exact reconstruction is looked for, and therefore a proper explanation of velars and vocalism (hence also laryngeals) is added at the end of this book – coming back, then, to a simplified writing system.

4. The historically alternating *Oblique* cases *Dative, Locative, Instrumental* and *Ablative*, were shown on a declension-by-declension (and even pronoun-by-pronoun) basis, as Late PIE shows in some declensions a simpler, thus more archaic, reconstructible paradigm (as **i**,**u**) while others (as the thematic **e**/**o**) show almost the same Late PIE pattern of four differentiated oblique case-endings. Now, the 8 cases traditionally reconstructed are usable – and its differentiation recommended – in MIE.

The classification of Modern Indo-European nominal declensions has been reorganized to adapt it to a more Classic pattern, to help the reader clearly identify their correspondence to the different Greek and Latin declension paradigms.

5. The verbal system has been reduced to the reconstructed essentials of Late Proto-Indo-European conjugation and of its early dialects. Whether such a simple and irregular system is usable as is, without further systematization, is a matter to be solved by Modern Indo-European speakers.

The so-called Augment in ***é***-, attested almost only in Greek, Indo-Iranian and Armenian, is sometimes left due to Proto-Indo-European tradition, although recent research shows that it was neither obligatory, nor general in Late PIE. It is believed today that it was just a prefix with a great success in the southern dialects, as *per*- (<PIE **per**-) in Latin or *ga*- (<PIE **ko**-) in Germanic.

6. The syntactical framework of Proto-Indo-European has been dealt with extensively by some authors, but, as the material hasn't still been summed up and corrected by other authors (who usually prefer the phonological or morphological reconstruction), we use literal paragraphs from possibly the most thorough work available on PIE syntax, Winfred P. Lehman's Proto-Indo-European Syntax (1974), along with some comments and corrections made since its publication by other scholars.

The timetable of the next grammatical and institutional changes can be followed in the website of the Indo-European Language Association.

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CONVENTIONS USED IN THIS BOOK

1. "Modern Indo-European" or MIE: To avoid some past mistakes, we use the term *Europaiom* only to refer to the *European language system*, or to the reconstructed **Europe's Indo-European** (EIE) proto-language. The suitable names for the simplified Indo-European language system for Europe are thus *European language* or *European*, as well as "*Europaio*".

2. The **roots** of the reconstructed **Middle PIE language** (PIH) are basic morphemes carrying a lexical meaning. By addition of suffixes, they form stems, and by addition of desinences, these form grammatically inflected words (nouns or verbs).

NOTE. PIE reconstructed roots are subject to *ablaut*, and except for a very few cases, such ultimate roots are fully characterized by its constituent consonants, while the vowel may alternate. PIH roots as a rule have a single syllabic core, and by ablaut may either be monosyllabic or unsyllabic. PIH roots may be of the following form (where K is a voiceless stop, G an unaspirated and G^h an aspirated stop, R a semivowel (***r̥, l̥, m̥, n̥, u̯, i̯***) and H a laryngeal (or *s*). After Meillet, impossible PIH combinations are voiceless/aspirated (as in **teub*^{h} or **b*^{h}*eut*), as well as voiced/voiceless (as in **ged* or **deg*). The following table depicts the general opinion:

stops	*-*	*K-*	*G-*	*G*^{h}*-*
-	[HR]e[RH]	K[R]e[RH]	G[R]e[RH]	G^h[R]e[RH]
-K	[HR]e[RH]K	-	G[R]e[RH]K	G^h[R]e[RH]K
-G	[HR]e[RH]G	K[R]e[RH]G	-	G^h[R]e[RH]G
-G^h	[HR]e[RH]G^h	K[R]e[RH]G^h	G[R]e[RH]G^h	G^h[R]e[RH]G^h*

*This combination appears e.g. in ***b*^{h}*eud*^{h}, *awake*, and ***b*^{h}*eid*^{h}, *obey*, *believe*.

A root has at least one consonant, for some at least two (e.g. PIH ***h₁ek*** vs. EIE ***ek-***, "*quick*", which is the root for MIE adj. **ōkús**). Depending on the interpretation of laryngeals, some roots seem to have an inherent ***a*** or ***o*** vowel, EIE ***ar*** (vs. PIH ***h₂ar-***), *fit*, EIE ***ong*^{w}** (vs. PIH ***h₃eng*^{w}**) "*anoint*", EIE ***ak*** (vs. PIH ***h₂ek***) "*keen*".

By "root extension", a basic CeC (with C being any consonant) pattern may be extended to CeC-C, and an s-mobile may extend it to s-CeC.

The total number of consonant, sonant and laryngeal elements that appear in an ordinary syllable are three – i.e., as the triliteral Semitic pattern. Those which have less than three are called 'Concave' verbs (cf. PIH ***Hes***, ***Hei***, ***g*^{w}*em***); those extended are called 'Convex' verbs (cf. Lat. *plangō*, *spargō*, *frangō*, etc., which, apart from the extension in ***-g***, contain a laryngeal); for more on this, *vide infra* on MIE Conjugations.

3. Verbs are usually shown in notes without an appropriate verbal noun ending ***-m***, infinitive ending – ***tu***/***-ti***, to distinguish them clearly from nouns and adjectives. They aren't shown inflected in 1st P.Sg. Present either – as they should –, because of the same reason, and aren't usually accented.

NOTE. Ultimate PIH reconstructed verbal roots are written even without an athematic or thematic ending. When an older laryngeal appears, as in PIH ***pelh₂-***, it sometimes remain, as in EIE ***pela***-, or in case of ultimate roots with semivowel endings [**i̯**], [**u̯**], followed by an older laryngeal, they may be written with ending **-j** or **-w**.

4. Adjectives are usually shown with an accented masculine (or general) ending **-*ós***, although sometimes a complete paradigm **-*ós***, **-*ā́***, **-*óm*,** is written.

5. An acute accent is written over the vowel or semivowel in the stressed syllable, except when stress is on the ***penult*** (one syllable before the last) and in monosyllabic words. Accented long vowels and sonants are represented with special characters. The weak vowel of a possible diphthong is also accented; so in **eími**, *I go*, instead of **eimi**, which would be read usually as ****éimi*** if left unaccented.

6. For *zero-grade* or *zero-ending*, the symbol ø is sometimes used.

7. Proto-Indo-European vowel apophony or Ablaut is indeed normal in MIE, but different dialectal Ablauts are corrected when loan-translated. Examples of these are **komb^{h}astós**, from Lat. *confessus* (cf. Lat. *fassus sum*), from EIE **b^{h}ā**-; EIE **d^{h}aklís/disd^{h}aklís**, as Lat. *facilis*/*difficilis*, from PIE **d^{h}ē**-; MIE **saliō/ensaliō/ensaltō**, as Lat. *saliō*/*insiliō*/*insultō,* etc.

NOTE. Such Ablaut is linked to languages with musical accent, as Latin. In Italic, the tone was always on the first syllable; Latin reorganized this system, and after Roman grammarians' "penultimate rule", Classic Latin accent felt on the penultimate syllable if long, on the antepenultimate if short (hence Lat. *pudícus* but *módicus*), thus triggering off different inner vocalic timbres or *Ablauts*. Other Italic dialects, as Oscan or Umbrian, didn't suffered such apophony; cf. Osc. *anterstataí* , Lat. *interstitae*; Umb. *antakres*, Lat. *integris*; Umb. *procanurent*, Lat. *procinuerint*, etc. Germanic also knew such tone variations. For more on this topic, see phonotactic development in Latin at <http://www.cunyphonologyforum.net/SYLLPAPERS/Senhandoutnew.pdf>.

8. In Germanic, Celtic and Italic dialects the IE intervocalic **-*s***- becomes voiced, and then it is pronounced as the trilled consonant, a phenomenon known as Rhotacism; as with zero-grade **kr̥s** [kr̥̬s] from EIE stem **kers**-, *run*, giving 's-derivatives' O.N. *horskr*, Gk. *-κουροϛ*, and 'r-derivatives' as MIE **kŕsos**, *wagon*, *cart*, from Celtic (cf. Gaul. *karros*, O.Ir., M.Welsh *carr*, into Lat. *carrus*) and **kŕsō**, *run*, cf. Lat. *currō*. In light of Greek forms as *criterion*, *monastery*, etc., the suffix to indicate "place where" (and sometimes instrument) had an original IE **r**, and its reconstruction as PIE **s** is wrong.

9. Some loans are left as they are, without necessarily implying that they are original Indo-European forms; as Latin *mappa*, "*map*", *aiqi*-, "*aequi*-", Celtic *pen*-, "*head*", Greek *sphaira*, "*sphere*", Germanic *iso*-, "*ice*", and so on. Some forms are already subject to change in MIE for a more 'purist' approach to a common EIE, as ***ati***- for Lat. *re*-, **-*ti*** for (Ita. and Arm.) secondary **-*tiō(n)***, etc.

10. In Romance languages, *Theme* is used instead of *Stem*. Therefore, *Theme Vowel* and *Thematic* refer to the Stem endings, usually to the **e**/**o** endings. In the Indo-European languages, *Thematic* roots are those roots that have a "*theme vowel*"; a vowel sound that is always present between the root of the

word and the attached inflections. *Athematic* roots lack a theme vowel, and attach their inflections directly to the root itself.

NOTE. The distinction between thematic and athematic roots is especially apparent in the Greek verb; they fall into two classes that are marked by quite different personal endings. Thematic verbs are also called *-ω* (*-ô*) verbs in Greek; athematic verbs are *-μι* (*-mi*) verbs, after the first person singular present tense ending that each of them uses. The entire conjugation seems to differ quite markedly between the two sets of verbs, but the differences are really the result of the thematic vowel reacting with the verb endings. In Greek, athematic verbs are a closed class of inherited forms from the parent IE language. Marked contrasts between thematic and athematic forms also appear in Lithuanian, Sanskrit, and Old Church Slavonic. In Latin, almost all verbs are thematic; a handful of surviving athematic forms exist, but they are considered irregular verbs.

The thematic and athematic distinction also applies to nouns; many of the old IE languages distinguish between "vowel stems" and "consonant stems" in the declension of nouns. In Latin, the first, second, fourth, and fifth declensions are vowel stems characterized by *a*, *o*, *u* and *e*, respectively; the third declension contains both consonant stems and *i* stems, whose declensions came to closely resemble one another in Latin. Greek, Sanskrit, and other older IE languages also distinguish between vowel and consonant stems, as did Old English.

11. PIE **d**+**t**, **t**+**t**, **dh**+**t** → MIE **st**; PIE **d**+**d**, **t**+**d**, **dh**+**d** → MIE **sd;** PIE **d**+**dh**, **t**+**dh**, **dh**+**dh** → MIE **sdh**; because of the common intermediate phases found in Proto-Greek, cf. Gk. *st*, *sth* (as *pistis*, *oisqa*), and Europe's Indo-European, cf. Lat. *est*, "*come*", and O.H.G. examples. For an earlier stage of this phonetic output, compare O.Ind. *sehí*<**sazdhi*, '*sit!*', and not **satthi* (cf. O.Ind. *dehí*, Av. *dazdi*).

NOTE. It has been proposed an earlier **TT→TsT** (where T = dental stop), i.e. that the cluster of two dental stops had a dental fricative **s** inserted between them. It is based on some findings in Hittite, where cluster *tst* is spelled as *z* (pronounced as *ts*), as in PIH **h₁ed-ti**, "*he eats*" → **h₁etsti* → Hitt. *ezzi*. Confirmation from early intermediate and common (Late PIE) ***-st-*** are found e.g. in O.Ind. *mastis*, "*measure"*, from ****med-tis***, or Av. *-hasta-*, from ****sed-tós***. This evolution was probably overshadowed by other Aryan developments, see Appendix II.

12. PIE made personal forms of composed verbs separating the root from the so-called 'prepositions', which were actually particles which delimited the meaning of the sentence. Thus, a sentence like Lat. *uos supplico* is in PIE as in O.Lat. *sub uos placo*. The same happened in Homeric Greek, in Hittite, in the oldest Vedic and in modern German '*trennbare Verben*'. Therefore, when we reconstruct a verb like *accept*, MIE inf. ***adkēptātus***, it doesn't mean it should be used as in Classic Latin (in fact its ablaut has been reversed), or indeed as in Modern English, but with its oldest use: ***kēptāiō ad***, *I accept*.

13. Reasons for not including the palatovelars in MIE writing system are 1) that, although possible, their existence is not sufficiently proven (see Appendix II.2); 2) that their writing because of tradition or 'etymology' is not justified, as this would mean a projective writing (i.e., like writing Lat. *casa*, but Lat. *ĉentum*, because the k-sound before *-e* and *-i* evolves differently in Romance). The pairs ǵ Ǫ and ķ Ķ, have been proposed to write them, for those willing to differentiate their pronunciation.

The following abbreviations apply in this book:

IE	: Indo-European
IE II	: Middle PIE or PIH
PIH	: Proto-Indo-Hittite
IE III	: Late PIE
PIE	: Proto-Indo-European
EIE	: Europe's Indo-European
MIE	: Modern Indo-European

PII	:Proto-Indo-Iranian
Ind.	*: Proto-Indo-Aryan*
O.Ind.	: Old Indian
Skr.	: Sanskrit
Hind.	: Hindustani
Hi.	: Hindi
Ur.	: Urdu
Ira.	*: Proto-Iranian*
Av.	: Avestan
O.Pers.	: Old Persian
Pers.	: Persian
Kur.	: Kurdish
Oss.	: Ossetian
Kam.	: Kamviri

PAn	: Proto-Anatolian
CA	: Common Anatolian
Hitt.	: Hittite
Luw.	: Luwian
Lyc.	: Lycian
Pal.	: Palaic
Lyd.	: Lydian

PGk	: Proto-Greek
Gk.	: (Ancient) Greek
Phryg.	: Phrygian
Thr.	: Thracian
Dac.	: Dacian
Ven.	: Venetic
Lus.	: Lusitanian
A.Mac.	: Ancient Macedonian
Illy.	: Illyrian
Alb.	: Albanian

Ita.	: Proto-Italic
Osc.	: Oscan
Umb.	: Umbrian
Lat.	: Latin
O.Lat.	: Archaic Latin
V.Lat.	: Vulgar Latin
L.Lat.	: Late Latin
Med.Lat.	: Mediaeval Latin
Mod.Lat.	: Modern Latin
O.Fr.	: Old French
Prov	: Provenzal
Gl.-Pt.	: Galician-Portuguese
Gal.	: Galician
Pt.	: Portuguese
Cat.	: Catalan
Fr.	: French
It.	: Italian
Spa.	: Spanish
Rom.	: Romanian

PGmc.	**: Pre-Proto-Germanic**
Gmc.	: Proto-Germanic
Goth.	: Gothic
Frank.	: Frankish
Sca.	: *Scandinavian (North Germanic)*
O.N.	: Old Norse
O.Ice.	: Old Icelandic
O.S.	: Old Swedish
Nor.	: Norwegian
Swe.	: Swedish
Da.	: Danish
Ice.	: Icelandic
Fae.	: Faeroese
W.Gmc.	*: West Germanic*
O.E.	: Old English (*W.Saxon, Mercian*)
O.Fris.	: Old Frisian
O.H.G.	: Old High German
M.L.G.	: Middle Low German
M.H.G.	: Middle High German
M.Du.	: Middle Dutch
Eng	: English
Ger.	: German
L.Ger.	: Low German
Fris.	: Frisian
Du.	: Dutch
Yidd.	: Yiddish (Judaeo-German)

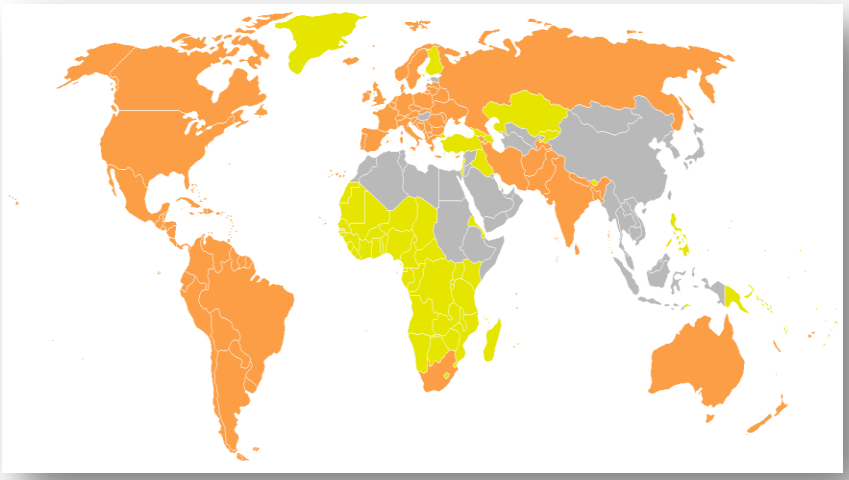
BSl.	**: Balto-Slavic**
Bal.	*: Proto-Baltic*
O.Lith.	: Old Lithuanian
O.Pruss.	: Old Prussian
Lith.	: Lithuanian
Ltv.	: Latvian
Sla.	*: Proto-Slavic*
O.C.S.	: Old Church Slavonic
O.Russ.	: Old Russian
O.Pol.	: Old Polish
Russ.	: Russian
Pol.	: Polish
Cz.	: Czech
Slo.	: Slovenian
Slk.	: Slovak
Ukr.	: Ukrainian
Bel.	: Belarusian
Bul.	: Bulgarian
Sr.-Cr.	: Serbo-Croatian

Cel.	**: Proto-Celtic**
Gaul.	: Gaulish
O.Ir.	: Old Irish
Sco.	: Scottish Gaelic
Ir.	: Irish Gaelic
Bret.	: Breton
Cor.	: Cornish
O.Welsh	: Old Welsh

1. INTRODUCTION

1.1. THE INDO-EUROPEAN LANGUAGE FAMILY

1.1.1. The Indo-European languages are a family of several hundred languages and dialects, including most of the major languages of Europe, as well as many in Asia. Contemporary languages in this family include English, German, French, Spanish, Portuguese, Hindustani (i.e., Hindi and Urdu among other modern dialects), Persian and Russian. It is the largest family of languages in the world today, being spoken by approximately half the world's population as first language. Furthermore, the majority of the other half speaks at least one of them as second language.



*In **dark**, countries with a majority of Indo-European speakers; in **light color**, countries with Indo-European-speaking minorities.*

1.1.2. Romans didn't perceive similarities between Latin and Celtic dialects, but they found obvious correspondences with Greek. After Roman Grammarian Sextus Pompeius Festus:

Suppum antiqui dicebant, quem nunc supinum dicimus ex Graeco, videlicet pro adspiratione ponentes <s> litteram, ut idem ὕλας *dicunt, et nos silvas; item* ἕξ *sex, et* ἑπτά *septem.*

Such findings are not striking, though, as Rome was believed to have been originally funded by Trojan hero Aeneas and, consequently, Latin was derived from Old Greek.

1.1.3. Florentine merchant Filippo Sassetti travelled to the Indian subcontinent, and was among the first European observers to study the ancient Indian language, Sanskrit. Writing in 1585, he noted some word similarities between Sanskrit and Italian, e.g. *deva/dio*, "*God*", *sarpa/serpe*, "*snake*", *sapta/sette*, "*seven*", *ashta/otto*, "*eight*", *nava/nove*, "*nine*". This observation is today credited to have foreshadowed the later discovery of the Indo-European language family.

1.1.4. The first proposal of the possibility of a common origin for some of these languages came from Dutch linguist and scholar Marcus Zuerius van Boxhorn in 1647. He discovered the similarities among Indo-European languages, and supposed the existence of a primitive common language which he called "*Scythian*". He included in his hypothesis Dutch, Greek, Latin, Persian, and German, adding later

Slavic, Celtic and Baltic languages. He excluded languages such as Hebrew from his hypothesis. However, the suggestions of van Boxhorn did not become widely known and did not stimulate further research.

1.1.5. On 1686, German linguist Andreas Jäger published *De Lingua Vetustissima Europae*, where he identified an remote language, possibly spreading from the Caucasus, from which Latin, Greek, Slavic, 'Scythian' (i.e., Persian) and Celtic (or 'Celto-Germanic') were derived, namely *Scytho-Celtic*.

1.1.6. The hypothesis re-appeared in 1786 when Sir William Jones first lectured on similarities between four of the oldest languages known in his time: Latin, Greek, Sanskrit and Persian:

"The Sanskrit language, whatever be its antiquity, is of a wonderful structure; more perfect than the Greek, more copious than the Latin, and more exquisitely refined than either, yet bearing to both of them a stronger affinity, both ***in the roots of verbs and the forms of grammar****, than could possibly have been produced by accident; so strong indeed, that no philologer could examine them all three, without believing them to have sprung* ***from some common source****, which, perhaps, no longer exists: there is a similar reason, though not quite so forcible, for supposing that both the Gothic and the Celtic, though blended with a very different idiom, had the same origin with the Sanskrit; and the old Persian might be added to the* ***same family****"*

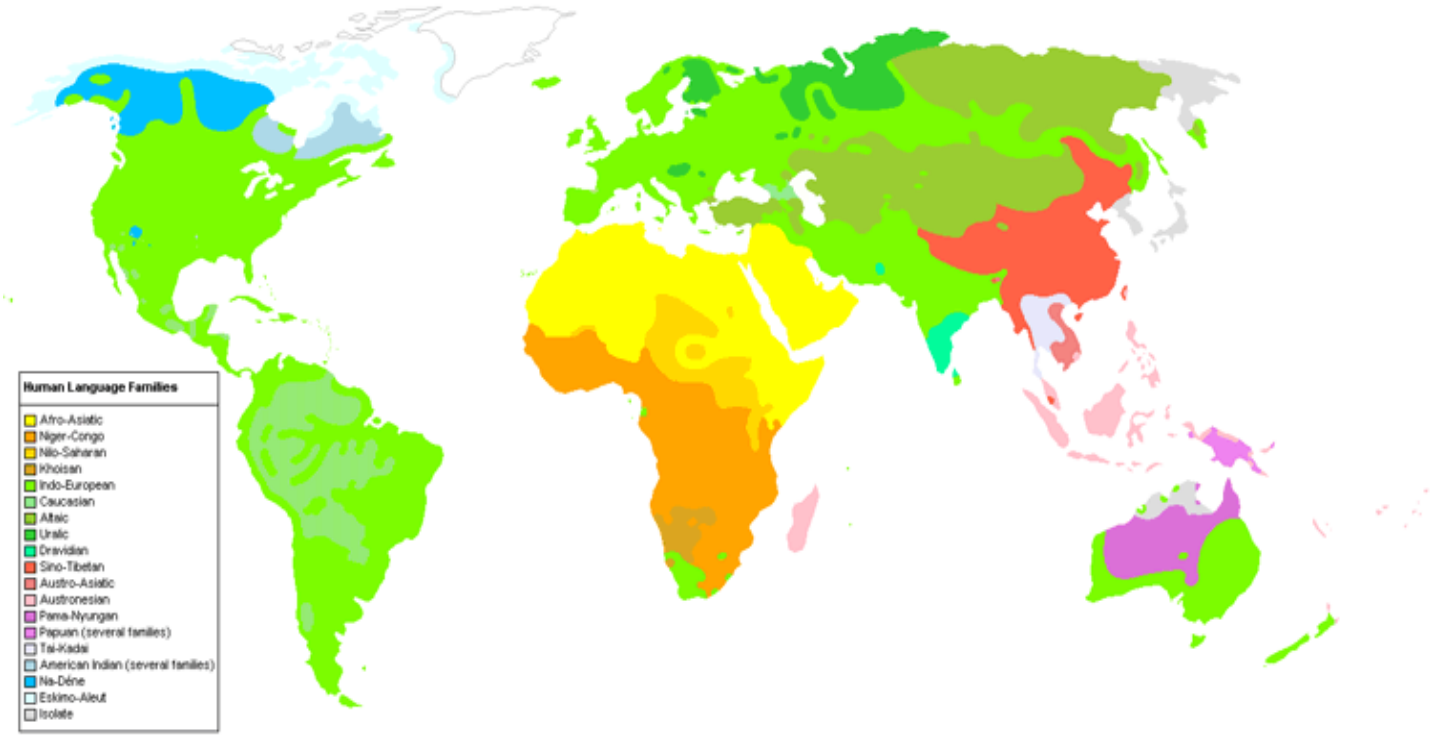
1.1.7. Danish Scholar Rasmus Rask was the first to point out the connection between Old Norwegian and Gothic on the one hand, and Lithuanian, Slavonic, Greek and Latin on the other. Systematic comparison of these and other old languages conducted by the young German linguist Franz Bopp supported the theory, and his *Comparative Grammar*, appearing between 1833 and 1852, counts as the starting-point of Indo-European studies as an academic discipline.

1.1.8. The classification of modern Indo-European dialects into '*languages*' and '*dialects*' is controversial, as it depends on many factors, such as the pure linguistic ones – most of the times being the least important of them –, and also social, economic, political and historical considerations. However, there are certain common ancestors, and some of them are old well-attested languages (or language systems), such as Classic Latin for modern Romance languages – French, Spanish, Portuguese, Italian, Romanian or Catalan –, Classic Sanskrit for some modern Indo-Aryan languages, or Classic Greek for Modern Greek.

Furthermore, there are some still older IE '*dialects*', from which these old formal languages were derived and later systematized. They are, following the above examples, *Archaic* or *Old Latin*, *Archaic* or *Vedic Sanskrit* and *Archaic* or *Old Greek*, attested in older compositions, inscriptions and inferred through the study of oral traditions and texts.

And there are also some old related dialects, which help us reconstruct proto-languages, such as Faliscan for *Latino-Faliscan* (and with Osco-Umbrian for an older *Proto-Italic*), the Avestan language for a *Proto-Indo-Iranian* or Mycenaean for an older *Proto-Greek*.

NOTE. Although proto-language groupings for early Indo-European languages may vary depending on different criteria, they all have the same common origin, the Proto-Indo-European language, which is generally easier to reconstruct than its dialectal groupings. For example, if we had only some texts of Old French, Old Spanish and Old Portuguese, Mediaeval Italian and Modern Romanian and Catalan, then Vulgar Latin – i.e. the features of the common language spoken by all of them, not the older, artificial, literary Classical Latin – could be easily reconstructed, but the groupings of the derived dialects not. In fact, the actual groupings of the Romance languages are controversial, even knowing well enough Archaic, Classic and Vulgar Latin...



Distribution of language families in the 20th century.

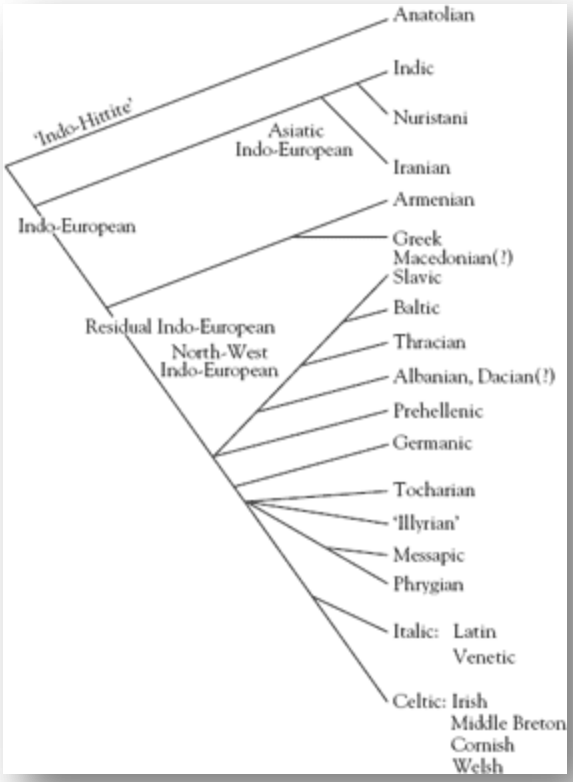
1.2. TRADITIONAL VIEWS

1.2.1. In the beginnings of the Indo-European or Indo-Germanic studies using the comparative grammar, the Indo-European proto-language was reconstructed as a unitary language. For Rask, Bopp and other Indo-European scholars, it was a search for *the* Indo-European. Such a language was supposedly spoken in a certain region between Europe and Asia and at one point in time – between ten thousand and four thousand years ago, depending on the individual theories –, and it spread thereafter and evolved into different languages which in turn had different dialects.

1.2.2. The *Stammbaumtheorie* or Genealogical Tree Theory states that languages split up in other languages, each of them in turn split up in others, and so on, like the branches of a tree. For example, a well known old theory about Indo-European is that, from *the* Indo-European language, two main

groups of dialects known as *Centum* and *Satem* separated – so called because of their pronunciation of the gutturals in Latin and Avestan, as in PIE **km̥tóm**, "*hundred*". From these groups others split up, as *Centum* Proto-Germanic, Proto-Italic or Proto-Celtic, and *Satem* Proto-Balto-Slavic, Proto-Indo-Iranian, which developed into present-day Germanic, Romance and Celtic, Baltic, Slavic, Iranian and Indo-Aryan languages.

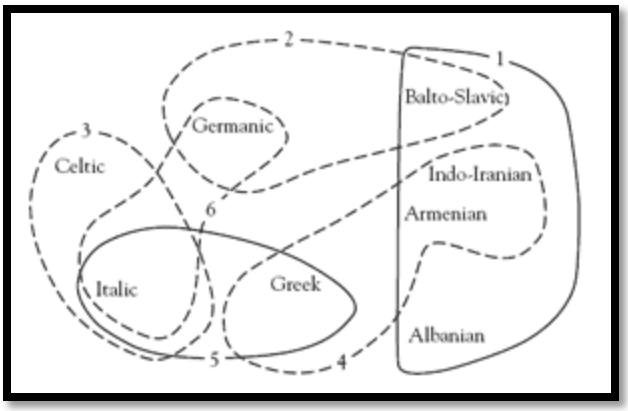
NOTE. The Centum and Satem isogloss is one of the oldest known phonological differences of Indo-European languages, and is still used by many to classify them in two groups, thus disregarding their relevant morphological and syntactical differences. It is based on a simple vocabulary comparison; as, from PIE **km̥tóm** (possibly earlier ****dkm̥tóm***, from **dekm̥**, "*ten*"), Satem: O.Ind. *śatám*, Av. *satəm*, Lith. *šimtas*, O.C.S. *sto*, or Centum: Gk. *ἑκατόν*, Lat. *centum*, Goth. *hund*, O.Ir. *cet*, etc.



Modern tree diagram of the IE languages by Eric Hamp (1990).

1.2.3. The *Wellentheorie* or Waves Theory, of J. Schmidt, states that one language is created from another by the spread of innovations, the way water waves spread when a stone hits the water surface. The lines that define the extension of the innovations are called isoglosses. The convergence of different isoglosses over a common territory signals the existence of a new language or dialect. Where isoglosses from different languages coincide, transition zones are formed.

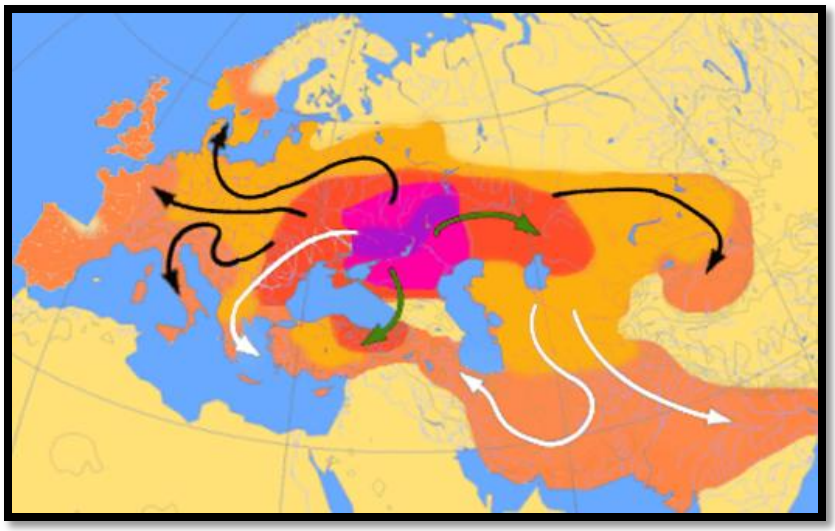
NOTE. These old theories are based on the hypothesis that there was one common and *static* Proto-Indo-European language, and that all features of modern Indo-European languages can be explained in such a unitary scheme, by classifying them either as innovations or as archaisms of one old, rigid proto-language. The language system we propose for the revived Modern Indo-European is based mainly on that traditionally reconstructed Proto-Indo-European, not because we uphold the traditional views, but because we still look for the immediate common ancestor of modern Indo-European languages, and it is that old, unitary Indo-European that scholars had been looking for during the first decades of Indo-European studies.



"Wave model" of some of the interrelationships of the Indo-European languages, J.P.Mallory and D.Q. Adams.

1.3. THE THEORY OF THE THREE STAGES

1.3.1. Even some of the first Indo-Europeanists had noted in their works the possibility of older origins for the reconstructed (Late) Proto-Indo-European, although they didn't dare to describe those possible older stages of the language.



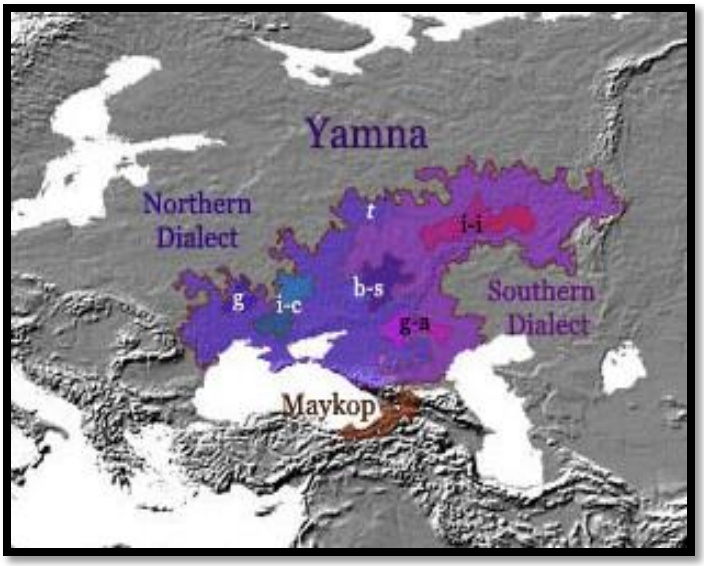
Expansion of IE 4000BC-1 AD, according to the Kurgan hypothesis.

1.3.2. Today, a widespread Three-Stage Theory depicts the Proto-Indo-European language evolution into three main historic layers or stages:

1) Indo-European I or **IE I**, also called *Early PIE*, is the hypothetical ancestor of IE II, and probably the oldest stage of the language that comparative linguistics could help reconstruct using internal reconstruction. There is, however, no common position as to how it was like or when and where it was spoken.

2) The second stage (3500-3000 BC) corresponds to a time before the separation of Proto-Anatolian from the common linguistic community where it coexisted with Pre-IE III. That stage of the language is called Indo-European II or **IE II**, *Middle PIE*, or *Indo-Hittite*. This is identified with the early Kurgan cultures in the Kurgan Hypothesis' framework.

3) The common immediate ancestor of the earliest known IE proto-languages –more or less the same static PIE searched for since the start of Indo-European studies – is usually called *Late PIE*, also *Indo-European III* or **IE III**, often simply *Proto-Indo-European*. Its prehistoric community of speakers is generally identified with the Yamna or Pit Grave culture (cf. Ukr. *яма*, "*pit*"), in the Pontic Steppe, roughly between 3000-2500 BC. Pre-Proto-Anatolian speakers are arguably identified with the – already independent – Maykop cultural community.

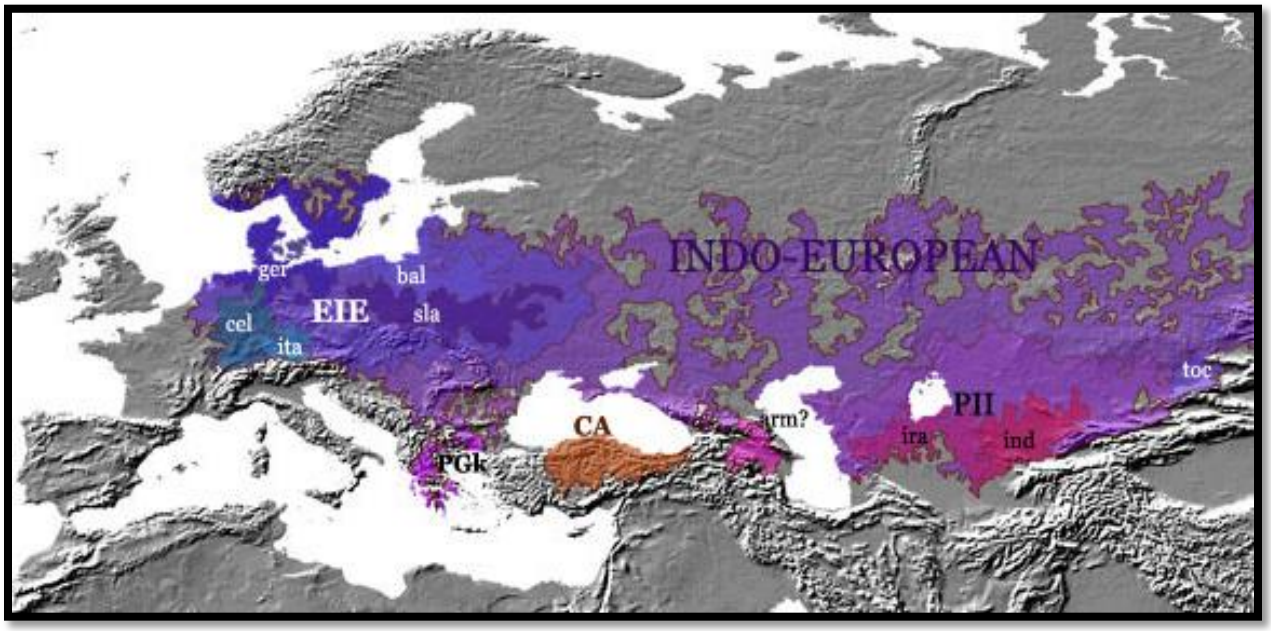


Yamna culture ca. 3000 BC, roughly the time when Late PIE and Proto-Anatolian were spoken.

NOTE. The development of this theory of three linguistic stages can be traced back to the very origins of Indo-European studies, firstly as a diffused idea of a non-static language, and later widely accepted as a dynamic dialectal evolution, already in the 20th century, after the discovery of the Anatolian scripts.

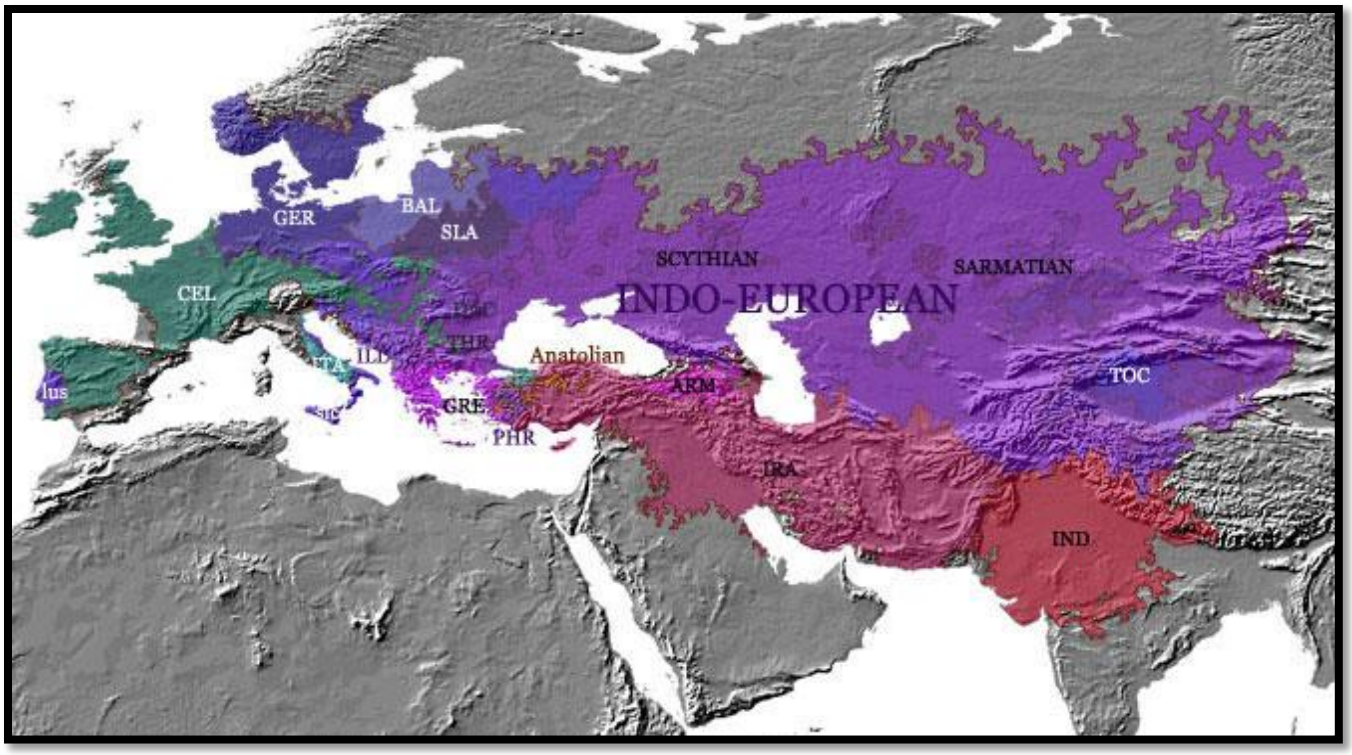
1.3.3. Another division has to be made, so that the dialectal evolution and this revival project is properly understood. Late PIE had at least two main dialectal branches, the *Northern* (or IE IIIb) and the *Southern* (or IE IIIa) ones. Terms like *Northwestern PIE* are commonly found in academic writings referring to the Northern Dialect, but we will use them here to name only the northern dialects of Europe, therefore excluding Tocharian. As far as we know, while speakers of *Southern* or *Graeco-Aryan* dialects (like Proto-Greek and Proto-Indo-Iranian) spread in different directions with the first Late PIE migrations ca. 2500 BC, speakers of Northern dialects remained still in loose contact in Europe, but for peoples like Proto-Tocharians who migrated to Asia. That so-called **Europe's Indo-European** – the ancestor of Celtic, Italic, Germanic, Baltic and Slavic dialects – is believed to have formed the last common Indo-European dialect continuum from ca. 2500-2000 BC in Northern Europe.

NOTE 1. On the so-called "Northwest Indo-European", see N. Oettinger "*Grundsätzliche überlegungen zum Nordwest-Indogermanischen*" in Incontri Linguistici 20 1997, and "*Zum nordwestindogermanischen Lexikon*" in FS Meid 70 1999. See also M. E. Huld in *Indo-Europeanization of Northern Europe* 1996; Adrados, Bernabé, Mendoza, *Manual de Lingüística Indoeuropea*, 1998; etc. Europe's Indo-European dialects show some common features, like a general reduction of the 8-case noun inflection system, the ***-r*** endings of the middle voice, as well as the lack (or late development) of *satemization*. The southern dialects, in turn, show a generalized Augment in ***é-***, a general Aorist formation and an 8-case system –apparently also in Proto-Greek.



Spread of Late PIE dialects and Common Anatolian by ca. 2000 BC.

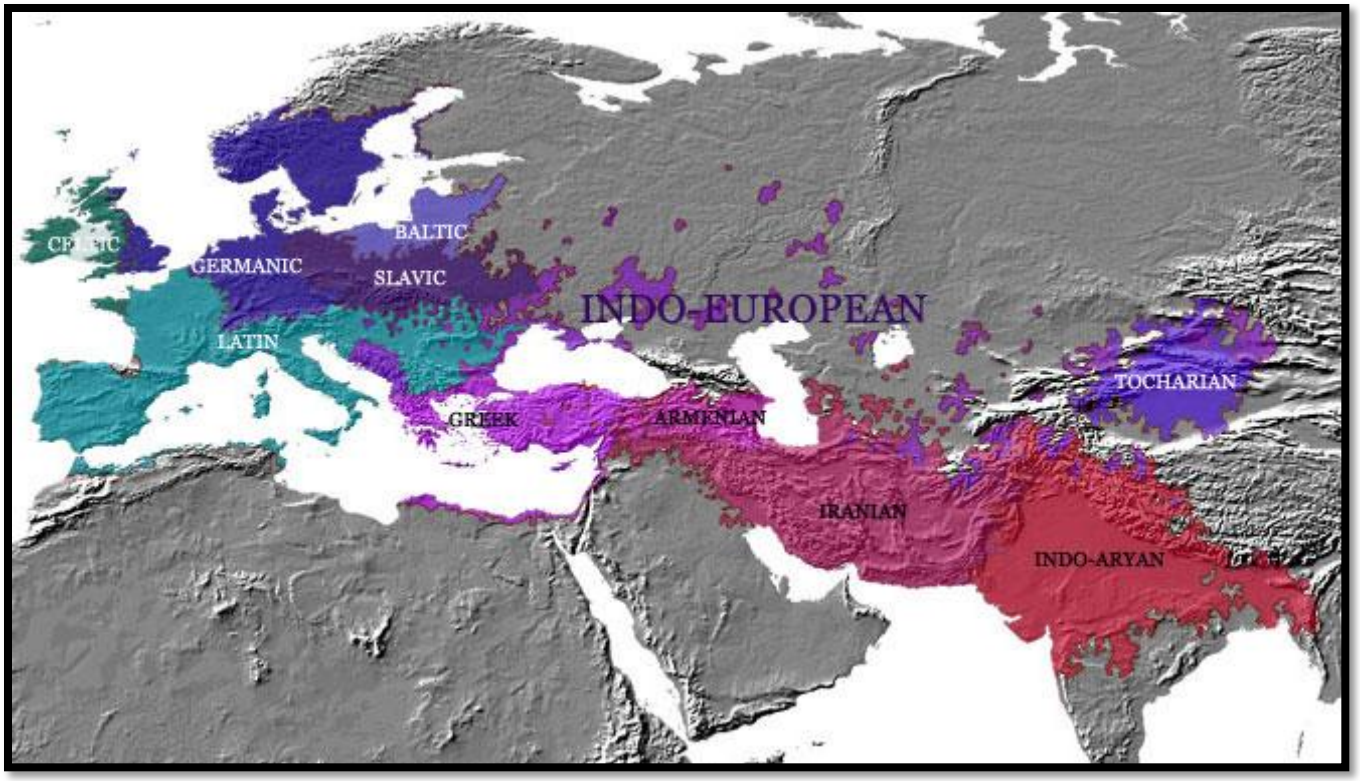
NOTE 2. European dialects like Balto-Slavic and, to some extent, Italic, either because of general PIE innovative or archaic trends that only they maintained, or because of their original situation within the PIE dialectal territories in relation with the origin of the innovations – or just because they remained in contact with Southern Indo-European dialects after the first PIE split (e.g. through the Scythian or Iranian expansions) – show features usually identified with Indo-Iranian, as an 8-case noun declension and phonetic satemization, while having morphological features clearly common to Germanic and Celtic dialects, as the verbal system.



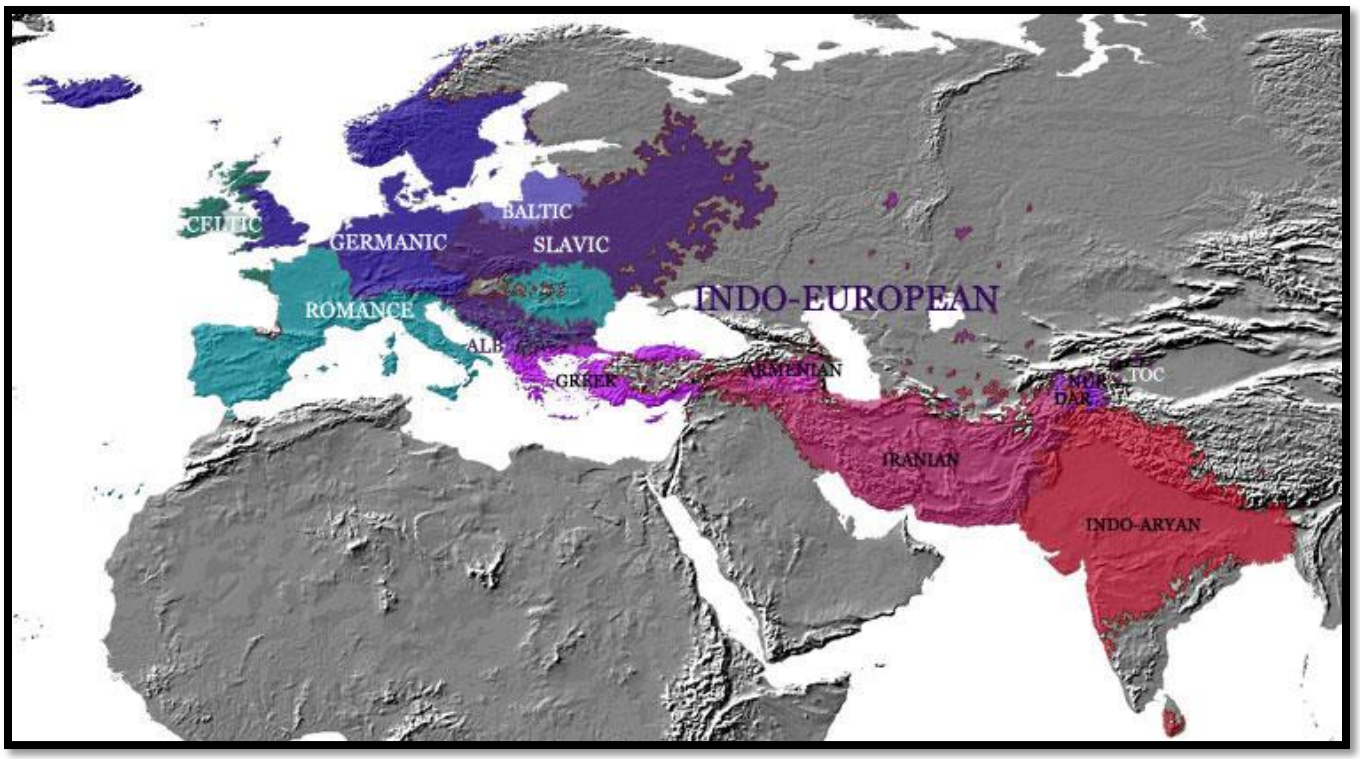
Indo-European dialects ca. 500 BC.

NOTE 3. The term Indo-European itself now current in English literature, was coined in 1813 by the British scholar Sir Thomas Young, although at that time there was no consensus as to the naming of the recently discovered language family. Among the names suggested were indo-germanique (C. Malte-Brun, 1810), Indoeuropean (Th. Young, 1813), japetisk (Rasmus C. Rask, 1815), indisch-teutsch (F. Schmitthenner, 1826), sanskritisch (Wilhelm von Humboldt, 1827), indokeltisch (A. F. Pott, 1840), arioeuropeo (G. I. Ascoli, 1854), Aryan (F. M. Müller, 1861), aryaque (H. Chavée, 1867), etc.

In English, *Indo-German* was used by J. C. Prichard in 1826 although he preferred *Indo-European*. In French, use of *indo-européen* was established by A. Pictet (1836). In German literature, *Indo-Europäisch* was used by Franz Bopp since 1835, while the term *Indo-Germanisch* had already been introduced by Julius von Klapproth in 1823, intending to include the northernmost and the southernmost of the family's branches, as it were as an abbreviation of the full listing of involved languages that had been common in earlier literature, opening the doors to ensuing fruitless discussions whether it should not be *Indo-Celtic*, or even *Tocharo-Celtic*.



Indo-European dialects ca. 500 AD.



Indo-European dialects ca. 1500 AD.

1.4. THE PROTO-INDO-EUROPEAN *URHEIMAT* OR 'HOMELAND'

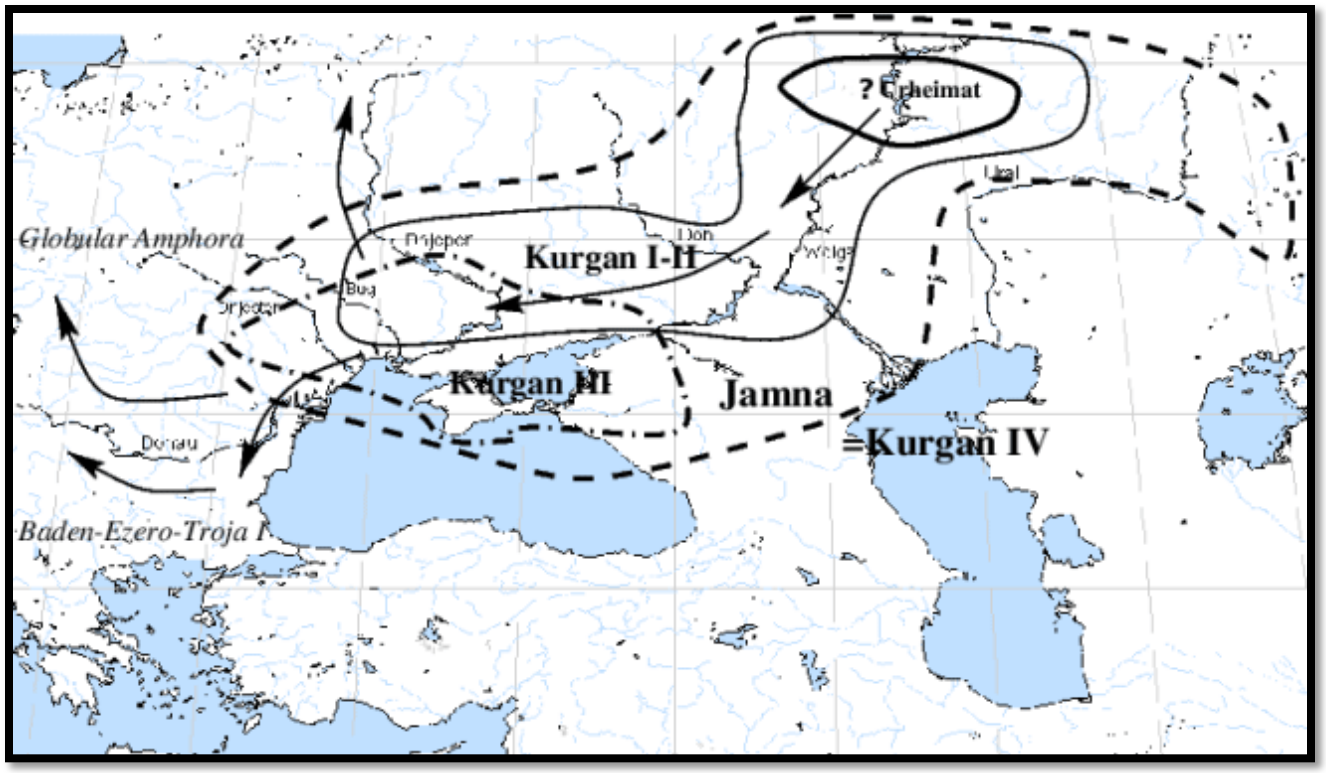
1.4.1. The search for the *Urheimat* or 'Homeland' of the prehistoric Proto-Indo-Europeans has developed as an archaeological quest along with the linguistic research looking for the reconstruction of that proto-language.

Photo of a Kurgan (Archaeology Magazine).

1.4.2. The **Kurgan hypothesis** was introduced by Marija Gimbutas in 1956 in order to combine archaeology with linguistics in locating the origins of the Proto-Indo-Europeans. She named the set of cultures in question "Kurgan" after their distinctive burial mounds and traced their diffusion into Europe.

1.4.3. According to her hypothesis, PIE speakers were probably a nomadic tribe of the Pontic-Caspian steppe that expanded in successive stages of the Kurgan culture and three successive "waves" of expansion during the 3rd millennium BC:

- **Kurgan I**, Dnieper/Volga region, earlier half of the 4th millennium BC. Apparently evolving from cultures of the Volga basin, subgroups include the Samara and Seroglazovo cultures.
- **Kurgan II–III**, latter half of the 4th millennium BC. Includes the Sredny Stog culture and the Maykop culture of the northern Caucasus. Stone circles, early two-wheeled chariots, anthropomorphic stone stelae of deities.
- **Kurgan IV** or Pit Grave culture, first half of the 3rd millennium BC, encompassing the entire steppe region from the Ural to Romania.
    - **Wave 1**, predating Kurgan I, expansion from the lower Volga to the Dnieper, leading to coexistence of Kurgan I and the Cucuteni culture. Repercussions of the migrations extend as far as the Balkans and along the Danube to the Vinča and Lengyel cultures in Hungary.
    - **Wave 2**, mid 4th millennium BC, originating in the Maykop culture and resulting in advances of "**kurganized**" hybrid cultures into northern Europe around 3000 BC – Globular Amphora culture, Baden culture, and ultimately Corded Ware culture.
    - **Wave 3**, 3000-2800 BC, expansion of the Pit Grave culture beyond the steppes; appearance of characteristic pit graves as far as the areas of modern Romania, Bulgaria and eastern Hungary.



Hypothetical Homeland or Urheimat of the first PIE speakers, from 4500 BC onwards. The Yamna (Pit Grave) culture lasted from ca. 3600 till 2200 BC. In this time the first wagons appeared. People were buried with their legs flexed, a position which remained typical for the Indo-Europeans for a long time. The burials were covered with a mound, a kurgan. During this period, from 3600 till 3000 IE II split up into Pre-IE III and Pre-Proto-Anatolian. From ca.3000 B.C on, Late PIE dialects began to differentiate and spread by 2500 westward (Europe's Indo-European), southward (Proto-Greek) and eastward (Proto-Aryan, Pre-Proto-Tocharian).

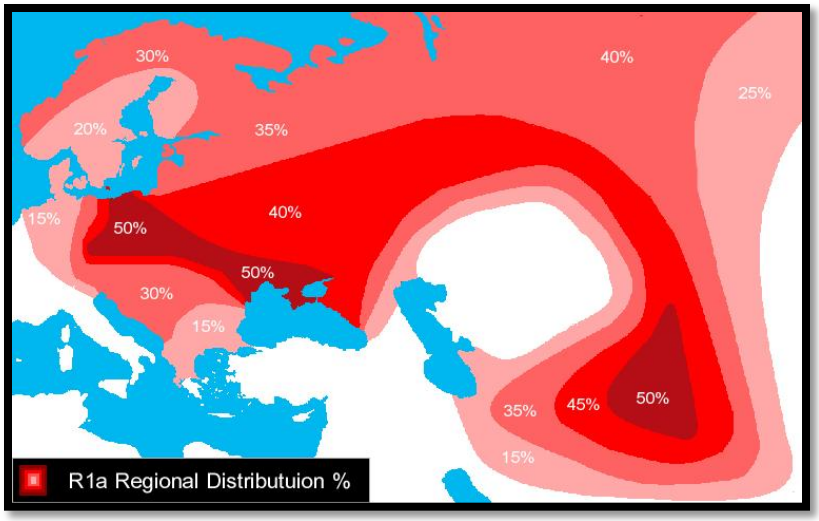
I. ARCHEOGENETICS AND INDO-EUROPEAN MIGRATIONS

Cavalli-Sforza and Alberto Piazza argue that Renfrew (*v.i.*) and Gimbutas reinforce rather than contradict each other, stating that "genetically speaking, peoples of the Kurgan steppe descended at least in part from people of the Middle Eastern Neolithic who immigrated there from Turkey".

NOTE. The genetic record cannot yield any direct information as to the language spoken by these groups. The current interpretation of genetic data suggests a strong genetic continuity in Europe; specifically, studies of mtDNA by Bryan Sykes show that about 80% of the genetic stock of Europeans originated in the Paleolithic.

Spencer Wells suggests that the origin, distribution and age of the **R1a1 haplotype** points to an ancient migration, possibly corresponding to the spread by the Kurgan people in their expansion across the Eurasian steppe around 3000 BC, stating that "there is nothing to contradict this model, although the genetic patterns do not provide clear support either".

NOTE. R1a1 is most prevalent in Poland, Russia, and Ukraine, and is also observed in Pakistan, India and central Asia. R1a1 is largely confined east of the Vistula gene barrier and drops considerably to the west. The

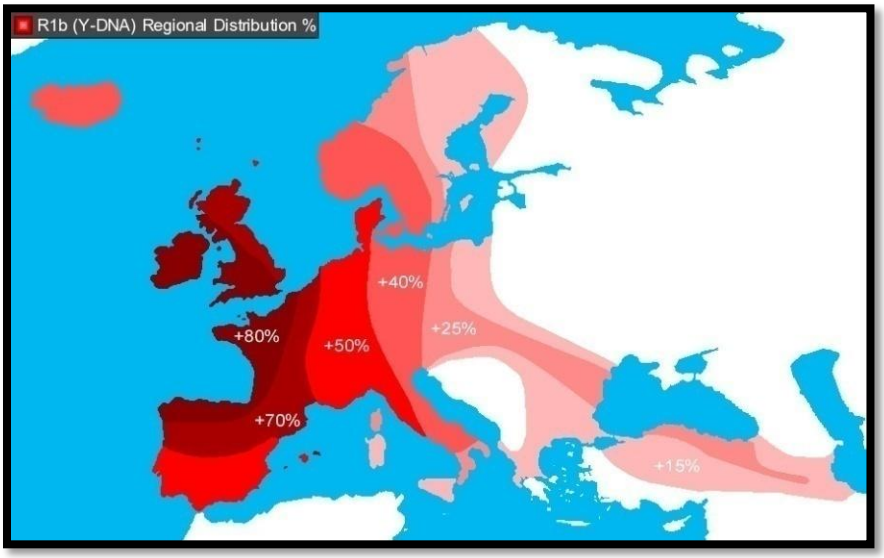


spread of Y-chromosome DNA haplogroup R1a1 has been associated with the spread of the Indo-European languages too. The mutations that characterize haplogroup R1a occurred ~10,000 years bp.

Haplogroup R1a1, whose lineage is thought to have originated in the Eurasian Steppes north of the Black and Caspian Seas, is therefore associated with the Kurgan culture, as well as with the postglacial Ahrensburg culture which has been suggested to have spread the gene originally.

The present-day population of **R1b haplotype**, with extremely high peaks in Western Europe and measured up to the eastern confines of Central Asia, are believed to be the descendants of a refugium in the Iberian peninsula (Portugal and Spain) at the Last Glacial Maximum, where the haplogroup may have achieved genetic homogeneity. As conditions eased with the Allerød Oscillation in about 12,000 BC, descendants of this group migrated and eventually recolonised all of Western Europe, leading to the dominant position of R1b in variant degrees from Iberia to Scandinavia, so evident in haplogroup maps.

NOTE 1. High concentrations of Mesolithic or late Paleolithic YDNA haplogroups of types R1b (typically well above 35%) and I (up to 25%), are thought to derive ultimately of the robust Eurasiatic Cro Magnoid homo sapiens of the Aurignacian culture, and the subsequent gracile leptodolichomorphous people of the Gravettian culture that entered Europe from the Middle East 20,000 to 25,000 years ago, respectively.



NOTE 2. The most common subclade is R1b1b2a, that has a maximum in Frisia. It may have originated towards the end of the last ice age, or perhaps more or less 7000 BC, possibly in the northern European mainland and a close match of the present–day distribution of S21 and the territorial pattern of the Eastern Corded Ware cultures and the Single Grave cultures has been observed. Dupuy and his colleagues proposed the ancestors of Scandinavian men from Haplogroup Hg P*(xR1a) or R1b (Y-DNA) to have brought Ahrensburg "culture" and stressed genetic similarity with Germany.

II. KURGAN HYPOTHESIS & PROTO-INDO-EUROPEAN LANGUAGES

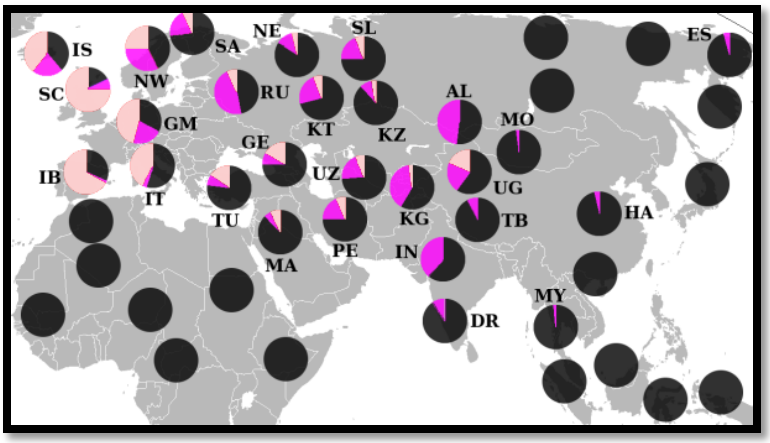
ARCHAEOLOGY (Kurgan Hypothesis)	***LINGUISTICS (Three-Stage Theory)***
ca. 4500-4000 BC. *Sredny Stog, Dnieper-Donets and Sarama cultures, domestication of the horse.*	***Pre-PIE*** *is spoken, probably somewhere in the Pontic-Caspian Steppe.*
ca. 4000-3500 BC. *The Yamna culture, the kurgan builders, emerges in the steppe, and the Maykop culture in northern Caucasus.*	***Early PIE*** *or IE I, the earliest Proto-Indo-European attainable by using the internal reconstruction method of comparative grammar.*
ca. 3500-3000 BC. *The Yamna culture is at its peak, with stone idols, two-wheeled proto-chariots, animal husbandry, permanent settlements and hillforts, subsisting on agriculture and fishing, along rivers. Contact of the Yamna culture with late Neolithic Europe cultures results in kurganized Globular Amphora and Baden cultures. The Maykop culture shows the earliest evidence of the beginning Bronze Age, and bronze weapons and artifacts are introduced.*	***Middle PIE*** *is spoken. Pre-IE III and Pre-Proto-Anatolian dialects evolve in different communities but presumably still in contact, until the later becomes isolated south of the Caucasus and has no more contacts with the linguistic innovations of common Late PIE.*
ca. 3000-2500 BC. *The Yamna culture extends over the entire Pontic steppe. The Corded Ware culture extends from the Rhine to the Volga, corresponding to the latest phase of Indo-European unity. Different cultures disintegrate, still in loose contact, enabling the spread of technology.*	***Late PIE*** *is spoken in different* ***dialects****, at least a Southern and a Northern one. Dialectal communities remain still in contact, enabling the spread of phonetic and morphological innovations, as well as early loan words.* ***Proto-Anatolian****, spoken in Asia Minor.*
ca. 2500-2000 BC. *The Bronze Age reaches Central Europe with the Beaker culture of Northern Indo-Europeans. Indo-Iranians settle north of the Caspian in the Sintashta-Petrovka and later the Andronovo culture.*	*The* ***breakup*** *of the southern IE dialects is complete. Proto-Greek spoken in the Balkans; Proto-Indo-Iranian in Central Asia; Europe's Indo-European in Northern Europe; Common Anatolian in Anatolia.*
ca. 2000-1500 BC. *The chariot is invented, leading to the split and rapid spread of Iranians and other peoples from the Andronovo culture and the Bactria-Margiana Complex over much of Central Asia, Northern India, Iran and Eastern Anatolia. Greek Darg Ages and flourishing of the Hittite Empire. Pre-Celtics Unetice culture has an active metal industry.*	*Indo-Iranian splits up in two main dialects, Indo-Aryan and Iranian.* ***European proto-dialects*** *like Germanic, Celtic, Italic, Baltic and Slavic differentiate from each other. A Proto-Greek dialect, Mycenaean, is already written in Linear B script. Anatolian languages like Hittite and Luwian are also written.*
ca. 1500-1000 BC. *The Nordic Bronze Age sees the rise of the Germanic Urnfield and the Celtic Hallstatt cultures in Central Europe, introducing the Iron Age. Italic peoples move to the Italian Peninsula. Rigveda is composed. The Hittite Kingdoms and the Mycenaean civilization decline.*	*Germanic, Celtic, Italic, Baltic and Slavic are already different* ***proto-languages****, developing in turn different dialects. Iranian and other related southern dialects expand through military conquest, and Indo-Aryan spreads in the form of its sacred language, Sanskrit.*
ca. 1000-500 BC. *Northern Europe enters the Pre-Roman Iron Age. Early Indo-European Kingdoms and Empires in Eurasia. In Europe, Classical Antiquity begins with the flourishing of the Greek peoples. Foundation of Rome.*	*Celtic dialects spread over Western Europe, German dialects to the south of Jutland. Italic languages attested in the Italian Peninsula. Greek and Old Italic alphabets appear. Late Anatolian dialects. Cimmerian, Scythian and Sarmatian in Asia, Paleo-Balkan languages in the Balkans.*

1.5. OTHER LINGUISTIC AND ARCHAEOLOGICAL THEORIES

1.5.1. A common development of new hypotheses has been to revise the Three-Stage assumption. It is actually not something new, but the come back to more traditional views, reinterpreting the new findings of the Hittite scripts, trying to insert Anatolian into the old, static PIE concept.

1.5.2. The most known new alternative theory concerning PIE is the **Glottalic theory**. It assumes that Proto-Indo-European was pronounced more or less like Armenian, i.e. instead of PIE **p**, **b**, **b^h**, the pronunciation would have been **p'*, **p*, **b*, and the same with the other two voiceless-voiced-voiced aspirated series of consonants. The IE *Urheimat* would have been then located in the surroundings of Anatolia, especially near Lake Urmia, in northern Iran, hence the archaism of Anatolian dialects and the glottalics still found in Armenian.

NOTE. Those linguistic findings are supported by Th. Gamkredlize-V. Ivanov (1990: "*The early history of Indo-European languages*", *Scientific American*, where early Indo-European vocabulary deemed "of southern regions" is examined, and similarities with Semitic and Kartvelian languages are also brought to light.



Distribution of haplotypes R1b (light color) for Eurasiatic Paleolithic and R1a (dark color) for Yamna expansion; black represents other haplogroups.

1.5.3. Alternative theories include:

I. The ***European Homeland thesis*** maintains that the common origin of the IE languages lies in Europe. These theses are more or less driven by Archeological or Linguistic findings.

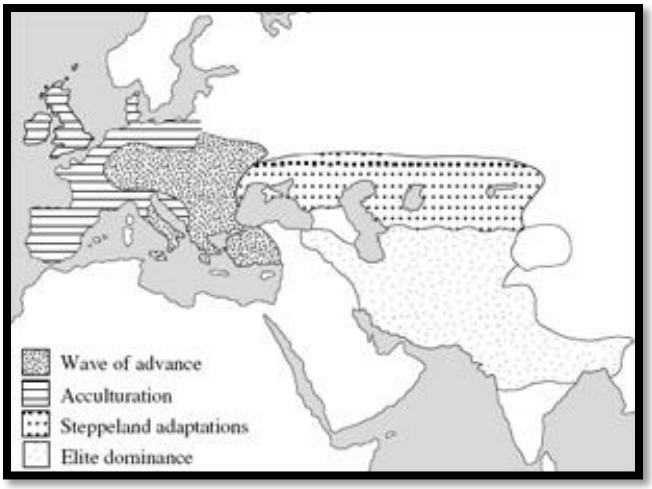
NOTE. It has been traditionally located in 1) ***Lithuania*** and the surrounding areas, by R.G. Latham (1851) and Th. Poesche (1878: *Die Arier. Ein Beitrag zur historischen Anthropologie*, Jena); 2) ***Scandinavia***, by K.Penka (1883: *Origines ariacae*, Viena); 3) ***Central Europe***, by G. Kossinna (1902: "*Die Indogermanische Frage archäologisch beantwortet*", *Zeitschrift für Ethnologie*, 34, pp. 161-222), P.Giles (1922: *The Aryans*, New York), and by linguist/archaeologist G. Childe (1926: *The Aryans. A Study of Indo-European Origins*, London).

a. The *Old European* or ***Alteuropäisch Theory*** compares some old European vocabulary (especially river names), which would be older than the spread of Late PIE dialects through Northern Europe. It points out the possibility of an older, pre-IE III spread of IE, either of IE II or I or maybe some other Pre-IE dialect. It is usually related to the PCT and Renfrew's NDT.

b. The ***Paleolithic Continuity Theory*** posits that the advent of IE languages should be linked to the arrival of Homo sapiens in Europe and Asia from Africa in the Upper Paleolithic. The PCT proposes a continuated presence of Pre-IE and non-IE peoples and languages in Europe from Paleolithic times and allowing for minor invasions and infiltrations of local scope, mainly during the last three millennia.

NOTE. There are some research papers concerning the PCT available at <http://www.continuitas.com/>. Also, the PCT could in turn be connected with Frederik Kortlandt's Indo-Uralic and Altaic studies <http://kortlandt.nl/publications/> – although they could also be inserted in Gimbutas' early framework.

c. This is, in turn, related to the theories of a ***Neolithic revolution*** causing the peacefully spreading of an older pre-IE language into Europe from Asia Minor from around 7000 BC, with the advance of farming. It proposes that the dispersal (discontinuity) of Proto-Indo-Europeans originated in Neolithic Anatolia.



Homeland question (mixing Neolithic and Kurgan hypothesis), J.P.Mallory & D.Q. Adams

NOTE. Reacting to criticism, Renfrew by 1999 revised his proposal to the effect of taking a pronounced Indo-Hittite position. Renfrew's revised views place only Pre-Proto-Indo-European in 7th millennium BC Anatolia, proposing as the homeland of Proto-Indo-European proper the Balkans around 5000 BC, explicitly identified as the "Old European culture" proposed by Gimbutas.

As of 2005, Colin Renfrew seems to support the PCT designs and the usefulness of the Paleolithic assumptions. He co-authored a paper concluding: *Our finding lends weight to a proposed Paleolithic ancestry for modern Europeans* The above quotation coming as results of archaeogenetic research on mtaDNA where 150 x greater N1a frequency was found. The first European farmers are descended from a European population who were present in Europe since the Paleolithic and not coming as a wave of Neolithic migration as proposed in Renfrew'S NDT.

II. Another hypothesis, contrary to the European ones, also mainly driven today by a nationalistic view, traces back the origin of PIE to Vedic Sanskrit, postulating that it is very *pure*, and that the origin can thus be traced back to the Indus Valley Civilization of ca. 3000 BC.

NOTE. Such Pan-Sanskritism was common among early Indo-Europeanists, as Schlegel, Young, A. Pictet (1877: *Les origines indoeuropéens*, Paris) or Schmidt (who preferred Babylonia), but are now mainly supported by those who consider Sanskrit almost equal to Late Proto-Indo-European. For more on this, see S. Misra (1992: *The Aryan Problem: A Linguistic Approach*, Delhi), Elst's *Update on the Aryan Invasion Debate* (1999), followed up by S.G. Talageri's *The Rigveda: A Historical Analysis* (2000), both part of "*Indigenous Indo-Aryan*" viewpoint by N. Kazanas, the "*Out of India*" theory, with a framework dating back to the times of the Indus Valley Civilization.

III. The Black Sea deluge theory dates the origins of the IE dialects expansion in the genesis of the Sea of Azov, ca. 5600 BC, which in turn would be related to the Bible Noah's flood, as it would have remained in oral tales until its writing down in the Hebrew *Tanakh*. This date is generally considered as rather early for the PIE spread.

NOTE. W.Ryan and W.Pitman published evidence that a massive flood through the Bosporus occurred about 5600 BC, when the rising Mediterranean spilled over a rocky sill at the Bosporus. The event flooded 155,000 km² of land and significantly expanded the Black Sea shoreline to the north and west. This has been connected with the fact that some Early Modern scholars based on Genesis 10:5 have assumed that the 'Japhetite' languages (instead of the 'Semitic' ones) are rather the direct descendants of the Adamic language, having separated before the confusion of tongues, by which also Hebrew was affected. That was claimed by *Blessed* Anne Catherine Emmerich (18th c.), who stated in her private revelations that most direct descendants of the *Adamic language* were Bactrian, Zend and Indian languages, related to her Low German dialect. It is claimed that Emmerich identified this way *Adamic language* as Early PIE.

1.6. RELATIONSHIP TO OTHER LANGUAGES

1.6.1. Many higher-level relationships between PIE and other language families have been proposed. But these speculative connections are highly controversial. Perhaps the most widely accepted proposal is of an Indo-Uralic family, encompassing PIE and Proto-Uralic, a language from which Hunarian, Finnish, Estonian, Saami and a number of other languages belong. The evidence usually cited in favor of this is the proximity of the proposed *Urheimaten* of the two proto-languages, the typological similarity between the two languages, and a number of apparent shared morphemes.

NOTE. Other proposals, further back in time (and correspondingly less accepted), model PIE as a branch of Indo-Uralic with a Caucasian substratum; link PIE and Uralic with Altaic and certain other families in Asia, such as Korean, Japanese, Chukotko-Kamchatkan and Eskimo-Aleut (representative proposals are Nostratic and Joseph Greenberg's Eurasiatic); etc.

1.6.2. **Indo-Uralic** or Uralo-Indo-European is a hypothetical language family consisting of Indo-European and Uralic (i.e. Finno-Ugric and Samoyedic). Most linguists still consider this theory speculative and its evidence insufficient to conclusively prove genetic affiliation.

NOTE. Dutch linguist Frederik Kortlandt supports a model of Indo-Uralic in which the original Indo-Uralic speakers lived north of the Caspian Sea, and Proto-Indo-Europeans began as a group that branched off westward from there to come into geographic proximity with the Northwest Caucasian languages, absorbing a Northwest Caucasian lexical blending before moving farther westward to a region north of the Black Sea where their language settled into canonical Proto-Indo-European.

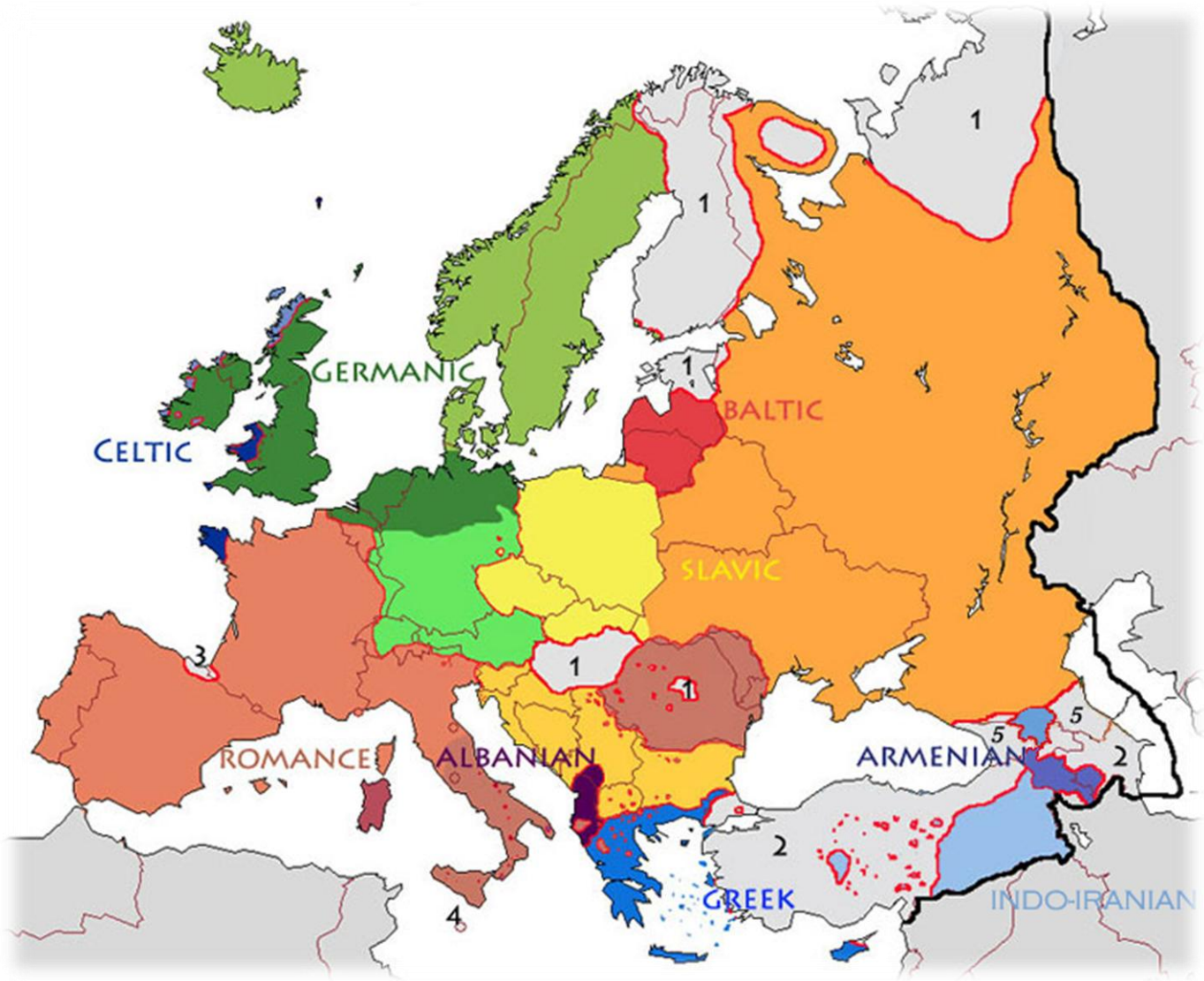
1.6.3. The most common arguments in favour of a relationship between Early PIE and Uralic are based on seemingly common elements of morphology, such as the pronominal roots **m-* for first person, **t-* for second person, **i-* for third person; case markings accusative **-m*, ablative/partitive **-ta*; interrogative/relative pronouns **kʷ-* "*who?, which?*", **j-* "*who, which*" to signal relative clauses; and a common SOV word order. Other, less obvious correspondences are suggested, such as the Indo-European plural marker **-es** (or **-s** in the accusative plural **-m̥-s**) and its Uralic counterpart **-t*. This same word-final assibilation of **-t* to **-s* may also be present in PIE second-person singular **-s** in

comparison with Uralic second-person singular *-*t*. Compare, within Indo-European itself, -**s** second-person singular injunctive, -**si** second-person singular present indicative, -**tHa** second-person singular perfect, -**te** second-person plural present indicative, **tu** "*you*" (singular) nominative, **tei** "*to you*" (singular) enclitic pronoun. These forms suggest that the underlying second-person marker in Indo-European may be **t* and that the **u* found in forms such as **tu** was originally an affixal particle.

NOTE. The problem with lexical evidence is to weed out words due to borrowing, because Uralic languages have been in contact with Indo-European languages for millenia, and consequently borrowed many words from them.

Meaning	Early PIE	Proto-Uralic
"I, me"	**me**, *"me"* (Acc.), **mene**, *"my"* (Gen.)	**mun*, **mina*, "I"
"you" (sg)	**tu** (Nom.), **twe** (Acc.), **tewe** *"your"* (Gen.)	***tun*, **tina*
First person singular	-**m**	**-m*
First person plural	-**me**	**-me*
Second person singular	-**s** (active), **-tHa** (perfect)	**-t*
Second person plural	-**te**	**-te*
Demonstrative	**so**, *"this*, *he/she"* (animate nom)	**ša* (3rd person singular)
Interrogative pronoun (An.)	**kʷi**-, *"who*?, *what*?"; **kʷo**-, *"who*?, *what*?"	**ken*, *"who*?", **ku*-, *"who*?"
Relative pronoun	**jo**-	**-ja* (nomen agentis)
Accusative	-**m**	**-m*
Ablative/partitive	-**od**	**-ta*
Nominative/Accusative pl.	-**es** (Nom. pl.), -**m̥-s** (Acc. pl.)	**-t*
Oblique plural	-**i** (pronominal pl., cf. **we-i**- *"we",* **to-i**- *"those"*)	**-i*
Dual	-$\mathbf{H_1}$	**-k*
Stative	-**s**- (aorist); -**es**-, -**t** (stative substantive)	**-ta*
Negative particle	**nei**, **ne**	**ei*- [negative verb] , **ne*
"to give"	**deh**$_3$-	**toHe*-
"to moisten",	**wed**-, *"to wet"*, **wodr̥-**, *"water"*	**weti*, "*water*"
"water"	**mesg**-, "*dip under water, dive*"	**muśke*-, "*wash*"
"to assign",	**nem**-, "*to assign, to allot*", **h$_1$nomn̥-**, "*name*"	**nimi*, "*name*"
"metal"	**h$_2$weseh$_2$**-, "*gold*"	**waśke*, "some metal"
"trade"	**mei**-, "*exchange*"	**miHe*-, "*give, sell*"
"fish"	(**s**)**kʷalo-**, "*large fish*"	***kala*, *"fish"*
"sister-in-law"	**galou-**, "*husband's sister*"	***käl*ɜ, "*sister-in-law*"
"much"	**polu-**, "*much*"	***palj*ɜ, "*thick, much"*

1.7. INDO-EUROPEAN DIALECTS OF EUROPE



*Languages of Europe. The **black line** divides the zones traditionally (or politically) considered inside the European subcontinent. Northern dialects are all but Greek and Kurdish (Iranian); Armenian is usually considered a Graeco-Aryan dialect, while Albanian is usually classified as a Northern one. Numbered inside the map, non-Indo-European languages: 1) Uralic languages; 2) Turkic languages; 3) Basque; 4) Maltese; 5) Caucasian languages.*

SCHLEICHER'S FABLE: FROM PROTO-INDO-EUROPEAN TO MODERN ENGLISH

The so-called *Schleicher's fable* is a poem composed in PIE, published by August Schleicher in 1868, originally named "*The Sheep and the Horses*". It is written here in the different reconstructible IE dialects for comparison.

More information and changes at <http://dnghu.org/en/indoeuropean-schleicher-fable/>

The immediate parent dialect of each proto-language is enclosed in parentheses.

Indo-Hittite (IE I), 3500 BC	Common Anatolian (PAn), 2500 BC	Europe's IE (IE IIIb), 2500 BC
H_3owis $h_1$ekwōs-k^{w}e.	Howis ekwōs-k^{w}e.	Owis ekwōs-k^{w}e.
H_3owis, k^{w}esjo w̥$h_1$neh$_2$ ne $h_1$est,	Howis, k^{w}esjo w̥neh ne est,	Owis, k^{w}esjo w̥nā ne est,
$h_1$ekwoms spekét,	ekwoms spekét,	ekwoms spekét,
$h_1$oinom cr̥$h_3$úm wog^{h}om wég^{h}ontm̥,	oikom gr̥rúm wogom wégontm̥,	oinom g^{w}r̥rúm wog^{h}om wég^{h}ontm̥,
$h_1$oinom-k^{w}e megeh$_2$m b^{h}orom,	oikom-k^{w}e megehm borom,	oinom-k^{w}e megām b^{h}orom,
$h_1$oinom-k^{w}e d^{h}h$_1$g^{h}monm̥ h$_1$oh$_1$ku b^{h}érontm̥.	oikom-k^{w}e dgmonm̥ oku bérontm̥.	oinom-k^{w}e d^{h}g^{h}monm̥ ōkú b^{h}érontm̥.
H_3owis nu $h_1$ékwob^{h}jos weuk^{w}ét:	Howis nu ékwobos wūk^{w}ét:	Owis nu ékwob^{h}os weuk^{w}ét:
"Kr̥d h$_2$ég^{h}nutoi $h_1$moí,	"Kr̥d xégnutor moí,	"Kr̥d ág^{h}nutoi moí,
$h_1$ekwoms h$_2$égontm̥ wih$_1$rom wídn̥tei".	ekwoms xégontm̥ wirom wídn̥tę".	ekwoms ágontm̥ wīrom wídn̥tei".
H$_1$ekwōs tu weuk^{w}ónt: "Klud^{h}í, $h_3$owi!	Ekwōs tu weuk^{w}ónt: "Kludí, howi!	Ekwōs tu weuk^{w}ónt: "Klud^{h}í, owi!
kr̥d h$_2$ég^{h}nutoi n̥sméi wídn̥tb^{h}jos:	kr̥d hegnutor n̥smę wídn̥tbos:	kr̥d ág^{h}nutoi n̥sméi wídn̥tb^{h}jos:
h$_2$ner, potis, $h_3$owjom-r̥ w̥$h_1$neh$_2$m̥	hner, potis, howjom-r̥ w̥nehm	ner, potis, owjom-r̥ w̥nām
sweb^{h}i g^{wh}ermóm westrom k^{w}r̥neuti".	swebi cermóm wéstrom k^{w}r̥nūdi".	seb^{h}i g^{wh}ermóm westrom k^{w}r̥neuti".
H_3owjom-k^{w}e w̥hneh$_2$ ne $h_1$esti.	Howjom-k^{w}e w̥neh ne esti.	Owjom-k^{w}e w̥nā ne esti.
Tod kékluwos $h_3$owis h$_2$egrom b^{h}ugét.	Tod kékluwos howis hegrom bugét.	Tod kékluwos owis agrom b^{h}ugét.

Proto-Indo-Iranian (IE IIIa), 2500 BC	Proto-Greek (IE IIIa), 2500 BC	Proto-Celtic (EIE), 1000 BC
Awis aḵwās-ka.	Owis ekwoi-k^{w}e.	Owis ek^{w}oi-k^{w}e.
Awis, kasja wr̥̄nā na āst,	Ówis, k^{w}eho w̥nā ne ēst,	Owis, k^{w}esjo wlānā ne est,
akwams spaḵát,	ekwos spekét,	ek^{w}os spekét,
aikam gr̥úm wag^{h}am wág^{h}antm̥,	oiwom k^{wh}r̥um wok^{h}om wek^{h}ontm̥,	oinom barúm woxom wéxontam,
aikam-ka mag^{h}am b^{h}aram,	oiwom-k^{w}e megām p^{h}orom,	oinom-k^{w}e megam borom,
aikam-ka g^{h}ámanm̥ āḵu b^{h}arantm̥.	oiwom-k^{w}e k^{h}t^{h}ómonm̥ ōku p^{h}érontm̥.	oinom-k^{w}e dxoniom āku berontam.
Awis nu áḵwab^{h}jas áwaukat:	Ówis nu ékwop^{h}os éweuk^{w}et:	Owis nu ék^{w}obos weuk^{w}ét:
"Ḵr̥d ág^{h}nutai mai,	"Kr̥d ák^{h}nutoi moi,	"Krid áxnutor mai,
aḵwams aǧantam wīram wídn̥tai".	ekwoms ágontm̥ wīrom wídn̥tei".	ek^{w}os ágontom wīrom wídanti".
Áḵwās tu áwawkant: "Ḵrud^{h}í avi!	Ékwoi tu éwewek^{w}ont: "Klut^{h}í, owi!	Ek^{w}oi tu wewk^{w}ónt: "Kludí, owi!
ḵr̥d ág^{h}nutai n̥smái wídn̥tb^{h}jas:	kr̥d ágnutoi n̥sméi wídn̥tp^{h}os:	krid áxnutor ansméi wídantbjos:
nar, patis, awjam-r̥ wr̥̄nām	anér, potis, owjom-r̥ w̥nām	ner, φotis, owjom-ar wlānām
swab^{h}i g^{h}armám wastram kr̥nauti".	sep^{h}i k^{wh}ermóm westrom k^{w}r̥neuti".	sebi g^{w}ermóm westrom k^{w}arneuti".
Awjam-ka wr̥̄nā na asti.	Owjom-k^{w}e w̥nā ne esti.	Owjom-k^{w}e wlānā ne esti.
Tat ḵáḵruwas awis aǧram áb^{h}ugat.	Tot kékluwos owis agrom ép^{h}uget.	Tod kéklowos owis agrom bugét.

Proto-Italic (EIE), 1000 BC	Pre-Proto-Germanic (EIE), 1000 BC	Common Tocharian (PToch), 1000 BC
Owis ekwoi-kʷe.	Awiz exwaz-xʷe.	Owi jukweñ-ke.
Owis, kʷesjo wlānā ne est,	Awiz, hʷes wulnō ne est,	Owi, kuse wlānā ne es,
ekwos spekét,	ehwanz spexét,	jukwes späkät,
oinom grāwúm woxom wéxontem,	ainan karún wagan wéganðun,	enem karäm wakm̥ wäkantäm,
oinom-kʷe megam ɸorom,	ainan-xʷe mekon baran,	enem-ke mäkām parm,
oinom-kʷe xomonem ōku ɸerontem.	ainan-xʷe gúmanan āxu béranðun.	enem-ke tkamnam ākä pärantäm.
Owis nu ékwoɸos weukʷét:	Awiz nu éxwamaz weuxʷéð:	Owi nä júkwebos wukät:
“Kord axnutor mei,	“Hurt ágnuðai mei,	“Kärt ágnätai me,
ekwos ágontom wīrom wídentei”.	exwanz ákanðun weran wítanðī”.	jukwes ākantän wirem witsante”.
Ekwoi tu wewkʷónt: “Kluþí, owi!	Exwaz wewxʷant: “Hludí, awi!	Jukweñ tä wukant: “Klutí, ow!
kord axnutor ensméi wídentɸos:	hurt áknuðai unsmí wítunðmaz:	kärt āknete ansme wítäntbe:
ner, potis, owjom-or wlānām	ner, faþiz, awjan-aur wulnōn	när, pats, owjāp-är wlānām
seɸi gʰermóm westrom kʷorneuti”.	sibi warmán westhran hʷurneuþi”.	säpi särmam wästram kärnuti”.
Owjom-kʷe wlānā ne esti.	Awjan-xʷe wulnō ne isti.	Owjāp-ke wlānā nä esti.
Tud kékluwos owis agrom ɸugít.	Þat héxluwaz awiz akran bukéþ.	Tä käklewe owi ākre bekät.

Proto-Armenian (?), 1 AD	Proto-Slavic (EIE), 500 AD	Proto-Baltic (EIE), 500 AD
Hovih ēšwuh-kʰe.	Ovĭs esvŭ-če.	Avis ašvai-ke.
Hovih, kʰehjo gálana ne ēs(tʰ),	Ovĭs, česo vlĭna ne jazĭt,	Avis, kaso vìlno ne ašt,
ēšwoh spʰekʰe(tʰ),	esva speset,	ašvus spekít,
enam erkúm woĵã wéĵonã,	inŭ žarŭõ vozŭ vézõtẽ,	ainam ǵarũ važam vėžantim,
enam-kʰe mekã borã,	inŭ-če meža borŭ,	ainam-ke meǵam baram,
enam-kʰe zmonã ušu béronã.	inŭ-če žmonŭ asŭ bérõtẽ.	ainam-ke zmonam uoku bérantim.
Hovih nu ēšwoboh égojkʰe(tʰ):	Ovĭs nŭ ésvomŭ vjučét:	Avis nu ášvamas vjaukít:
“Sart égnutʰe me,	“Srĭd áznutě mě,	“Šird ágnutai mai,
ēšwuh ákontʰã garã gítantʰi”.	esvŭ ágõtŭ virŭ vídẽti”.	ašvai ágantim viram vídintei”.
Ēšwoh tʰu égojkʰõ: “Ludí, hovi!	Esva tu vjučõt: “Sludĭ, ove!	Ašvus tu vjaukant: “Šludí, avi!
Sart égnutʰoi asmí gítan(tʰ)bos:	srĭd áznutě ẽsmí vídẽtmŭ:	šird ágnutai insméi vídintmas:
a(n)ír, pʰotʰis, owjã-ar gálanam	ner, podĭs, óvjemĭ-rĭ vlĭnõ	ner, pats, avjam-ir vìlnom
(k)ibi ĵermã gesthrã kʰarnojtʰi”.	sẽbi germŭ vestrŭ črĭnjutĭ”.	sebi garmám vestram kirnjauti”.
Hovjã-kʰe gálana ne estʰi.	Óvjemĭ-če vlĭna ne jázĭtĭ.	Avjam-ke vìlno ne ašti.
Da kʰékʰlugah hovih akrã ébuke(tʰ).	To sésluvŭ ovĭs agrŭ bugĭt.	Ta šėšluvas avis agram bugít.

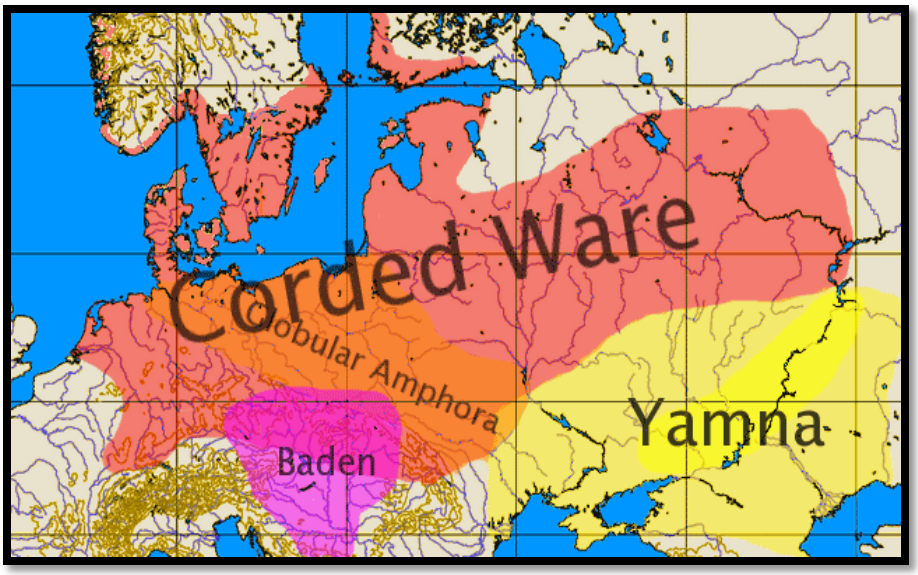
Translation: *« The Sheep and the Horses. • A sheep that had no wool • saw horses, • one pulling a heavy wagon, • one carrying a big load, • and one carrying a man quickly. • The sheep said to the horses: • “My heart pains me, • seeing a man driving horses”. • The horses said: “Listen, sheep, • our hearts pain us when we see this: • a man, the master, makes the wool of the sheep • into a warm garment for himself. • And the sheep has no wool”. • Having heard this, the sheep fled into the plain. »*

1.7.1. NORTHERN INDO-EUROPEAN DIALECTS

I. EUROPE'S INDO-EUROPEAN

The Northwestern Proto-Indo-European dialect, or **Europe's Indo-European**, was spoken in the European Subcontinent between ca. 2500-2000 BC, until it evolved into Proto-Celtic, Proto-Italic, Proto-Germanic, and Proto-Balto-Slavic. Its original common location is usually traced back to some place to the East of the Rhine, to the North of the Alps and the Carpathian Mountains, to the South of Scandinavia and to the East of the Eastern European Lowlands or Russian Plain, not beyond Moscow.

The Corded Ware complex of cultures traditionally represents for many scholars the arrival of the first speakers of Northern Dialects in central Europe, coming from the Yamna culture. The archaeological complex dates from about 3.000-2.000 BC. The Globular Amphorae culture may be slightly earlier, but the relation between these two cultures remains unclear.



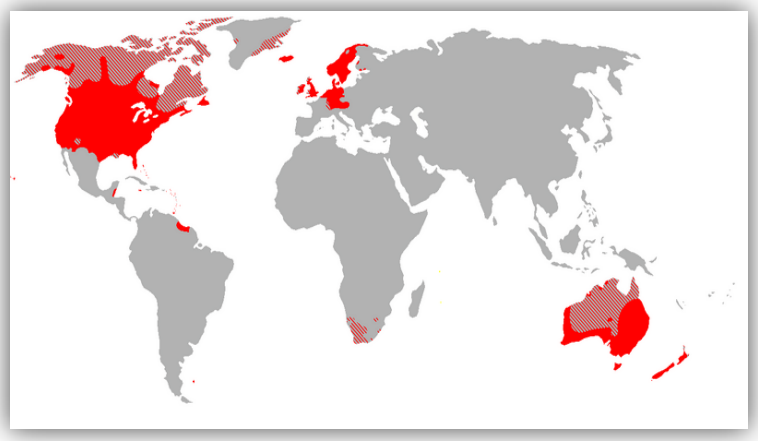
Europe 2500-2000 BC. The Proto-Germanic homeland is traced back to Jutland and southern Scandinavia; present-day West Germany was the homeland for Proto-Celtic and Proto-Italic speakers; the Eastern zone corresponds to Balto-Slavic speakers.

Evolution of PIH laryngeals in EIE include vowel colourization and compensatory lengthening, many of them common to Late PIE:

- PIH **H₁**, the *neutral* laryngeal: **h₁a**→*a*, **h₁e**→*e*, **h₁o**→*o*; **ah₁**→*ā*, **eh₁**→*ē*, **oh₁**→*ō*.
- PIH **H₂**, the *a-colouring* laryngeal: **h₂a**→*a*, **h₂e**→*a*, **h₂o**→*a*; **ah₂**→*ā*, **eh₂**→*ā*.
- PIH **H₃**, the *o-colouring* laryngeal: **h₃e**→*o*, **h₃o**→*o*; **eh₃**→*ō*, **oh₃**→*ō*.
- PIE **ə** (PIH interconsonantal **-H-**) → *a*, as in PIH **ph₂tḗr** → EIE patḗr (cf. PII *pitā́r*)
- PIH **r̥H**→*r̥̄*, **l̥H**→***l̥̄***, **n̥H**→*n̥̄*, **m̥H**→*m̥̄*; also, **iH**→*ī*, **uH**→*ū*.
- PIH **H** before consonants → **Ø** : cf. PIH **h₁dōnts**, EIE *dōnts* (cf. PGk *odōnts*), "*tooth*"; PIH **h₂stḗr**, EIE *stḗr* (cf. PGk *astḗr*), etc.

NOTE. There are many variations in the laryngeal theories proposed by scholars, who reconstruct from just one (Szemerényi) to eight (Puhvel) or nine (Adrados); a general reconstruction of three laryngeals is commonly accepted for its simplicity and wide acceptance today. For more on this see Appendix II.3, The Laryngeal Theory.

A. GERMANIC

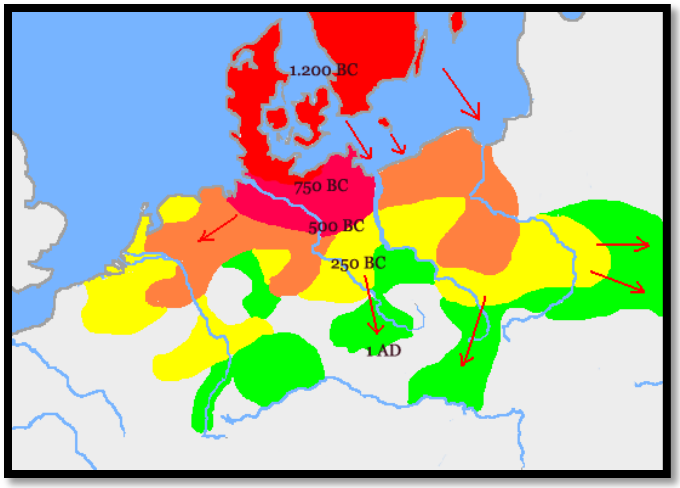


Spread of Germanic languages today.

The **Germanic languages** form one of the branches of the Indo-European language family. The largest Germanic languages are English and German, with ca. 340 and some 120 million native speakers, respectively. Other significant languages include a number Low Germanic dialects (like Dutch) and the Scandinavian languages.

Their common ancestor is **Proto-Germanic**, probably still spoken in the mid-1st millennium B.C. in Iron Age Northern Europe, since its separation from an earlier **Pre-Proto-Germanic**, a dialect of Europe's Indo-European branch dated ca. 1000 BC. The succession of archaeological horizons suggests that before their language differentiated into the individual Germanic branches the Proto-Germanic speakers lived in southern Scandinavia and along the coast from the Netherlands in the west to the Vistula in the east around 750 BC. Early Germanic dialects enter history with the Germanic peoples who settled in northern Europe along the borders of the Roman Empire from the 2nd century.

NOTE. A few surviving inscriptions in a runic script from Scandinavia dated to ca. 200 are thought to represent a later stage of Proto-Norse; according to Bernard Comrie, it represents a *Late Common Germanic* which followed the "Proto-Germanic" stage.



Expansion of Germanic tribes 1200 BC - 1 AD.

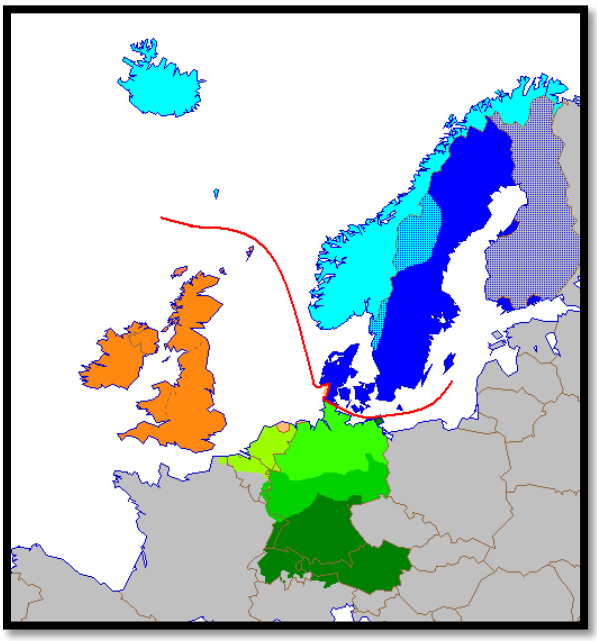
The earliest evidence of the Germanic branch is recorded from names in the 1st century by Tacitus, and in a single instance in the 2nd century BC, on the *Negau helmet*. From roughly the 2nd century AD, some speakers of early Germanic dialects developed the *Elder Futhark*. Early runic inscriptions are also largely limited to personal names, and difficult to interpret. The Gothic language was written in the Gothic alphabet developed by Bishop Ulfilas for his translation of the Bible in the 4th century. Later, Christian priests and monks who spoke and read Latin in addition to their native Germanic tongue began writing the Germanic languages with slightly modified Latin letters, but in Scandinavia, runic alphabets remained in common use throughout the Viking Age.

NOTE. W. P. Lehmann (1961) considered that Jacob Grimm's "First Germanic Sound Shift", or Grimm's Law and Verner's Law, which pertained mainly to consonants and were considered for a good many decades to have generated Proto-Germanic, were Pre-Proto-Germanic, and that the "upper boundary" was the fixing of the accent, or stress, on the root syllable of a word, typically the first. Proto-Indo-European had featured a moveable pitch accent comprising "an alternation of high and low tones" as well as stress of position determined by a set of rules based on the lengths of the word's syllables.

The fixation of the stress led to sound changes in unstressed syllables. For Lehmann, the "lower boundary" was the dropping of final -a or -e in unstressed syllables; for example, PIE **woid-á** >, Goth. *wait*, "*knows*" (the > and < signs in linguistics indicate a genetic descent). Antonsen (1965) agreed with Lehmann about the upper boundary but later found runic evidence that the **-a** was not dropped: Gmc. *ékwakraz ... wraita*, "*I wakraz ... wrote (this)*". He says: "We must therefore search for a new lower boundary for Proto-Germanic".

The so-called **Grimm's law** is a set of statements describing the inherited Europe's Indo-European stops as they developed in Pre-Proto-Germanic. As it is presently formulated, Grimm's Law consists of three parts, which must be thought of as three consecutive phases in the sense of a chain shift:

- PIE voiceless stops change into PGmc. voiceless fricatives: **p**→*f*, **t**→*θ*, **k**→*x*, **k^{w}**→*x^{w}*.
- PIE voiced stops become PGmc. voiceless stops: **b**→*p*, **d**→*t*, **g**→*k*, **g^{w}**→*k^{w}*.
- PIE voiced aspirated stops lose their aspiration and change into plain voiced stops: **b^{h}**→*b*, **d^{h}**→*d*, **g^{h}**→*g*, **g^{wh}**→*g^{w}*,*g*,*w*.



Germanic dialects in Europe. The line dividesWestern from Northern dialects.

Verner's Law addresses a category of exceptions, stating that unvoiced fricatives are voiced when preceded by an unaccented syllable: PGmc. *s*→*z*, *f*→*v*, *θ*→*ð*; as, PIE **b^{h}ratēr** → PGmc. *brōþēr*, "*brother*", but PIE **mātḗr** → PGmc. *mōðēr* "*mother*".

NOTE. Sometimes the shift produced allophones (consonants that were pronounced differently) depending on the context of the original. With regard to original PIE **k** and **k^{w}**, Trask (2000) says that the resulting PGmc. *x* and *x^{w}* were reduced to *h* and *h^{w}* in word-initial position. Consonants were lengthened or prolonged under some circumstances, appearing in some daughter languages as geminated graphemes. Kraehenmann (2003) states that Proto-Germanic already had long consonants, but they contrasted with short ones only word-medially. Moreover, they were not very frequent and occurred only intervocally almost exclusively after short vowels. The phonemes b, *d*, *g* and *g^{w}*, says Ringe (2006) were stops in some environments and fricatives in others.

Effects of the aforementioned sound laws include the following examples:

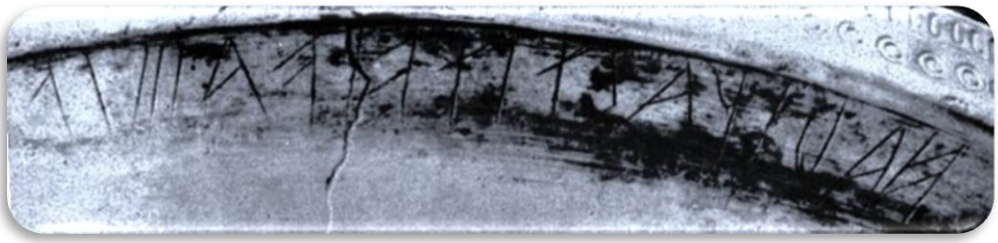
- **p**→*f*: PIE **pōds**, "*foot*", PGmc. *fōts*; cf. Goth. *fōtus*, O.N. *fōtr*, O.E. *fōt*, O.H.G. *fuoz*.
- **t**→*þ,ð*: PIE **tritjós**, "*third*", PGmc. *þriðjaz*; cf. Goth. *þridja*, O.N. *þriðe*, OE. *þridda*, O.H.G. *dritto*.
- **k**→*x,h*: PIE **kuntós**, "*dog*", PGmc. *xunðaz*; cf. Goth. *hunds*, O.N. *hundr*, O.E. *hund*, O.H.G. *hunt*.
- **k^{w}**→*x^{w},h^{w}*: PIE **k^{w}os**, "*what, who*", Gmc. *h^{w}oz*; cf. Goth. *hwas*, O.N. *hverr*, O.S. *hwe*, O.E. *hwā*, O.Fris. *hwa*, O.H.G. *hwër*.
- **b**→*p*: PIE **werbō**, "throw", Gmc. *werpō*; cf. Goth. *wairpan*, O.S. *werpan*, O.N. *verpa*, O.E. *weorpan*, M.L.G., Du. *werpen*, Ger. *werfen*.
- **d**→*t*: PIE **dekm̥**, "*ten*", Gmc. *tehun*; cf. Goth. *taihun*, O.S. *tehan*, O.N. *tiu*, O.Fris. *tian*, O.Du. *ten*, O.H.G. *zehan*.
- **g**→*k*: PIE **goldós**, "*cold*", Gmc. *kaldaz*; cf. Goth. *kalds*, O.N. *kaldr*, O.E. *cald*, O.H.G. *kalt*.
- **g^{w}**→*kw*: PIE **g^{w}ĭwós**, "*alive*", Gmc. *k^{w}i(k)waz*; cf. Goth. *k^{w}ius*, O.N. *kvikr*, O.E. *cwic*, O.H.G. *quec*.
- **b^{h}**→b: PIE **b^{h}rātēr**, Gmc. *brōþēr*; cf. Goth. *bróþar*, O.N. *brōþir*, O.E. *brōþor*, O.H.G. *bruoder*.
- **d^{h}**→*d*: PIE **d^{h}woris**, "door", Gmc. *duriz*; cf. Goth. *daúr*, O.N. *dyrr*, O.E *duru*, O.H.G. *turi*.
- **g^{h}**→*g*: PIE **g^{h}ansis**, "goose", Gmc. *gansiz*; cf. Goth *gansus*, O.N. *gās*, O.E. *gōs*, O.H.G. *gans*.
- **g^{wh}**→*gw/g/w*: PIE **g^{wh}ormós**, "*warm*", Gmc. *warmaz*; cf. O.N. *varmr*, O.E. *wearm*, O.H.G. *warm*. PIE **g^{wh}ondos**, "*fight*", Gmc. *gandaz*; cf. Goth. *gunþs*, O.N. *gandr*, O.E. *gūþ*, O.H.G. *gund*.

Known exception is that the voiceless stops did not become fricatives if they were preceded by PIE **s**., i.e. **sp**, **st**, **sk**, **sk^{w}**. Similarly, PIE **t** did not become a fricative if it was preceded by **p**, **k**, or **k^{w}**.This is sometimes treated separately under the Germanic *spirant law*.

About the PIE vowels: **a**,**o**→*a*; PIE ***ā***,***ō***→*ō*. PGmc. had then short *i*, *u*, *e*, *a*, and long *ī*, *ū*, *ē*, *ō*, *ǣ*?

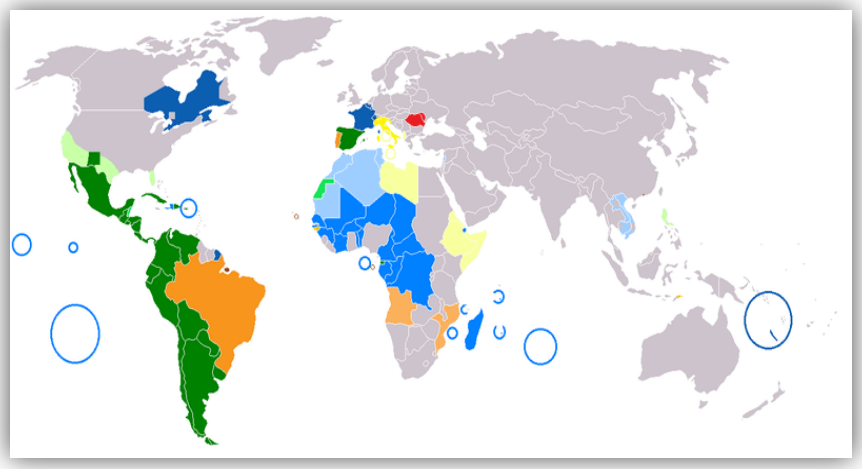
NOTE 1. A similar mergers happened in the Slavic languages, but in the opposite direction. At the time of the merge, the vowels probably were [ɒ] and [ɒ:] before their timbres differentiated into maybe [ɑ] and [ɔ:].

NOTE 2. PGmc. *ǣ* and *ē* are also transcribed as *ē¹* and *ē²*; *ē²* is uncertain as a phoneme, and only reconstructed from a small number of words; it is posited by the comparative method because whereas all probable instances of inherited PIE **ē** (PGmc. **ē¹*) are distributed in Gothic as *ē* and the other Germanic languages as *ā*, all the Germanic languages agree on some occasions of *ē* (e.g. PGmc. *hē²r* → Goth.,O.E.,O.N. *hēr*, "*here*"). Krahe treats *ē²* (secondary ē) as identical with *ī*. It probably continues PIE **ei** or **ēi**, and it may have been in the process of transition from a diphthong to a long simple vowel in the Proto-Germanic period. Gothic makes no orthographic and therefore presumably no phonetic distinction between *ē¹* and *ē²*. The existence of two Proto-Germanic [e:]-like phonemes is supported by the existence of two e-like Elder Futhark runes, *Ehwaz* and *Eihwaz*.



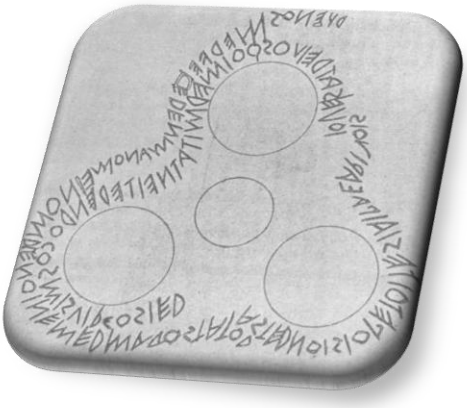
Negau helmet. It reads (read from right to left) **harikastiteiva\\\ip**, *translated as "Harigast the priest.*

B. LATIN



Regions where Romance languages are spoken, either as mother tongue or as second language.

The **Romance languages**, a major branch of the Indo-European language family, comprise all languages that descended from Latin, the language of the Roman Empire. Romance languages have some 800 million native speakers worldwide, mainly in the Americas, Europe, and Africa, as well as in many smaller regions scattered through the world. The largest languages are Spanish and Portuguese, with about 400 and 200 million mother tongue speakers respectively, most of them outside Europe. Within Europe, French (with 80 million) and Italian (70 million) are the largest ones. All Romance languages descend from Vulgar Latin, the language of soldiers, settlers, and slaves of the Roman Empire, which was substantially different from the Classical Latin of the Roman *literati*. Between 200 BC and 100 AD, the expansion of the Empire, coupled with administrative and educational policies of Rome, made Vulgar Latin the dominant native language over a wide area spanning from the Iberian Peninsula to the Western coast of the Black Sea. During the Empire's decadence and after its collapse and fragmentation in the 5th century, Vulgar Latin evolved independently within each local area, and eventually diverged into dozens of distinct languages. The oversea empires established by Spain, Portugal and France after the 15th century then spread Romance to the other continents — to such an extent that about two thirds of all Romance speakers are now outside Europe.



The Duenos (O.Lat. duenus*, Lat.* buenus*) Inscription in Old Latin, ca. 6th century BC.*

Latin is usually classified, along with Faliscan, as an **Italic** dialect. The Italic speakers were not native to Italy, but migrated into the Italian Peninsula in the course of the 2nd millennium BC, and were apparently related to the Celtic tribes that roamed over a large part of Western Europe at the time. Archaeologically, the Apennine culture of inhumations enters the Italian Peninsula from ca. 1350 BC, east to west; the Iron Age reaches Italy from ca. 1100 BC, with the Villanovan culture (cremating), intruding north to south. Before the Italic arrival, Italy was populated primarily by non-

Indo-European groups (perhaps including the Etruscans). The first settlement on the Palatine hill dates to ca. 750 BC, settlements on the Quirinal to 720 BC, both related to the Founding of Rome. As Rome extended its political dominion over Italy, Latin became dominant over the other Italic languages, which ceased to be spoken perhaps sometime in the 1st century AD.

The ancient Venetic language, as revealed by its inscriptions (including complete sentences), was also closely related to the Italic languages and is sometimes even classified as Italic. However, since it also shares similarities with other Western Indo-European branches (particularly Germanic), some linguists prefer to consider it an independent Indo-European language.

Italic is usually divided into:

- **Sabellic**, including:
  - **Oscan**, spoken in south-central Italy.
  - **Umbrian** group:
    - ***Umbrian***.
    - ***Volscian***.
    - ***Aequian***.
    - ***Marsian***.
    - ***South Picene***.
- **Latino-Faliscan**, including:
  - **Faliscan**, spoken in the area around *Falerii Veteres*, north of the city of Rome.
  - **Latin**, which was spoken in west-central Italy. The Roman conquests eventually spread it throughout the Roman Empire and beyond.

Iron Age Italy, ca 800 BC. In central Italy, Italic languages. In southern and north-western Italy, other Indo-European languages. Venetic, Sicanian and Sicel were possibly also languages of the IE family.

NOTE. A specimen of Faliscan appears written round the edge of a picture on a patera: "*foied vino pipafo, cra carefo*", which in Old Latin would have been "*hodie vinom bibabo, cras carebo*", translated as "today *I will drink wine; tomorrow I won't have any*" (R. S. Conway, *Italic Dialects*). Among other distinctive features, it shows the retention of medial *f* which in Latin became *b*, and evolution of PIE **gʰ**→*f* (*fo-*, contrast Lat. *ho-*).

The Masiliana tablet abecedarium, *ca. 700 BC, read right to left:*
ABGDEVZHΘIKLMN[Ξ]OPŚQRSTUXΦΨ.

Phonetic changes from PIE to Latin include: **b**^{h}→*f*/*b*, **d**^{h}→*f*/*b*, **g**^{h}→*h*/*f*, **g**^{w}→*w*/*g*, **k**^{w}→*kw*/*k*, **p**→*p*/*kw*.

The Italic languages are first attested in writing from Umbrian and Faliscan inscriptions dating to the 7th century BC. The alphabets used are based on the Old Italic alphabet, which is itself based on the Greek alphabet. The Italic languages themselves show minor influence from the Etruscan and somewhat more from the Ancient Greek languages.

Oscan had much in common with Latin, though there are also some differences, and many common word-groups in Latin were represented by different forms; as, Lat. *uolo*, *uelle*, *uolui*, and other such forms from PIE **wel**-, *will*, were represented by words derived from **g**^{h}**er**-, *desire*, cf. Osc. *herest*, *"he wants, desires*" as opposed to Lat. *uult* (id.). Lat. *locus*, "*place*" was absent and represented by Osc. *slaagid*.

In phonology, Oscan also shows a different evolution, as PIE **k**^{w}→ Osc. *p* instead of Lat. *kw* (cf. Osc. *pis*, Lat. *quis*); PIE **g**^{w} → Osc. *b* instead of Latin *w*; PIE medial **b**^{h}, **d**^{h} → Osc. *f*, in contrast to Lat. *b* or *d* (cf. Osc. *mefiai*, Lat. *mediae*), but *v.s.* Faliscan; etc.

Hence the reconstructed changes of PIE into Proto-Italic:

- Voiced labiovelars unround or lenite: **g**^{w}→*g*/*w*, **g**^{wh}→*g*^{h}.
- Voiced aspirates become first unvoiced, then fricativize: **b**^{h}→*p*^{h}→*ɸ*→*f*; **d**^{h}→*t*^{h}→*θ*; **g**^{h}→*k*^{h}→*x*.

Forum inscription in Latin, written boustrophedon.

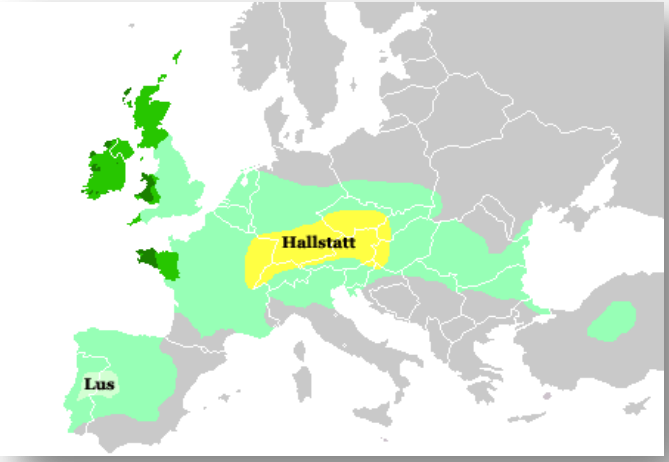
NOTE. About PIE intervocalic **g**^{h} → Ita. *x*, linguists (see Joseph y Wallace 1991) generally propose that it evolves as Faliscan *g* or *k*, while in Latin it becomes glottal *h*, without a change of manner of articulation. Picard (1993) rejects that proposal citing abstract phonetic principles, which Chela-Flores (1999) discusses.

- PIE **s** → Ita. *θ* before *r* (cf. Ita. *kereθrom*, Lat. *cerebrum*); unchanged elsewhere.

Up to 8 cases are found; apart from the 6 cases of Classic Latin (i.e. N-V-A-G-D-Ab), there was a Locative (cf. Lat. *proxumae viciniae*, *domī*, *carthagini*; Osc. *aasai*, Lat. "*in ārā*" etc.) and an Instrumental (cf. Columna Rostrata Lat. *pugnandod*, *marid*, *naualid*, etc; Osc. *cadeis amnud*, Lat. "*inimicitiae causae*"; Osc. *preiuatud*, Lat. "*prīuātō*", etc.).

About forms different from original Genitives and Datives, compare Genitive (Lapis Satricanus:) *popliosio valesiosio* (the type in -*ī* is also very old, Segomaros -*i*), and Dative (Praeneste Fibula:) *numasioi*, (Lucius Cornelius Scipio Epitaph:) *quoiei*.

C. CELTIC



Diachronic distribution of Celtic peoples: maximal expansion (ca. 200 BC) and modern "Celtic nations" and Celtic-speaking territories.

The **Celtic languages** are the languages descended from Proto-Celtic, or "Common Celtic", a dialect of Proto-Indo-European.

During the 1st millennium BC, especially between the 5th and 2nd centuries BC they were spoken across Europe, from the southwest of the Iberian Peninsula and the North Sea, up the Rhine and down the Danube to the Black Sea and the Upper Balkan Peninsula, and into Asia Minor (Galatia). Today, Celtic languages are now limited to a few enclaves in the British Isles and on the peninsula of Brittany in France.

The distinction of Celtic into different sub-families probably occurred about 1000 BC. The early Celts are commonly associated with the archaeological Urnfield culture, the La Tène culture, and the Hallstatt culture.

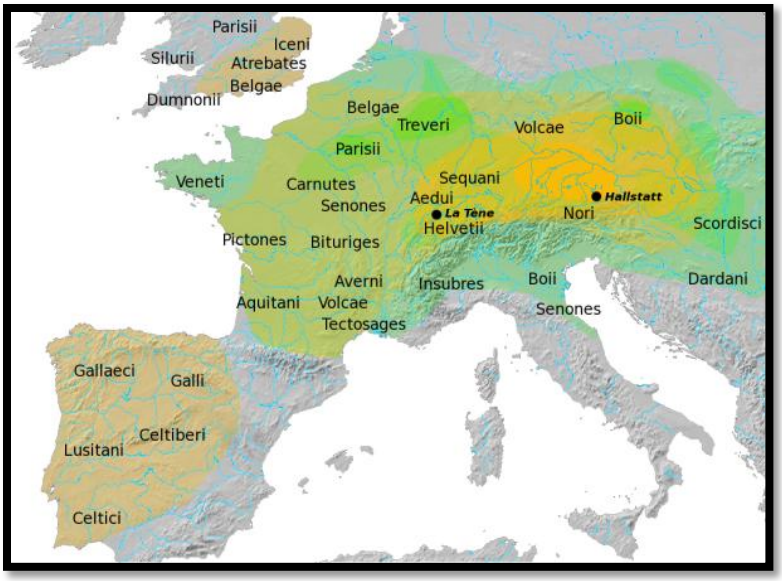
Scholarly handling of the Celtic languages has been rather argumentative owing to lack of primary source data. Some scholars distinguish Continental and Insular Celtic, arguing that the differences between the Goidelic and Brythonic languages arose after these split off from the Continental Celtic languages. Other scholars distinguish P-Celtic from Q-Celtic, putting most of the Continental Celtic languages in the former group – except for Celtiberian, which is Q-Celtic.

NOTE. There are two competing schemata of categorization. One scheme, argued for by Schmidt (1988) among others, links Gaulish with Brythonic in a **P-Celtic** node, leaving Goidelic as **Q-Celtic**. The difference between P and Q languages is the treatment of PIE **kʷ**, which became **p* in the P-Celtic languages but **k* in Goidelic. An example is the Proto-Celtic verbal root *kʷrin-* "*to buy*", which became *pryn-* in Welsh but *cren-* in Old Irish.

The other scheme links Goidelic and Brythonic together as an Insular Celtic branch, while Gaulish and Celtiberian are referred to as Continental Celtic. According to this theory, the 'P-Celtic' sound change of [kʷ] to [p] occurred independently or regionally. The proponents of the Insular Celtic hypothesis point to other shared innovations among Insular Celtic languages, including inflected prepositions, VSO word order, and the lenition of intervocalic [m] to [β̃], a nasalized voiced bilabial fricative (an extremely rare sound), etc. There is, however, no assumption that the Continental Celtic languages descend from a common "Proto-Continental Celtic" ancestor. Rather, the Insular/Continental schemata usually consider Celtiberian the first branch to split from Proto-Celtic, and the remaining group would later have split into Gaulish and Insular Celtic.

Known PIE evolutions into Proto-Celtic include:

- Consonants: **p** →*ɸ*→*h*→*Ø* in initial and intervocalic positions. Cel. *ɸs→xs, ɸt→xt*



Hallstatt core territory (ca. 800 BC) and influence (ca. 500 BC) and La Tène culture (ca. 450) and influence (ca. 50 BC), with some major Celtic tribes labeled.

NOTE. PIE **p** was lost in Proto-Celtic, apparently going through the stages *ɸ* (perhaps in Lus. *porcos*, *v.i.*) and *h* (perhaps attested by the toponym *Hercynia* if this is of Celtic origin) before being lost completely word-initially and between vowels. PIE **sp**- became Old Irish s and Brythonic f; while Schrijver (1995) argues there was an intermediate stage s*ɸ*- (in which *ɸ* remained an independent phoneme until after Proto-Insular Celtic had diverged into Goidelic and Brythonic), McCone (1996) finds it more economical to believe that **sp**- remained unchanged in PC, that is, the change **p** to *ɸ* did not happen when **s** preceded.

- Aspirated: $\mathbf{d^h}$→*d*, $\mathbf{b^h}$→*b*, $\mathbf{g^h}$→*x*, $\mathbf{g^{wh}}$→g^w; but $\mathbf{g^w}$→*b*.
- Vowels: **ō** → *ā, ū* (in final syllable); ***ē***→*ī*; PIE ***u*-*w*** → Cel. *o*-*w*.
- Diphthongs: ***āi***→*ai*, ***ēi***→*ei*, ***ōi***→*oi*; ***āu***→*au*, ***ēu***,***ōu***→*ou*;
- Sonorants: $\mathbf{l̥}$→*la*, *li* (before stops); $\mathbf{r̥}$ → *ar*, *ri* (before stops); $\mathbf{m̥}$ → Cel. *am;* $\mathbf{n̥}$ → Cel. *an*.

Italo-Celtic refers to the hypothesis that Italic and Celtic dialects are descended from a common ancestor, Proto-Italo-Celtic, at a stage post-dating Proto-Indo-European. Since both Proto-Celtic and Proto-Italic date to the early Iron Age (say, the centuries on either side of 1000 BC), a probable time frame for the assumed period of language contact would be the late Bronze Age, the early to mid 2nd millennium BC. Such grouping is supported among others by Meillet (1890), and Kortlandt (2007).

NOTE. One argument for Italo-Celtic was the thematic Genitive in *i* (*dominus*, *domin**i***). Both in Italic (*Popliosio Valesiosio*, Lapis Satricanus) and in Celtic (Lepontic, Celtiberian *-o*), however, traces of PIE gentivie ***-osjo*** have been discovered, so that the spread of the *i*-Genitive could have occurred in the two groups independently, or by areal diffusion. The community of *-ī* in Italic and Celtic may be then attributable to early contact, rather than to an original unity. The *i*-Genitive has been compared to the so-called Cvi formation in Sanskrit, but that too is probably a comparatively late development.

Other arguments include that both Celtic and Italic have collapsed the PIE Aorist and Perfect into a single past tense, and the *ā*-subjunctive, because both Italic and Celtic have a subjunctive descended from an earlier optative in *-ā-*. Such an optative is not known from other languages, but the suffix occurs in Balto-Slavic and Tocharian past tense formations, and possibly in Hittite *-ahh-*.

D. SLAVIC

The **Slavic languages** (also called **Slavonic** languages), a group of closely related languages of the Slavic peoples and a subgroup of the Indo-European language family, have speakers in most of Eastern Europe, in much of the Balkans, in parts of Central Europe, and in the northern part of Asia. The largest languages are Russian and Polish, with 165 and some 47 million speakers, respectively. The oldest Slavic literary language was Old Church Slavonic, which later evolved into Church Slavonic.

Distribution of Slavic languages in Europe now and in the past (in stripes).

There is much debate whether Pre-Proto-Slavic branched off directly from Europe's Indo-European in 2000 BC, or whether it passed through a common ***Proto-Balto-Slavic*** stage which had necessarily split apart before 1000 BC in its two main sub-branches.

Historical distribution of the Slavic languages. The larger shaded area is the Prague-Penkov-Kolochin complex of cultures of the 6th to 7th centuries, likely corresponding to the spread of Slavic-speaking tribes of the time. The smaller shaded area indicates the core area of Slavic river names, dated ca. 500 AD.

The original homeland of the speakers of Proto-Slavic remains controversial too. The most ancient recognizably Slavic hydronyms (river names) are to be found in northern and western Ukraine and southern Belarus. It has also been noted that Proto-Slavic seemingly lacked a maritime vocabulary.

The Proto-Slavic language seccesion from common Proto-Balto-Slavic is estimated on archaeological and glottochronological critera to have occurred between 1500-1000 BC. Common Slavic is usually reconstructible to around 600 AD.

By the 7th century, Common Slavic had broken apart into large dialectal zones. Linguistic differentiation received impetus from the dispersion of the Slavic peoples over a large territory – which in Central Europe exceeded the current extent of Slavic-speaking territories. Written documents of the 9th, 10th & 11th centuries already show some local linguistic features.

NOTE. For example the Freising monuments show a language which contains some phonetic and lexical elements peculiar to Slovenian dialects (e.g. rhotacism, the word *krilatec*).

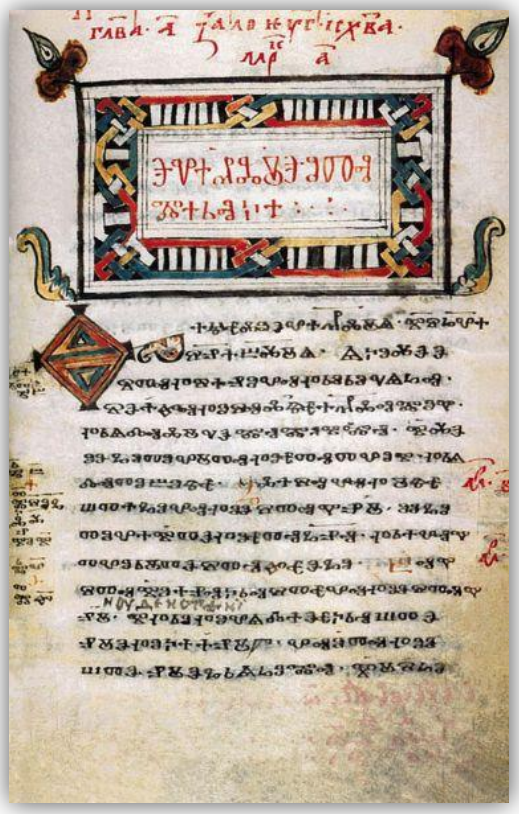
In the second half of the ninth century, the dialect spoken north of Thessaloniki became the basis for the first written Slavic language, created by the brothers Cyril and Methodius who translated portions of the Bible and other church books. The language they recorded is known as Old Church Slavonic. Old Church Slavonic is not identical to Proto-Slavic, having been recorded at least two centuries after the breakup of Proto-Slavic, and it shows features that clearly distinguish it from Proto-Slavic. However, it is still reasonably close, and the mutual intelligibility between Old Church Slavonic and other Slavic dialects of those days was proved by Cyril's and Methodius' mission to Great Moravia and Pannonia. There, their early South Slavic dialect used for the translations was clearly understandable to the local population which spoke an early West Slavic dialect.

As part of the preparation for the mission, the Glagolitic alphabet was created in 862 and the most important prayers and liturgical books, including the Aprakos Evangeliar – a Gospel Book lectionary containing only feast-day and Sunday readings – , the Psalter, and Acts of the Apostles, were translated. The language and the alphabet were taught at the Great Moravian Academy (O.C.S. *Veľkomoravské učilište*) and were used for government and religious documents and books. In 885, the use of the Old

Church Slavonic in Great Moravia was prohibited by the Pope in favour of Latin. Students of the two apostles, who were expelled from Great Moravia in 886, brought the Glagolitic alphabet and the Old Church Slavonic language to the Bulgarian Empire, where it was taught and Cyrillic alphabet developed in the Preslav Literary School.

Vowel changes from PIE to Proto-Slavic:

- PIE **ī**, **ei** → Sla. *i₁*.
- PIE **ai**, **oi** → reduced **ai* (**ăi*/**ui*) → Sla. *i₂*.
- PIE **i** →**i* → Sla. *ь*.
- PIE **e** → Sla. *e*.
- PIE **en**, **em** → Sla. *ę*.
- PIE **ē** → Sla. *ě₁*.
- PIE **ai**, **oi** → **ai* → Sla. *ě₂*.
- PIE **ā**, **ō** → **ā* → Sla. *a*.
- PIE **a**, **o**, intervocalic **ə** → **a* → Sla. *o*.
- PIE **an**, **on**, **am**, **om** →**an, *am* → Sla. *ǫ*.
- PIE **u** → **u* → Sla. *ъ*.
- PIE **ū** → Sla. *y*.
- PIE **au**, **ou** → **au* → Sla. *u*.



A page from the 10th-11th century Codex Zographensis *found in the Zograf Monastery in 1843. It is written in Old Church Slavonic, in the Glagolitic alphabet designed by brothers St Cyril and St Methodius.*

NOTE 1. Apart from this simplified equivalences, other evolutions appear:

- The vowels *i₂, ě₂* developed later than *i₁, ě₁*. In Late Proto-Slavic there were no differences in pronunciation between *i₁* and *i₂* as well as between *ě₁* and *ě₂*. They had caused, however, different changes of preceding velars, see below.
- Late Proto-Slavic yers *ь, ъ* < earlier *i, u* developed also from reduced PIE **e**, **o** respectively. The reduction was probably a morphologic process rather than phonetic.
- We can observe similar reduction of **ā** into **ū* (and finally *y*) in some endings, especially in closed syllables.
- The development of the Sla. *i₂* was also a morphologic phenomenon, originating only in some endings.
- Another source of the Proto-Slavic *y* is **ō* in Germanic loanwords – the borrowings took place when Proto-Slavic no longer had *ō* in native words, as PIE **ō** had already changed into **ā*.
- PIE **ə** disappeared without traces when in a non-initial syllable.
- PIE **eu** probably developed into **jau* in Early Proto-Slavic (or: during the Balto-Slavic epoch), and eventually into Proto-Slavic *ju*.

○ According to some authors, PIE long diphthongs **ēi**, **āi**, **ōi**, **ēu**, **āu**, **ōu** had twofold development in Early Proto-Slavic, namely they shortened in endings into simple **ei, *ai, *oi, *eu, *au, *ou* but they lost their second element elsewhere and changed into **ē, *ā, *ō* with further development like above.

NOTE 2. Other vocalic changes from Proto-Slavic include *jo, *jъ, *jy changed into *je, *jь, *ji; *o, *ъ, *y also changed into *e, *ь, *i after *c, *ʒ, *s' which developed as the result of the 3rd palatalization; *e, *ě changed into *o, *a after *č, *ǯ, *š, *ž in some contexts or words; a similar change of *ě into *a after *j seems to have occurred in Proto-Slavic but next it can have been modified by analogy.

On the origin of Proto-Slavic consonants, the following relationships are regularly found:

- PIE **p** → Sla. *p*.
- PIE **b**, **b^{h}** → Sla. *b*.
- PIE **t** → Sla. *t*.
- PIE **d**, **d^{h}** → Sla. *d*.
- PIE **k**, **k^{w}** → Sla. *k*;
  - palatalized ****k^{j}*** → Sla. *s*.
- PIE **g**, **g^{h}**, **g^{w}**, **g^{wh}** → Sla. *g*;
  - palatalized ****g^{j}***, ****g^{jh}*** → Sla. *z*.
- PIE **s** → Sla. *s*;
  - before a voiced consonant PIE [***z***] → Sla. *z*;
  - PIE **s** before a vowel when after **r**, **u**, **k**, **i**, probably also after **l** → Sla. *x*.
- PIE word-final **m** → Sla. *n* (<BSl. **n*).
- PIE **m̥** → Sla. *im*, *um*.
- PIE **n̥** → Sla. *in*, *un*.
- PIE **l̥** → Sla. *il*, *ul*.
- PIE **r̥** → Sla. *ir*, *ur*.
- PIE **w** → Sla. *v* (<BSl. **w*).
- PIE **j** → Sla. *j*.

Page from the Spiridon Psalter in Church Slavic, a language derived from Old Church Slavonic by adapting pronunciation and orthography, and replacing some old and obscure words and expressions by their vernacular counterparts.

In some words the Proto-Slavic *x* developed from other PIE phonemes, like **kH**, **ks**, **sk**.

NOTE. For a detailed study of phonetic changes you can read Frederik Kortlandt's online article From Proto-Indo-European to Slavic (1983) at <http://www.kortlandt.nl/publications/art066e.pdf>.

E. BALTIC

The **Baltic languages** are a group of related languages belonging to the Indo-European language family and spoken mainly in areas extending east and southeast of the Baltic Sea in Northern Europe.

The language group is often divided into two sub-groups: Western Baltic, containing only extinct languages as Prussian or Galindan, and Eastern Baltic, containing both extinct and the two living languages in the group, Lithuanian and Latvian. While related, Lithuanian, Latvian, and particularly Old Prussian differ substantially from each other and are not mutually intelligible.

Baltic and Slavic share so many similarities that many linguists, following the lead of such notable Indo-Europeanists as August Schleicher and Oswald Szemerényi, take these to indicate that the two groups separated from a common ancestor, the **Proto-Balto-Slavic** language, dated ca. 2000-1400 BC.

NOTE 1. Until Meillet's *Dialectes indo-européens* of 1908, Balto-Slavic unity was undisputed among linguists – as he notes himself at the beginning of the *Le Balto-Slave* chapter, "*L'unité linguistique balto-slave est l'une de celles que personne ne conteste*". Meillet's critique of Balto-Slavic confined itself to the seven characteristics listed by Karl Brugmann in 1903, attempting to show that no single one of these is sufficient to prove genetic unity. Szemerényi in his 1957 re-examination of Meillet's results concludes that the Balts and Slavs did, in fact, share a "*period of common language and life*", and were probably separated due to the incursion of Germanic tribes along the Vistula and the Dnepr roughly at the beginning of the Common Era.

NOTE 2. Another theory was proposed in the 1960s by V. Ivanov and V. Toporov: that the Balto-Slavic proto-language split from the start into West Baltic, East Baltic and Proto-Slavic. In their framework, Proto-Slavic is a peripheral and innovative Balto-Slavic dialect which suddenly expanded, due to a conjunction of historical circumstances. Onomastic evidence shows that Baltic languages were once spoken in much wider territory than the one they cover today, and were later replaced by Slavic.

The most important of these common Balto-Slavic isoglosses are:

- Winter's law: lengthening of a short vowel before a voiced plosive, usually in a closed syllable.
- Identical reflexes of PIE syllabic sonorants, usually developing *i* and *u* before them.

NOTE. Kuryłowicz thought that *uR reflexes arose after PIE velars, and also notable is also older opinion of J.Endzelīns and R. Trautmann according to whom *uR reflexes are the result of zero-grade of morphemes that had PIE **o** → PBSl. **a* in normal-grade. Matasović (2008) proposes following internal rules after PIE syllabic **R** → BSl. **əR*: 1) **ə→*i* in a final syllable; 2) **ə→*u* after velars and before nasals; 3) **ə→*i* otherwise.

- Hirt's law: retraction of PIE accent to the preceding syllable closed by a laryngeal.
- Rise of the Balto-Slavic acute before PIE laryngeals in a closed syllable.
- Replacement of PIE genitive singular of thematic nouns with ablative.
- Formation of past tense in *-*ē* (cf. Lith. preterite *dãvė*, "he gave", O.C.S. imperfect *bě*, "he was")
- Generalization of the PIE neuter *to- stem to the nominative singular of masculine and feminine demonstratives instead of PIE **so**- pronoun, **so**, **sā**, **tod** → BSl. *tos, tā, tod*.
- Formation of so-called definite adjectives with a construction of adjective and relative pronoun; cf. Lith. *geràsis*, "the good", vs. *gẽras*, "good"; O.C.S *dobrъjь*, "the good", vs. *dobrъ*, "good".

NOTE. 'Ruki' is the term for a sound law which is followed especially in Balto-Slavic and Indo-Iranian dialects. The name of the term comes from the sounds which cause the phonetic change, i.e. PIE ***s*** → *š / r, u, K, i* (it associates with a Slavic word which means *'hands'* or *'arms'*). A sibilant [s] is retracted to [ʃ] after *i*,*u*,*r*, and after velars (i.e. *k* which may have developed from earlier **k**, **g**, **g**$^{\mathbf{h}}$). Due to the character of the retraction, it was probably an apical sibilant (as in Spanish), rather than the dorsal of English. The first phase (**s** → *š*) seems to be universal, the later retroflexion (in Sanskrit and probably in Proto-Slavic as well) is due to levelling of the sibilant system, and so is the third phase - the retraction to velar [*x*] in Slavic and also in some Middle Indian languages, with parallels in e.g. Spanish. This rule was first formulated for the Indo-European by Holger Pedersen.

Common Balto-Slavic innovations include several other prominent, but non-exclusive isoglosses, such as the satemization, Ruki, change of PIE **o** → BSl. **a* (shared with Germanic, Indo-Iranian and Anatolian) and the loss of labialization in PIE labiovelars (shared with Indo-Iranian, Armenian and Tocharian). Among Balto-Slavic archaisms notable is the retention of traces of an older PIE accent.

Baltic and Slavic languages also show a remarkable amount of correspondence in vocabulary; there are at least 100 words exclusive to Balto-Slavic, either being a common innovation (i.e. not of PIE origin) or sharing the same semantic development from PIE root. For example:

- BSl. **lēipā*, "*tilia*" → Lith. *líepa*, O.Prus. *līpa*, Ltv. *liẽpa*; Sla. **lipa*.
- BSl. **rankā*, "*hand*" → Lith. *rankà*, O.Prus. *rānkan*, Ltv. *rùoka*; Sla. **rǭkà* (cf. O.C.S. *rǫka*).
- BSl. **galwā́*, "*head*" → Lith. *galvà*, O.Prus. *galwo*, Ltv. *galva*; Sla. **golvà* (cf. O.C.S. *glava*).

F. FRAGMENTARY DIALECTS

MESSAPIAN

Messapian (also known as *Messapic*) is an extinct Indo-European language of south-eastern Italy, once spoken in the regions of Apulia and Calabria. It was spoken by the three Iapygian tribes of the region: the Messapians, the Daunii and the Peucetii. The language, a centum dialect, has been preserved in about 260 inscriptions dating from the 6th to the 1st century BC.

There is a hypothesis that Messapian was an Illyrian language. The Illyrian languages were spoken mainly on the other side of the Adriatic Sea. The link between Messapian and Illyrian is based mostly on personal names found on tomb inscriptions and on classical references, since hardly any traces of the Illyrian language are left.

The Messapian language became extinct after the Roman Empire conquered the region and assimilated the inhabitants.

Some phonetic characteristics of the language may be regarded as quite certain:

- PIE short **o**→*a*, as in the last syllable of the genitive *kalatoras*.
- PIE final **m**→*n*, as in *aran*.
- PIE **nj**→*nn*, as in the Messapian praenomen *Dazohonnes* vs. the Illyrian praenomen *Dazonius*; the Messapian genitive *Dazohonnihi* vs. Illyrian genitive *Dasonii*, etc.
- PIE **tj**→*tth*, as in the Messapian praenomen *Dazetthes* vs. Illyrian *Dazetius*; the Messapian genitive *Dazetthihi* vs. the Illyrian genitive *Dazetii*; from a *Dazet-* stem common in Illyrian and Messapian.
- PIE **si**→*ss*, as in Messapian *Vallasso* for *Vallasio*, a derivative from the shorter name *Valla*.
- The loss of final **-d**, as in *tepise*, and probably of final **-t**, as in *-des*, perhaps meaning "*set*", from PIE **d^{h}e-**, "*set, put*".
- The change of voiced aspirates in Proto-Indo-European to plain voiced consonants: PIE **d^{h}**→*d*, as in Messapian *anda* (< PIE **en-d^{h}a-** < PIE **en-**, "*in*", compare Gk. *entha*); and PIE **b^{h}**→*b*, as in Messapian *beran* (< PIE **b^{h}er-**, "*to bear*").
- PIE **au**→*ā* before (at least some) consonants: *Bāsta*, from *Bausta*.
- The form *penkaheh* – which Torp very probably identifies with the Oscan stem *pompaio* – a derivative of the Proto-Indo-European numeral **penk^{w}e**, "*five*".

If this last identification be correct it would show, that in Messapian (just as in Venetic and Ligurian) the original labiovelars (**k^{w}**, **g^{w}**, **g^{wh}**) were retained as gutturals and not converted into labials. The change of *o* to *a* is exceedingly interesting, being associated with the northern branches of Indo-

European such as Gothic, Albanian and Lithuanian, and not appearing in any other southern dialect hitherto known. The Greek *Aphrodite* appears in the form *Aprodita* (Dat. Sg., *fem.*).

The use of double consonants which has been already pointed out in the Messapian inscriptions has been very acutely connected by Deecke with the tradition that the same practice was introduced at Rome by the poet Ennius who came from the Messapian town Rudiae (Festus, p. 293 M).

VENETIC

Venetic is an Indo-European language that was spoken in ancient times in the Veneto region of Italy, between the Po River delta and the southern fringe of the Alps.

The language is attested by over 300 short inscriptions dating between the 6th century BC and 1st century. Its speakers are identified with the ancient people called *Veneti* by the Romans and *Enetoi* by the Greek. It became extinct around the 1st century when the local inhabitants were assimilated into the Roman sphere.

Venetic was a centum dialect. The inscriptions use a variety of the Northern Italic alphabet, similar to the Old Italic alphabet.

The exact relationship of Venetic to other Indo-European languages is still being investigated, but the majority of scholars agree that Venetic, aside from Liburnian, was closest to the Italic languages. Venetic may also have been related to the Illyrian languages, though the theory that Illyrian and Venetic were closely related is debated by current scholarship.

Interesting parallels with Germanic have also been noted, especially in pronominal forms:

- Ven. *ego*, "*I*", acc. *mego*, "*me*"; Goth. *ik*, acc. *mik*; but cf. Lat. *ego*, acc. *me*.
- Ven. *sselboisselboi*, "*to oneself*"; O.H.G. *selb selbo*; but cf. Lat. *sibi ipsi*.

Venetic had about six or even seven noun cases and four conjugations (similar to Latin). About 60 words are known, but some were borrowed from Latin (*liber.tos.* < *libertus*) or Etruscan. Many of them show a clear Indo-European origin, such as Ven. *vhraterei* (< PIE **b^{h}raterei**), "*to the brother*".

In Venetic, PIE stops **b^{h}**→*f,* **d^{h}**→*f*, **g^{h}**→*h*, in word-initial position (as in Latin and Osco-Umbrian), but to **b^{h}**→*b,* **d^{h}**→*d*, **g^{h}**→*g*, in word-internal intervocalic position, as in Latin. For Venetic, at least the developments of **b^{h}** and **d^{h}** are clearly attested. Faliscan and Osco-Umbrian preserve internal **b^{h}**→*f,* **d^{h}**→*f*, **g^{h}**→*h*.

There are also indications of the developments of PIE initial **g^{w}**→*w*-, PIE **k^{w}**→*kv* and PIE initial **g^{wh}**→*f* in Venetic, all of which are parallel to Latin, as well as the regressive assimilation of PIE sequence ***p*...*k^{w}*...** → ***k^{w}*...*k^{w}*...** (e.g. **penk^{w}e** → **k^{w}enk^{w}e*, "*five*", **perk^{w}u**→ **k^{w}erk^{w}u*, "oak"), a feature also found in Italic and Celtic (Lejeune 1974).

LIGURIAN

The **Ligurian language** was spoken in pre-Roman times and into the Roman era by an ancient people of north-western Italy and south-eastern France known as the Ligures. Very little is known about this language (mainly place names and personal names remain) which is generally believed to have been Indo-European; it appears to have adopted significantly from other Indo-European languages, primarily Celtic (Gaulish) and Italic (Latin).

Strabo states *"As for the Alps... Many tribes (éthnê) occupy these mountains, all Celtic (Keltikà) except the Ligurians; but while these Ligurians belong to a different people (hetero-ethneis), still they are similar to the Celts in their modes of life (bíois)."*

LIBURNIAN

The **Liburnian language** is an extinct language which was spoken by the ancient Liburnians, who occupied Liburnia in classical times. The Liburnian language is reckoned as an Indo-European language, usually classified as a Centum language. It appears to have been on the same Indo-European branch as the Venetic language; indeed, the Liburnian tongue may well have been a Venetic dialect.

No writings in Liburnian are known, though. The grouping of Liburnian with Venetic is based on the Liburnian onomastics. In particular, Liburnian anthroponyms show strong Venetic affinities, with many common or similar names and a number of common roots, such as *Vols-*, *Volt-*, and *Host-* (<PIE ***g^{h}os-ti-***, "*stranger, guest, host*"). Liburnian and Venetic names also share suffixes in common, such as *-icus* and *-ocus*.

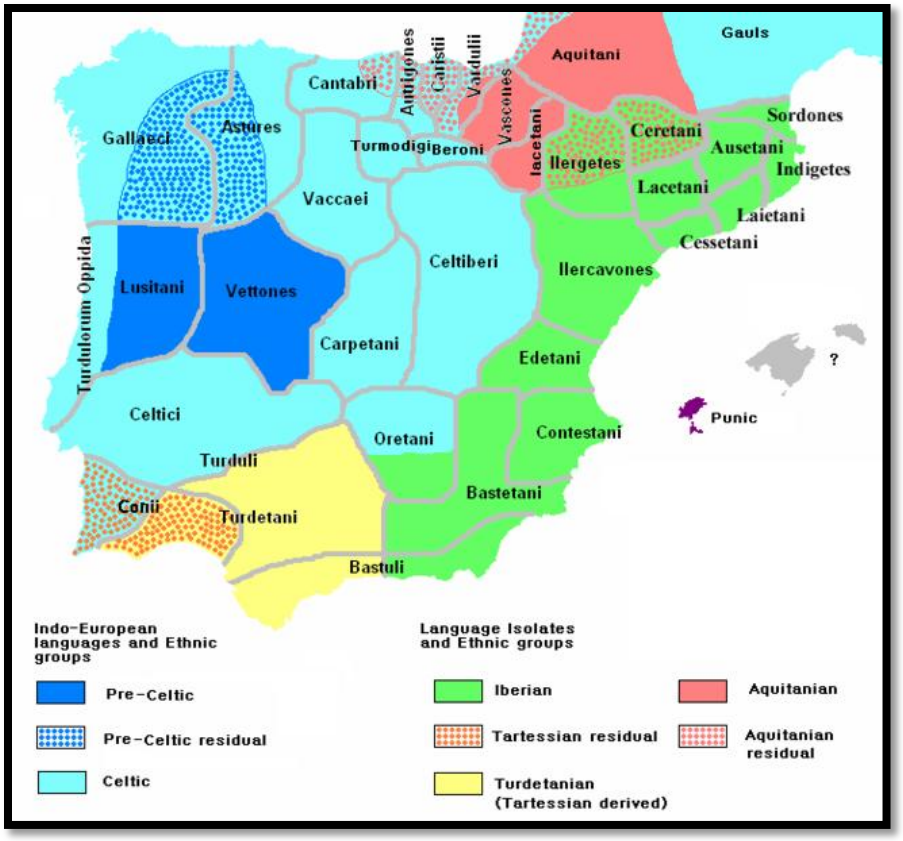
NOTE. These features set Liburnian and Venetic apart from the Illyrian onomastic province, though this does not preclude the possibility that Venetic-Liburnian and Illyrian may have been closely related, belonging to the same Indo-European branch. In fact, a number of linguists argue that this is the case, based on similar phonetic features and names in common between Venetic-Liburnian on the one hand and Illyrian on the other.

The Liburnians were conquered by the Romans in 35 BC, and its language was eventually replaced by Latin, undergoing language death probably very early in the Common era.

LUSITANIAN

Lusitanian (so named after the Lusitani or Lusitanians) was a Paleohispanic Indo-European language known by only five inscriptions and numerous toponyms and theonyms. The language was spoken before the Roman conquest of Lusitania, in the territory inhabited by Lusitanian tribes, from Douro to the Tagus rivers in the wetern area of the Iberian Peninsula, where they were established already before the 6th century BC.

Their language is usually considered a Pre-Celtic (possibly Italo-Celtic) IE dialect, and it is sometimes associated with the language of the Vettones and with the linguistic substratum of the Gallaeci and Astures, based on archaeological findings and descriptions of ancient historians.



Classification of ethnic groups in Hispania ca. 200 BC.

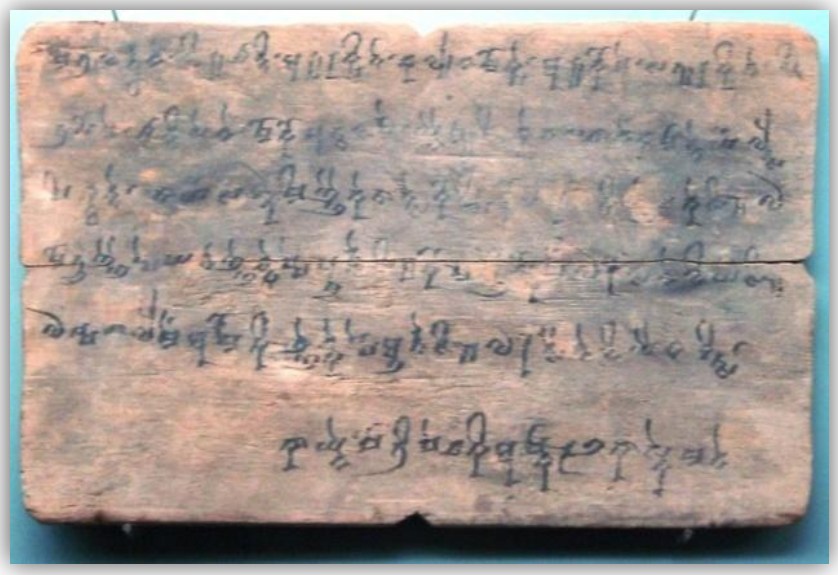
NOTE. The affiliation of the Lusitanian language within the Italo-Celtic group is still debated. There are those who endorse that it is a Celtic language, a theory largely based upon the historical fact that the only Indo-European tribes that are known to have existed in Portugal at that time were Celtic tribes. The apparent Celtic character of most of the lexicon — anthroponyms and toponyms — may also support a Celtic affiliation. There is a substantial problem in the Celtic theory however: the preservation of PIE initial **p**-, as in Lusitanian *pater* or *porcom*, meaning "*father*" and "*pig*", respectively. The Celtic languages had lost that initial **p**- in their evolution; compare Lat. *pater*, Gaul. *ater*, and Lat. *porcum*, O.Ir. *orc*. However, it does not necessarily preclude the possibility of Lusitanian being Celtic, because of the supposed evolution of PIE initial **p** → **ɸ* → **h* → Cel. Ø, so it might have been an early Proto-Celtic (or Italo-Celtic) dialect that split off before the loss of *p*-, or when *p*- had become **ɸ* - (before shifting to *h*- and then being lost); the letter *p* of the Latin alphabet could have been used to represent either sound.

F. Villar and R. Pedrero relate Lusitanian with the Italic languages. The theory is based on parallels in the names of deities, as Lat. *Consus*, Lus. *Cossue*, Lat. *Seia*, Lus. *Segia*, or Marrucinian *Iovia*, Lus. *Iovea(i)*, etc. and other lexical items, as Umb. *gomia*, Lus. *comaiam*, with some other grammatical elements.

Arroyo de la Luz (Cáceres) Inscription:
ISACCID·RVETI//PVPPID·CARLAE·EN//ETO
M·INDI·NA. //....CE·IOM·//M·

II. NORTHERN INDO-EUROPEAN IN ASIA: TOCHARIAN

Tocharian or **Tokharian** is one of the most obscure branches of the group of Indo-European languages. The name of the language is taken from people known to the Greek historians (Ptolemy VI, 11, 6) as the Tocharians (Greek Τόχαροι, "*Tokharoi*"). These are sometimes identified with the Yuezhi and the Kushans, while the term *Tokharistan* usually refers to 1st millennium Bactria. A Turkic text refers to the Turfanian language (Tocharian A) as *twqry*. Interpretation is difficult, but F. W. K. Müller has associated this with the name of the Bactrian *Tokharoi*. In Tocharian, the language is referred to as *arish-käna* and the Tocharians as *arya*.



Wooden plate with inscriptions in Tocharian. Kucha, China, 5th-8th century.

Tocharian consisted of two languages; **Tocharian A** (Turfanian, Arsi, or East Tocharian) and **Tocharian B** (Kuchean or West Tocharian). These languages were spoken roughly from the 6th to 9th century centuries; before they became extinct, their speakers were absorbed into the expanding Uyghur tribes. Both languages were once spoken in the Tarim Basin in Central Asia, now the Xinjiang Autonomous Region of China.

Tocharian is documented in manuscript fragments, mostly from the 8th century (with a few earlier ones) that were written on palm leaves, wooden tablets and Chinese paper, preserved by the extremely dry climate of the Tarim Basin. Samples of the language have been discovered at sites in Kucha and Karasahr, including many mural inscriptions.

Tocharian A and B are not intercomprehensible. Properly speaking, based on the tentative interpretation of *twqry* as related to *Tokharoi*, only Tocharian A may be referred to as *Tocharian*, while Tocharian B could be called *Kuchean* (its native name may have been *kuśiññe*), but since their grammars are usually treated together in scholarly works, the terms A and B have proven useful. The common Proto-Tocharian language must precede the attested languages by several centuries, probably dating to the 1st millennium BC.

1.7.2. SOUTHERN INDO-EUROPEAN DIALECTS

I. GREEK

Greek (Gk. Ἑλληνική, "*Hellenic*") is an Indo-European branch with a documented history of 3,500 years. Today, Modern Greek is spoken by 15 million people in Greece, Cyprus, the former Yugoslavia, particularly the former Yugoslav Republic of Macedonia, Bulgaria, Albania and Turkey.

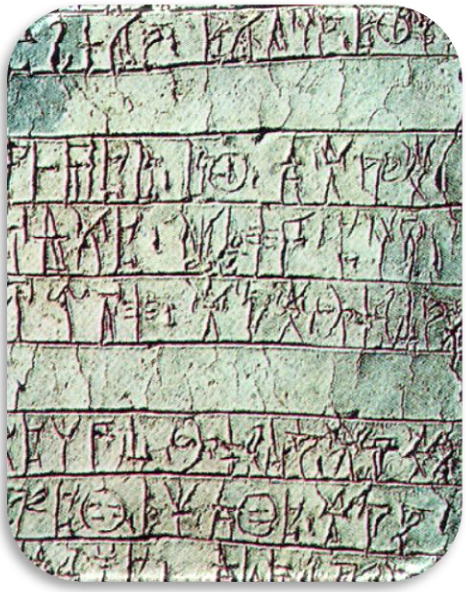
Ancient Greek dialects by 400 BC after R.D. Woodard (2008).

The major dialect groups of the Ancient Greek period can be assumed to have developed not later than 1120 BC, at the time of the Dorian invasions, and their first appearances as precise alphabetic writing began in the 8th century BC. The ancient Greeks themselves considered there to be three major divisions of the Greek people, into Dorians, Aeolians, and Ionians (including Athenians), each with their own defining and distinctive dialects. Allowing for their oversight of Arcadian, an obscure mountain dialect, and Cyprian, far from the center of Greek scholarship, this division of people and language is quite similar to the results of modern archaeological and linguistic investigation.

Greek has been spoken in the Balkan Peninsula since the 2nd millennium BC. The earliest evidence of this is found in the Linear B tablets dating from 1500 BC. The later Greek alphabet is unrelated to Linear B, and was derived from the Phoenician alphabet; with minor modifications, it is still used today.

Mycenaean is the most ancient attested form of the Greek branch, spoken on mainland Greece and on Crete in the 16th to 11th centuries BC, before the Dorian invasion. It is preserved in inscriptions in Linear B, a script invented on Crete before the 14th century BC. Most instances of these inscriptions are on clay tablets found in Knossos and in Pylos. The language is named after Mycenae, the first of the palaces to be excavated.

The tablets remained long undeciphered, and every conceivable language was suggested for them, until Michael Ventris deciphered the script in 1952 and proved the language to be an early form of Greek. The texts on the tablets are mostly lists and inventories. No prose narrative survives, much less myth or poetry. Still, much may be glimpsed from these records about the people who produced them, and about the Mycenaean period at the eve of the so-called Greek Dark Ages.



Linear B has roughly 200 signs, divided into syllabic signs with phonetic values and logograms with semantic values.

Unlike later varieties of Greek, Mycenaean Greek probably had seven grammatical cases, the nominative, the genitive, the accusative, the dative, the instrumental, the locative, and the vocative. The instrumental and the locative however gradually fell out of use.

NOTE. For the Locative in ***-ei***, compare *di-da-ka-re*, '*didaskalei*', *e-pi-ko-e*, '*Epikóhei*', etc (in Greek there are syntactic compounds like *puloi-genēs*, '*born in Pylos*'); also, for remains of an Ablative case in ***-ōd***, compare (months' names) *ka-ra-e-ri-jo-me-no*, *wo-de-wi-jo-me-no*, etc.

Proto-Greek, a southern PIE dialect, was spoken in the late 3rd millennium BC, roughly at the same time as Europe's Indo-European, most probably in the Balkans. The unity of Proto-Greek probably ended as Hellenic migrants, speaking the predecessor of the Mycenaean language, entered the Greek peninsula around the 21st century BC. They were then separated from the Dorian Greeks, who entered the peninsula roughly one millennium later, speaking a dialect that in some respects had remained more archaic.

Proto-Greek was affected by a late satemization, evidenced by the (post-Mycenaean) change of labiovelars into dentals before *e* (e.g. $k^we \rightarrow te$ "*and*").

The primary sound changes from PIE (and PIH laryngeals) to Proto-Greek include:

- Aspiration of PIE intervocalic **s** → PGk *h*.

NOTE. The loss of PIE prevocalic **s**- was not completed entirely, famously evidenced by *sus* "*sow*", *dasus* "*dense*"; *sun* "*with*", sometimes considered contaminated with PIE **kom** (cf. Latin *cum*) to Homeric / Old Attic *ksun*, is possibly a consequence of Gk. psi-substrate (See Villar).

- De-voicing of voiced aspirates: $\mathbf{b^h} \rightarrow p^h$, $\mathbf{d^h} \rightarrow t^h$, $\mathbf{g^h} \rightarrow k^h$, $\mathbf{g^{wh}} \rightarrow k^{wh}$.
- Dissimilation of aspirates (Grassmann's law), possibly post-Mycenaean.
- PIE word-initial ***j***- (not ***Hj***-) is strengthened to PGk *dj*- (later Gk. ζ-).

- Vocalization of laryngeals between vowels and initially before consonants, i.e. ***h₁***→e, ***h₂***→a, ***h₃***→o.

NOTE. The evolution of Proto-Greek should be considered with the background of an early Palaeo-Balkan sprachbund that makes it difficult to delineate exact boundaries between individual languages. The characteristically Greek representation of word-initial laryngeals by prothetic vowels is shared by the Armenian language, which also shares other phonological and morphological peculiarities of Greek, *vide infra*.

- The sequence CRHC (where C = consonant, R = resonant, H = laryngeal) becomes PIH **CRh₁C** → PGk *CRēC*; PIH **CRh₂C** → PGk *CRāC*; PIH **CRh₃C** → PGk *CRōC*.
- The sequence PIH **CRHV** (where V = vowel) becomes PGk *CaRV*.

NOTE. It has also been proposed that **Vk^{w}**→*uk^{w}*; cf. PIE **nok^{w}ts**, "*night*" → PGk *nuk^{w}ts* → Gk. *nuks*/*nuxt-*.

Later sound changes between the earliest Proto-Greek and the attested Mycenaean include:

- Loss of final stop consonants; final **m**→n.
- Syllabic **m̥**→*am*, and **n̥**→*an*, before resonants; otherwise both were nasalized **m̥/n̥**→*ã*→*a*.
- loss of *s* in consonant clusters, with supplementary lengthening, e.g. **esmi**→*ēmi*.
- creation of secondary *s* from clusters, ***ntia***→*nsa*. Assibilation ***ti***→*si* only in southern dialects.

Other attested changes between PIE and the earliest Greek dialects include:

- The PIE dative, instrumental and locative cases are syncretized into a single dative case. Some innovative desinences appear, as e.g. dative plural *-si* from locative plural **-su**.
- Dialectal nominative plural in *-oi*, *-ai* fully replaces Late PIE common **-ōs**, **-ās**.
- The superlative on *-tatos* (<PIE ***-tm̥-to-s***) becomes productive.
- The peculiar oblique stem *gunaik-* "*women*", attested from the Thebes tablets is probably Proto-Greek; it appears, at least as *gunai-* also in Armenian.
- The pronouns *houtos*, *ekeinos* and *autos* are created. Use of *ho, hā, ton* as articles is post-Mycenaean.
- An isogloss between Greek and the closely related Phrygian is the absence of *r*-endings in the Middle in Greek, apparently already lost in Proto-Greek.
- Proto-Greek inherited the augment, an IE prefix ***é-*** to verbal forms expressing past tense. This feature it shares only with Indo-Iranian and Phrygian (and to some extent, Armenian), lending support to a Southern or Graeco-Aryan Dialect.
- The first person middle verbal desinences *-mai*, *-mān* replace *-ai*, *-a*. The third singular *pherei* is an analogical innovation, replacing the expected PIE **b^{h}éreti**, i.e. Dor. **phereti*, Ion. **pheresi*.
- The future tense is created, including a future passive, as well as an aorist passive.
- The suffix *-ka-* is attached to some perfects and aorists.
- Infinitives in *-ehen*, *-enai* and *-men* are created.

II. ARMENIAN

Distribution of Armenian speakers in the 20th Century.

Armenian is an Indo-European language spoken in the Armenian Republic and also used by Armenians in the Diaspora. It constitutes an independent branch of the Indo-European language family.

Armenian was traditionally regarded as a close relative of Phrygian, apparently closely related to Greek, sharing major isoglosses with it. The *Graeco-Armenian hypothesis* proposed a close relationship to the Greek language, putting both in the larger context of Paleo-Balkans languages – notably including Phrygian, which is widely accepted as an Indo-European language particularly close to Greek, and sometimes Ancient Macedonian –, consistent with Herodotus' recording of the Armenians as descending from colonists of the Phrygians.

NOTE. That traditional linguistic theory, proposed by Pedersen (1924), establishes a close relationship between both original communities, Greek and Armenian, departing from a common subdialect of IE IIIa (Southern Dialect of Late PIE). That vision, accepted for a long time, was rejected by Clackson (1994) in The linguistic relationship between Armenian and Greek, which, supporting the *Graeco-Aryan* linguistic hypothesis, dismisses that the coincidences between Armenian and Greek represent more than those found in the comparison between any other IE language pair. Those findings are supported by Kortlandt in Armeniaca (2003), in which he proposes a continuum *Daco-Albanian / Graeco-Phrygian / Thraco-Armenian*.

The earliest testimony of the Armenian language dates to the 5th century AD, the Bible translation of Mesrob Mashtots. The earlier history of the language is unclear and the subject of much speculation. It is clear that Armenian is an Indo-European language, but its development is opaque.

NOTE. Proto-Armenian sound-laws are varied and eccentric, such as PIE **dw**- yielding Arm. *k*-, and in many cases still uncertain. In fact, that phonetic development is usually seen as **dw**- to *erk*-, based on PIE numeral **dwo**-, "*two*", a reconstruction Kortlandt (ibidem) dismisses, exposing alternative etymologies for the usual examples.

PIE voiceless stops are aspirated in Proto-Armenian, a circumstance that gave rise to the Glottalic theory, which postulates that this aspiration may have been sub-phonematic already in PIE. In certain

contexts, these aspirated stops are further reduced to *w*, *h* or zero in Armenian – so e.g. PIE **p'ots*, into Arm. *otn*, Gk. *pous*, "*foot*"; PIE **t'reis*, Arm. *erek'*, Gk. *treis*, "*three*".

The reconstruction of Proto-Armenian being very uncertain, there is no general consensus on the date range when it might have been alive. If Herodotus is correct in deriving Armenians from Phrygian stock, the Armenian-Phrygian split would probably date to between roughly the 12th and 7th centuries BC, but the individual sound-laws leading to Proto-Armenian may have occurred at any time preceding the 5th century AD. The various layers of Persian and Greek loanwords were likely acquired over the course of centuries, during Urartian (pre-6th century BC) Achaemenid (6th to 4th c. BC; Old Persian), Hellenistic (4th to 2nd c. BC Koine Greek) and Parthian (2nd c. BC to 3rd c. AD; Middle Persian) times.

Armenian manuscript, ca. 5th-6th AD.

Grammatically, early forms of Armenian had much in common with classical Greek and Latin, but the modern language (like Modern Greek) has undergone many transformations. Interestingly enough, it shares with Italic dialects the secondary IE suffix ***-tiō(n)***, extended from ***-ti***, cf. Arm թյուն (*t'youn*).

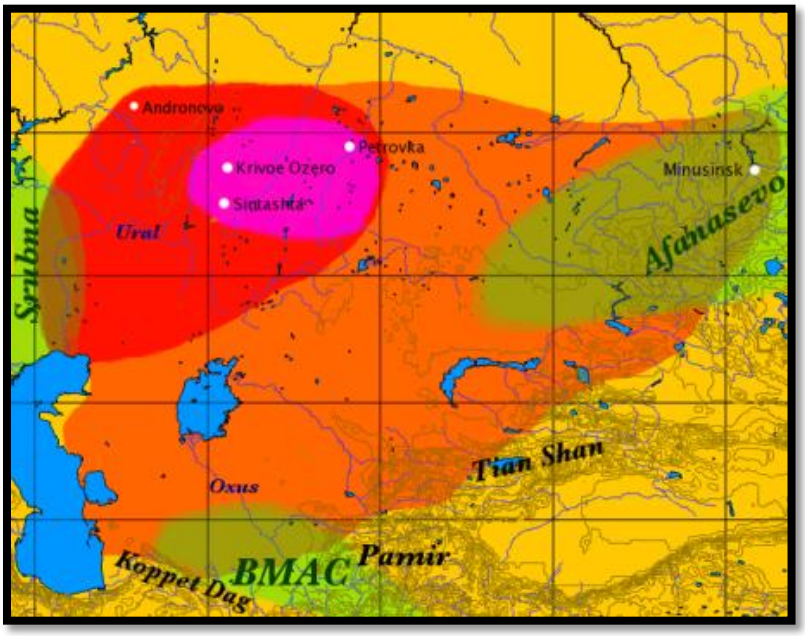
III. INDO-IRANIAN

The **Indo-Iranian language** group constitutes the easternmost extant branch of the Indo-European family of languages. It consists of four language groups: the Indo-Aryan, Iranian, Nuristani, and possibly Dardic, usually classified within the Indic subgroup. The term **Aryan languages** is also traditionally used to refer to the Indo-Iranian languages.

The contemporary Indo-Iranian languages form the largest sub-branch of Indo-European, with more than one billion speakers in total, stretching from Europe (Romani) and the Caucasus (Ossetian) to East India (Bengali and Assamese). A 2005 estimate counts a total of 308 varieties, the largest in terms of native speakers being Hindustani (Hindi and Urdu, ca. 540 million), Bengali (ca. 200 million), Punjabi (ca. 100 million), Marathi and Persian (ca. 70 million each), Gujarati (ca. 45 million), Pashto (40 million), Oriya (ca. 30 million), Kurdish and Sindhi (ca. 20 million each).

Proto-Indo-Iranians are commonly identified with the bearers of the Andronovo culture and their homeland with an area of the Eurasian steppe that borders the Ural River on the west, the Tian Shan on the east – where the Indo-Iranians took over the area occupied by the earlier Afanasevo culture –, and Transoxiana and the Hindu Kush on the south. Historical linguists broadly estimate that a continuum of Indo-Iranian languages probably began to diverge by 2000 BC, preceding both the Vedic and Iranian

cultures. A Two-wave model of Indo-Iranian expansion have been proposed (see Burrow 1973 and Parpola 1999), strongly associated with the chariot.



Map of the Sintashta-Petrovka culture (red), its expansion into the Andronovo culture during the 2nd millennium BC, showing the overlap with the BMAC in the south. The location of the earliest chariots is shown in purple.

Aryans spread into the Caucasus, the Iranian plateau, and South Asia, as well as into Mesopotamia and Syria, introducing the horse and chariot culture to this part of the world. Sumerian texts from EDIIIb Ngirsu (2500-2350 BC) already mention the 'chariot' (*gigir*) and Ur III texts (2150-2000 BC) mention the horse (*anshe-zi-zi*). They left linguistic remains in a Hittite horse-training manual written by one "Kikkuli the Mitannian". Other evidence is found in references to the names of Mitanni rulers and the gods they swore by in treaties; these remains are found in the archives of the Mitanni's neighbors, and the time period for this is about 1500 BC.

The standard model for the entry of the Indo-European languages into South Asia is that the **First Wave** went over the Hindu Kush, either into the headwaters of the Indus and later the Ganges. The earliest stratum of Vedic Sanskrit, preserved only in the Rigveda, is assigned to roughly 1500 BC. From the Indus, the Indo-Aryan languages spread from ca. 1500 BC to ca. 500 BC, over the northern and central parts of the subcontinent, sparing the extreme south. The Indo-Aryans in these areas established several powerful kingdoms and principalities in the region, from eastern Afghanistan to the doorstep of Bengal.

The **Second Wave** is interpreted as the Iranian wave. The Iranians would take over all of Central Asia, Iran, and for a considerable period, dominate the European steppe (the modern Ukraine) and intrude north into Russia and west into central and eastern Europe well into historic times and as late as the Common Era. The first Iranians to reach the Black Sea may have been the Cimmerians in the 8th century BC, although their linguistic affiliation is uncertain. They were followed by the Scythians, who are considered a western branch of the Central Asian Sakas, and the Sarmatian tribes.

The Medes, Parthians and Persians begin to appear on the Persian plateau from ca. 800 BC, and the Achaemenids replaced Elamite rule from 559 BC. Around the first millennium of the Common Era, the

Iranian Pashtuns and Baloch began to settle on the eastern edge of the Iranian plateau, on the mountainous frontier of northwestern Pakistan in what is now the North-West Frontier Province and Balochistan, displacing the earlier Indo-Aryans from the area.

The main changes separating Proto-Indo-Iranian from Late PIE include:

- Early "satemization" trend:
  - Loss of PIE labio-velars into PII plain velars: **kʷ**→*k* , **gʷ**→*g*, **gʷʰ**→*gʰ* .
  - Palatalization of PII velars in certain phonetic environments: *k*→*ḳ*, *g*→*ǵ*, *gʰ*→*ǵʰ*.
- Collapse of PIE ablauting vowels into a single PII vowel: **e**,**o**→*a*; **ē**,**ō**→*ā*.
  - A common exception is the Brugmann's law.
- Grassmann's law, Bartholomae's law, and the Ruki sound law were also complete in PII.

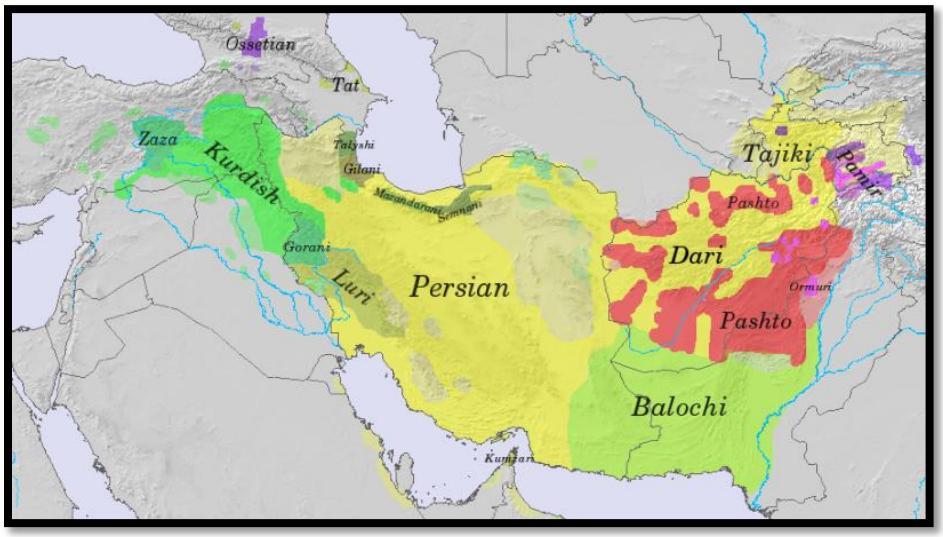
NOTE. For a detailed description of those Indo-Iranian sound laws and the "*satemization*" process, see Appendix II. For Ruki sound law, *v.s.* Baltic in §1.7.1.

- Sonorants are generally stable in PII, but for PIE **l̥** → PII *r̥*, just like **l**→*r*.

Among the sound changes from Proto-Indo-Iranian to Indo-Aryan is the loss of the voiced sibilant **z*; among those to Iranian is the de-aspiration of the PIE voiced aspirates.

A. IRANIAN

The **Iranian languages** are a branch of the Indo-Iranian subfamily, with an estimated 150-200 million native speakers today, the largest being Persian (ca. 60 million), Kurdish (ca. 25 million), Pashto (ca. 25 million) and Balochi (ca. 7 million).



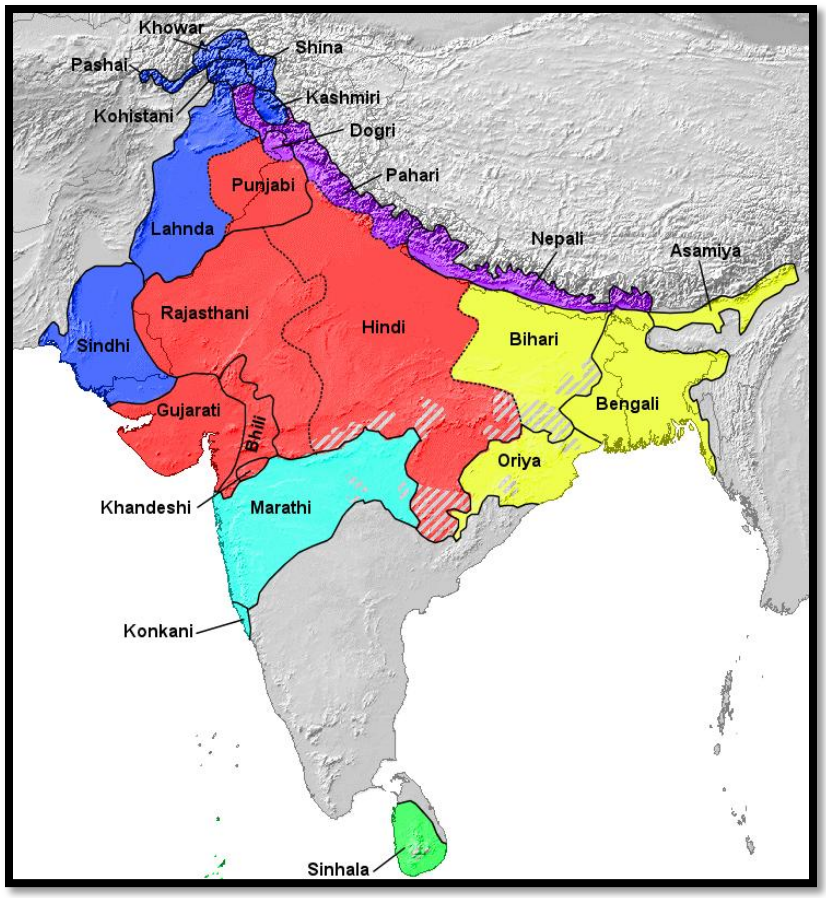
Current distribution of Iranian dialects.

Proto-Iranian dates to some time after Proto-Indo-Iranian breakup, or the early second millennium BC, as the Old Iranian languages began to break off and evolve separately as the various Iranian tribes migrated and settled in vast areas of southeastern Europe, the Iranian plateau, and Central Asia. The oldest Iranian language known, Avestan, is mainly attested through the Avesta, a collection of sacred texts connected to the Zoroastrian religion.

Linguistically, the Old Iranian languages are divided into two major families, the Eastern and Western group, and several subclasses. The so-called Eastern group includes Scythian, even though the Scyths lived in a region extending further west than the Western group. The northwestern branch included Median, and Parthian, while the southwestern branch included Old Persian.

B. INDO-ARYAN

The Indo-Aryan or **Indic languages** are a branch of the Indo-Iranian subfamily with a total number of native speakers of more than 900 million. The largest in terms of native speakers being Hindustani (Hindi and Urdu, about 540 million), Bangali (about 200 million), Punjabi (about 100 million), Marathi (about 90 million), Gujarati (about 45 million), Nepali (about 40 million), Oriya (about 30 million), Sindhi (about 20 million) and Assamese (about 14 million).



The earliest evidence of the group is from Vedic Sanskrit, the language used in the ancient preserved texts of the Indian subcontinent, the foundational canon of Hinduism known as the Vedas. The Indo-Aryan superstrate in Mitanni is of similar age as the Rigveda, but the only evidence is a number of loanwords.

In the 4th c. BC, the Sanskrit language was codified and standardised by the grammarian Panini, called "Classical Sanskrit" by convention. Outside the learned sphere of Sanskrit, vernacular dialects (Prakrits) continued to evolve and, in medieval times, diversified into various Middle Indic dialects.

C. NURISTANI

The recent view is to classify Nuristani as an independent branch of the Indo-Iranian language family, instead of the the Indic or Iranian group. In any event, it would seem they arrived in their present homeland at a very early date, and never entered the western Punjab of Pakistan.

1.7.3. OTHER INDO-EUROPEAN DIALECTS OF EUROPE

I. ALBANIAN

Albanian an Indo-European language spoken by over 8 million people primarily in Albania, Kosovo, and the Former Yugoslav Republic of Macedonia, but also by smaller numbers of ethnic Albanians in other parts of the Balkans, along the eastern coast of Italy and in Sicily, as well other emigrant groups.

Albanian dialects Gheg, Tosk. Communities of Arbëreshë- and Arvanitika-speakers

The Albanian language has no living close relatives among the modern languages. There is no scholarly consensus over its origin and dialectal classification, although some scholars derive it from the Illyrian language, and others claim that it derives from Thracian.

While it is considered established that the Albanians originated in the Balkans, the exact location from which they spread out is hard to pinpoint. Despite varied claims, the Albanians probably came from farther north and inland than would suggest the present borders of Albania, with a homeland concentrated in the mountains.

NOTE. Given the overwhelming amount of shepherding and mountaineering vocabulary as well as the extensive influence of Latin, it is more likely the Albanians come from north of the Jireček line, on the Latin-speaking side, perhaps in part from the late Roman province of *Dardania* from the western Balkans. However, archaeology has more convincingly pointed to the early Byzantine province of *Praevitana* (modern northern Albania) which shows an area where a primarily shepherding, transhumance population of Illyrians retained their culture.

The period in which Proto-Albanian and Latin interacted was protracted and drawn out over six centuries, 1st c. AD to 6th or 7th c. AD. This is born out into roughly three layers of borrowings, the largest number belonging to the second layer. The first, with the fewest borrowings, was a time of less important interaction. The final period, probably preceding the Slavic or Germanic invasions, also has a notably smaller amount of borrowings. Each layer is characterized by a different treatment of most vowels, the first layer having several that follow the evolution of Early Proto-Albanian into Albanian; later layers reflect vowel changes endemic to Late Latin and presumably Proto-Romance. Other formative changes include the syncretism of several noun case endings, especially in the plural, as well as a large scale palatalization.

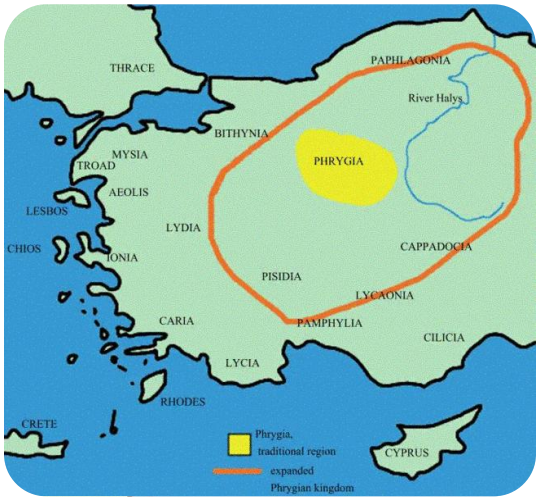
A brief period followed, between 7th c. AD and 9th c. AD, that was marked by heavy borrowings from Southern Slavic, some of which predate the *o→a* shift common to the modern forms of this language group. Starting in the latter 9th c. AD, a period followed of protracted contact with the Proto-Romanians, or Vlachs, though lexical borrowing seems to have been mostly one sided – from Albanian into Romanian. Such a borrowing indicates that the Romanians migrated from an area where the majority was Slavic (i.e. Middle Bulgarian) to an area with a majority of Albanian speakers, i.e. Dardania, where Vlachs are recorded in the 10th c. AD. This fact places the Albanians at a rather early date in the Western or Central Balkans, most likely in the region of Kosovo and Northern Albania.

References to the existence of Albanian as a distinct language survive from the 1300s, but without recording any specific words. The oldest surviving documents written in Albanian are the *Formula e Pagëzimit* (Baptismal formula), *Un'te paghesont' pr'emenit t'Atit e t'Birit e t'Spirit Senit*, "*I baptize thee in the name of the Father, and the Son, and the Holy Spirit*", recorded by Pal Engjelli, Bishop of Durres in 1462 in the Gheg dialect, and some New Testament verses from that period.

II. PALEO-BALKAN LANGUAGES

A. PHRYGIAN

The **Phrygian language** was the Indo-European language spoken by the Phrygians, a people that settled in Asia Minor during the Bronze Age. It survived probably into the sixth century AD, when it was replaced by Greek



Traditional Phrygian region and expanded Kingdom.

Ancient historians and myths sometimes did associate Phrygian with Thracian and maybe even Armenian, on grounds of classical sources. Herodotus recorded the Macedonian account that Phrygians migrated into Asia Minor from Thrace (7.73). Later in the text (7.73), Herodotus states that the Armenians were colonists of the Phrygians, still considered the same in the time of Xerxes I. The earliest mention of Phrygian in Greek sources, in the *Homeric Hymn to Aphrodite*, depicts it as different from Trojan: in the hymn, Aphrodite, disguising herself as a mortal to seduce the Trojan prince Anchises, tells him:

"*Otreus of famous name is my father, if so be you have heard of him, and he reigns over all Phrygia rich in fortresses. But I know your speech well beside my own, for a Trojan nurse brought me up at home*". Of Trojan, unfortunately, nothing is known.

Phrygian is attested by two corpora, one, Paleo-Phrygian, from around 800 BC and later, and another after a period of several centuries, Neo-Phrygian, from around the beginning of the Common Era. The Paleo-Phrygian corpus is further divided geographically into inscriptions of **Midas-city**, Gordion, Central, Bithynia, Pteria, Tyana, Daskyleion, Bayindir, and "*various*" (*documents divers*). The **Mysian** inscriptions show a language classified as a separate Phrygian dialect, written in an alphabet with an additional letter, the "*Mysian s*". We can reconstruct some words with the help of some inscriptions written with a script similar to the Greek one.

Phrygian inscription in Midas City.

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Its structure, what can be recovered from it, was typically Indo-European, with nouns declined for case (at least four), gender (three) and number (singular and plural), while the verbs are conjugated for tense, voice, mood, person and number.

Phrygian seems to exhibit an augment, like Greek and Armenian, as in Phryg. *eberet*, probably corresponding to PIE **é-b^{h}er-e-t** (cf. Gk. *epheret*).

A sizable body of Phrygian words are theoretically known; however, the meaning and etymologies and even correct forms of many Phrygian words (mostly extracted from inscriptions) are still being debated.

A famous Phrygian word is *bekos*, meaning "*bread*". According to Herodotus (*Histories* 2.9) Pharaoh Psammetichus I wanted to establish the original language. For this purpose, he ordered two children to be reared by a shepherd, forbidding him to let them hear a single word, and charging him to report the children's first utterance. After two years, the shepherd reported that on entering their chamber, the

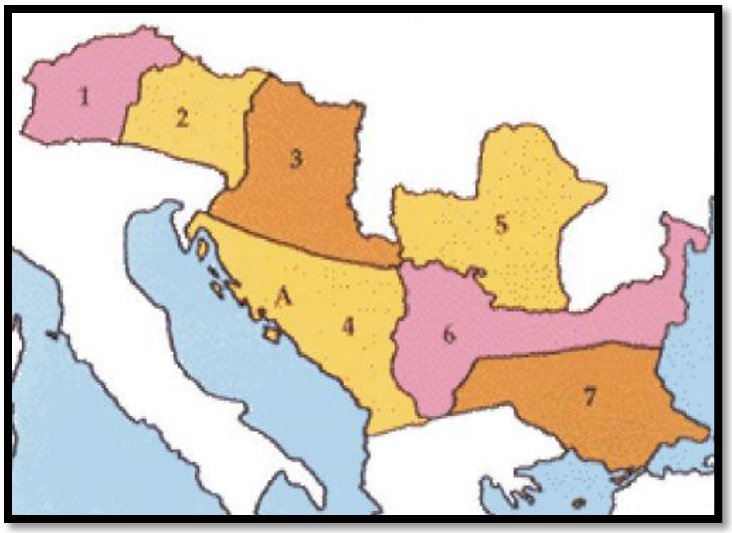
children came up to him, extending their hands, calling *bekos*. Upon enquiry, the pharaoh discovered that this was the Phrygian word for "*wheat bread*", after which the Egyptians conceded that the Phrygian nation was older than theirs. The word *bekos* is also attested several times in Palaeo-Phrygian inscriptions on funerary stelae. It was suggested that it is cognate to Eng. *bake*, from PIE **b^{h}eh$_{3}$g-**; cf. Gk. *phōgō*, "*to roast*", Lat. *focus,* "*fireplace*", Arm. *bosor,* "*red*", and *bots* "*flame*", Ir. *goba* "*smith*, etc.

Phryg. *bedu* (<PIE **wed-**) according to Clement of Alexandria's *Stromata*, quoting one Neanthus of Cyzicus means "*water*". The Macedonians are said to have worshiped a god called Bedu, which they interpreted as "*air*". The god appears also in Orphic ritual.

Other Phrygian words include:

- Phryg. *anar*, *"husband"*, *"man",* from PIE **(a)nḗr**, "*man*"; cf. Gk. *anḗr,* "*man*, *husband*".
- Phryg. *belte*, *"swamp"*, from PIE root **b^{h}el-**, *"to gleam"*; cf. Gk. *baltos,* "*swamp*".
- Phryg. *brater*, *"brother*", from PIE **b^{h}rāter**; cf. Gk. *phrātēr*.
- Phryg. *ad-daket*, *"does*, *causes"*, from PIE stem **d^{h}ē-k-**; cf. Gk. *ethēka*.
- Phryg. *germe*, *"warm"*, from PIE **g^{wh}ermós**; cf. Gk. *thermós*.
- Phryg. *gdan*, *"earth"*, from PIE **d^{h}g^{h}ōm**; cf. Gk. *khthōn*.

B. ILLYRIAN



Roman provinces in the Balkans, 2nd century AD: A. Spalatum (Split); 1. Raetia; 2. Noricum; 3. Pannonia; 4. Illyricum; 5. Dacia; 6. Moesia; 7. Tracia.

The **Illyrian languages** are a group of Indo-European languages that were spoken in the western part of the Balkans in former times by ethnic groups identified as *Illyrians*: Delmatae, Pannoni, Illyrioi, Autariates, Taulanti.

The main source of authoritative information about the Illyrian language consists of a handful of Illyrian words cited in classical sources, and numerous examples of Illyrian anthroponyms, ethnonyms, toponyms and hydronyms. Some sound-changes and other language features are deduced from what remains of the Illyrian languages, but because no writings in Illyrian are known, there is not sufficient evidence to clarify its place within the Indo-European language family aside from its probable *Centum* nature.

NOTE. A grouping of Illyrian with the Messapian language has been proposed for about a century, but remains an unproven hypothesis. The theory is based on classical sources, archaeology, as well as onomastic considerations. Messapian material culture bears a number of similarities to Illyrian material culture. Some Messapian anthroponyms have close Illyrian equivalents. A relation to the Venetic language and Liburnian language, once spoken in northeastern Italy and Liburnia respectively, is also proposed.

A grouping of Illyrian with the Thracian and Dacian language in a "Thraco-Illyrian" group or branch, an idea popular in the first half of the 20th century, is now generally rejected due to a lack of sustaining evidence, and due to what may be evidence to the contrary. Also, the hypothesis that the modern Albanian language is a surviving Illyrian language remains very controversial among linguists.

B. THRACIAN

Excluding Dacian, whose status as a Thracian language is disputed, **Thracian** was spoken in in what is now southern Bulgaria, parts of Serbia, the Republic of Macedonia, Northern Greece – especially prior to Ancient Macedonian expansion –, throughout Thrace (including European Turkey) and in parts of Bithynia (North-Western Asiatic Turkey). Most of the Thracians were eventually Hellenized (in the province of Thrace) or Romanized (in Moesia, Dacia, etc.), with the last remnants surviving in remote areas until the 5th century.

As an extinct language with only a few short inscriptions attributed to it (*v.i.*), there is little known about the Thracian language, but a number of features are agreed upon. A number of probable Thracian words are found in inscriptions – most of them written with Greek script – on buildings, coins, and other artifacts. Some Greek lexical elements may derive from Thracian, such as *balios*, "*dappled*" (< PIE **b^{h}el-**, "*to shine*", Pokorny also cites Illyrian as possible source), *bounos*, "*hill, mound*", etc.

C. DACIAN

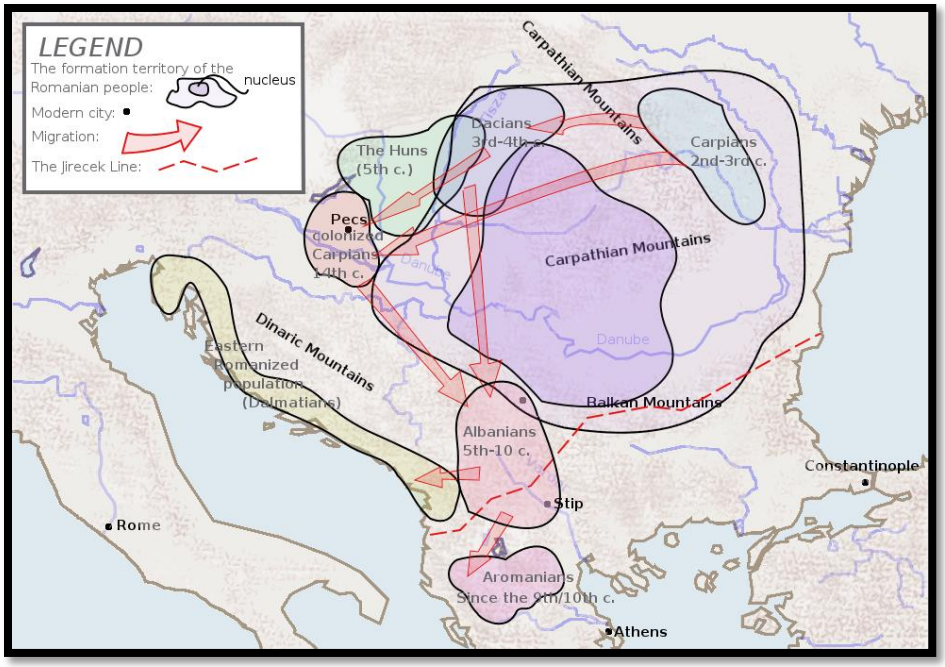
The **Dacian language** was an Indo-European language spoken by the ancient people of Dacia. It is often considered to have been a northern variant of the Thracian language or closely related to it.

There are almost no written documents in Dacian. Dacian used to be one of the major languages of South-Eastern Europe, stretching from what is now Eastern Hungary to the Black Sea shore. Based on archaeological findings, the origins of the Dacian culture are believed to be in Moldavia, being identified as an evolution of the Iron Age Basarabi culture.

It is unclear exactly when the Dacian language became extinct, or even whether it has a living descendant. The initial Roman conquest of part of Dacia did not put an end to the language, as Free Dacian tribes such as the Carpi may have continued to speak Dacian in Moldavia and adjacent regions

as late as the 6th or 7th century AD, still capable of leaving some influences in the forming Slavic languages.

According to one hypothesis, a branch of Dacian continued as the Albanian language (Hasdeu, 1901). A refined version of that hypothesis considers Albanian to be a Daco-Moesian Dialect that split off from Dacian before 300 BC and that Dacian itself became extinct.



Theoretical scenario: the Albanians as a migrant Dacian people

NOTE. The arguments for this early split before 300 BC include:

- Inherited Albanian words (e.g. PIE **mātēr** → Alb. *motër*) shows the transformation Late PIE **ā** → Alb. *o*, but all the Latin loans in Albanian having an *ā* (<PIE **ā**) shows Lat. *ā* → Alb. *a*. Therefore, the transformation happened and ended before the Roman arrival in the Balkans.
- Romanian substratum words shared with Albanian show a Rom. *a* that corresponds to Alb. *o* when the source for both sounds is an original common *ā* (cf. *mazãre/modhull*<**mādzula*, *"pea"*; *raţã/rosë*<**rāţja*: *"duck"*); therefore, when these words had the same common form in Pre-Romanian and Proto-Albanian the transformation PIE **ā** → Alb. *o* had not started yet.

The correlation between these two facts indicates that the split between Pre-Romanian (the Dacians that were later Romanized) and Proto-Albanian happened before the Roman arrival in the Balkans.

E. PAIONIAN

The **Paionian language** is the poorly attested language of the ancient Paionians, whose kingdom once stretched north of Macedon into Dardania and in earlier times into southwestern Thrace.

Classical sources usually considered the Paionians distinct from Thracians or Illyrians, comprising their own ethnicity and language. Athenaeus seemingly connected the Paionian tongue to the Mysian language, itself barely attested. If correct, this could mean that Paionian was an Anatolian language. On the other hand, the Paionians were sometimes regarded as descendants of Phrygians, which may put Paionian on the same linguistic branch as the Phrygian language.

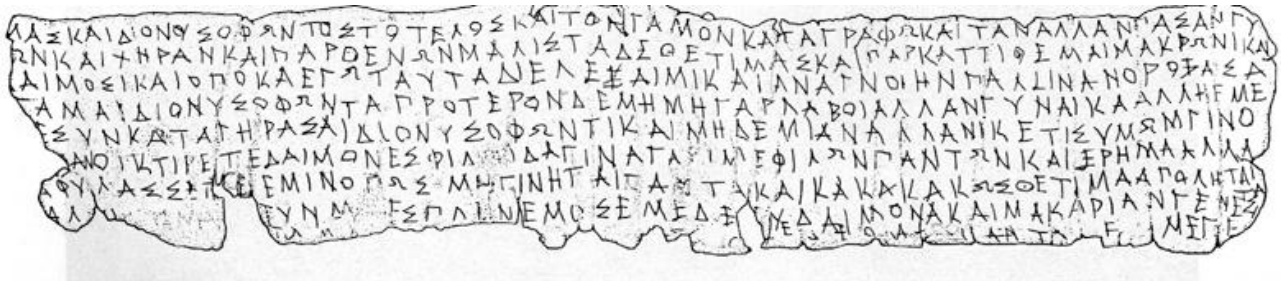
Modern linguists are uncertain on the classification of Paionian, due to the extreme scarcity of materials we have on this language. However, it seems that Paionian was an independent IE dialect. It shows **a**/**o** distinction and does not appear to have undergone Satemization. The Indo-European voiced aspirates became plain voiced consonants, i.e. $\mathbf{b^h}\rightarrow b$, $\mathbf{d^h}\rightarrow d$, $\mathbf{g^h}\rightarrow g$, $\mathbf{g^{wh}}\rightarrow g^w$; as in Illyrian, Thracian, Macedonian and Phrygian (but unlike Greek).

F. ANCIENT MACEDONIAN

The **Ancient Macedonian** language was the tongue of the Ancient Macedonians. It was spoken in Macedon during the 1st millennium BC. Marginalized from the 5th century BC, it was gradually replaced by the common Greek dialect of the Hellenistic Era. It was probably spoken predominantly in the inland regions away from the coast. It is as yet undetermined whether the language was a dialect of Greek, a sibling language to Greek, or an Indo-European language which is a close cousin to Greek and also related to Thracian and Phrygian languages.

Knowledge of the language is very limited because there are no surviving texts that are indisputably written in the language, though a body of authentic Macedonian words has been assembled from ancient sources, mainly from coin inscriptions, and from the 5th century lexicon of Hesychius of Alexandria, amounting to about 150 words and 200 proper names. Most of these are confidently identifiable as Greek, but some of them are not easily reconciled with standard Greek phonology. The 6,000 surving Macedonian inscriptions are in the Greek Attic dialect.

The Pella curse tablet, a text written in a distinct Doric Greek idiom, found in Pella in 1986, dated to between mid to early 4th century BC, has been forwarded as an argument that the Ancient Macedonian language was a dialect of North-Western Greek. Before the discovery it was proposed that the Macedonian dialect was an early form of Greek, spoken alongside Doric proper at that time.



The Pella katadesmos, *is a katadesmos (a curse, or magic spell) inscribed on a lead scroll, probably dating to between 380 and 350 BC. It was found in Pella in 1986*

NOTE. Olivier Masson thinks that "in contrast with earlier views which made of it an Aeolic dialect (O.Hoffmann compared Thessalian) we must by now think of a link with North-West Greek (Locrian, Aetolian, Phocidian, Epirote). This view is supported by the recent discovery at Pella of a curse tablet which may well be the first

'Macedonian' text attested (...); the text includes an adverb "opoka" which is not Thessalian." Also, James L. O'Neil states that the "curse tablet from Pella shows word forms which are clearly Doric, but a different form of Doric from any of the west Greek dialects of areas adjoining Macedon. Three other, very brief, fourth century inscriptions are also indubitably Doric. These show that a Doric dialect was spoken in Macedon, as we would expect from the West Greek forms of Greek names found in Macedon. And yet later Macedonian inscriptions are in Koine avoiding both Doric forms and the Macedonian voicing of consonants. The native Macedonian dialect had become unsuitable for written documents."

From the few words that survive, a notable sound-law may be ascertained, that PIE voiced aspirates **d^{h}**, **b^{h}**, **g^{h}**, appear as δ (=*d[^{h}]*), β (=*b[^{h}]*), γ (=*g[^{h}]*), in contrast to Greek dialects, which unvoiced them to θ (=*t^{h}*), φ (=*p^{h}*), χ (=*k^{h}*).

NOTE. Since these languages are all known via the Greek alphabet, which has no signs for voiced aspirates, it is unclear whether de-aspiration had really taken place, or whether the supposed voiced stops β, δ, γ were just picked as the closest matches to express voiced aspirates **b^{h}**, **d^{h}**, **g^{h}**.

- PIH **d^{h}enh$_{2}$-**, *"to leave"*, → A.Mac. δανός (*d[^{h}]anós*), *"death"*; cf. Attic θάνατος (*t^{h}ánatos*). PIH **h$_{2}$aid^{h}-** → A.Mac.*ἄδραια (*ad[^{h}]raia*), *'bright weather'*, Attic αἰθρία (*ait^{h}ría*).
- PIE **b^{h}asko-** → A.Mac. βάσκιοι (*b[^{h}]áskioi*), *"fasces"*. Compare also for A.Mac. ἀβροῦτες (*ab[^{h}]roûtes*) or ἀβροῦFες (*ab[^{h}]roûwes*), Attic ὀφρῦς (*op^{h}rûs*), *"eyebrows";* for Mac. Βερενίκη (*B[^{h}]ereníkē*), Attic Φερενίκη (*P^{h}ereníkē*), *"bearing victory*".
  - According to Herodotus (ca. 440 BC), the Macedonians claimed that the *Phryges* were called *Brygoi* (<PIE **b^{h}rugo-**) before they migrated from Thrace to Anatolia ca. 1200 BC.
  - In Aristophanes' The Birds, the form κεβλήπυρις (*keblēpyris*), "red-cap bird", shows a voiced stop instead of a standard Greek unvoiced aspirate, i.e. Macedonian κεβ(α)λή (*keb[^{h}]alē*) vs. Greek κεφαλή (*kep^{h}alē*), "head".
- If A.Mac. γοτάν (*gotán*), "*pig*", is related to PIE **g^{w}ou-**, *"cow"*, this would indicate that the labiovelars were either intact (hence **g^{ω}otán*), or merged with the velars, unlike the usual Gk. βοῦς (*boûs*).

NOTE. Such deviations, however, are not unknown within Greek dialects; compare Dor. γλεπ- (*glep-*) for common Gk. βλεπ- (*blep-*), as well as Dor. γλάχων (*gláchōn*) and Ion. γλήχων (*glēchōn*) for Gk. βλήχων (*blēchōn*).

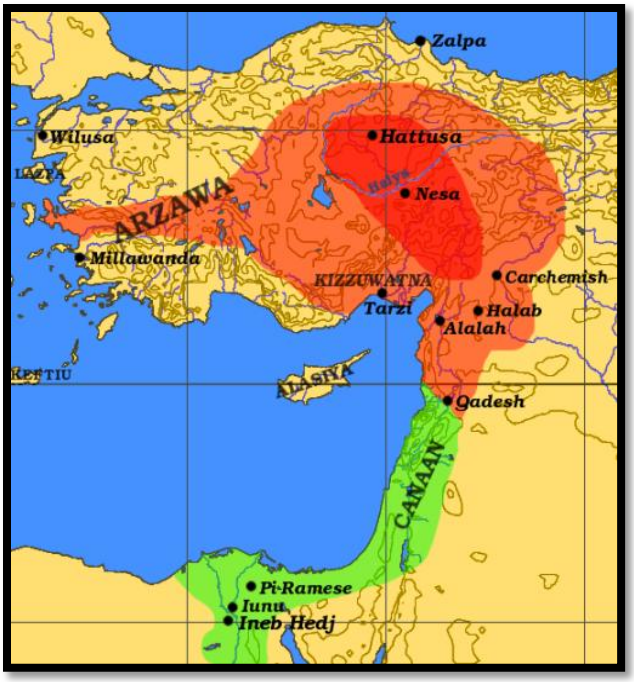
- Examples suggest that voiced velar stops were devoiced, especially word-initially: PIE **genu-** → A.Mac. κάναδοι *(kánadoi*), *"jaws"*; PIE **gomb^{h}-** → A.Mac. κόμβους (*kómbous*), *"molars"*.
  - Compared to Greek words, there is A.Mac. ἀρκόν *(arkón*) vs. Attic ἀργός *(argós*); the Macedonian toponym *Akesamenai*, from the Pierian name *Akesamenos* – if *Akesa-* is cognate to Greek *agassomai*, *agamai*, *"to astonish*"; cf. also the Thracian name *Agassamenos*.

1.7.4. ANATOLIAN LANGUAGES

The **Anatolian languages** are a group of extinct Indo-European languages, which were spoken in Anatolia for millennia, the best attested of them being the Hittite language.

The Anatolian branch is generally considered the earliest to split off the Proto-Indo-European language, from a stage referred to either as Middle PIE or "*Indo-Hittite*" (PIH), typically a date ca. 3500 BC is assumed. Within a Kurgan framework, there are two possibilities of how early Anatolian speakers could have reached Anatolia: from the north via the Caucasus, and from the west, via the Balkans.

NOTE. The term *Indo-Hittite* is somewhat imprecise, as the prefix *Indo-* does not refer to the Indo-Aryan branch in particular, but is iconic for *Indo-European* (as in *Indo-Uralic*), and the *-Hittite* part refers to the Anatolian language family as a whole.

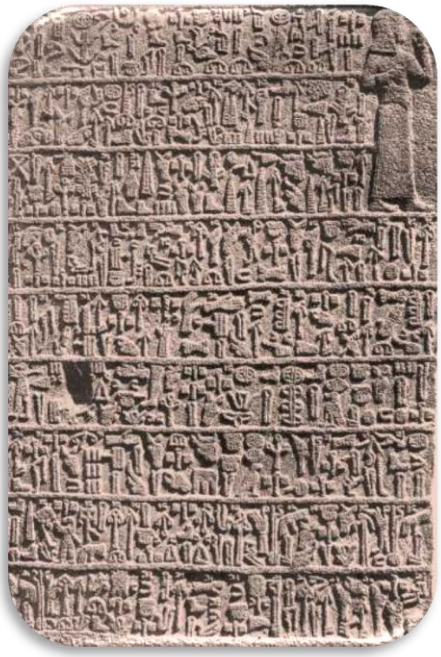


The approximate extent of the Hittite Old Kingdom under Hantili I (ca. 1590 BC) in ***darkest****. Maximal extent of the Hittite Empire ca. 1300 BC is shown in* ***dark color****, the Egyptian sphere of influence in* ***light color****.*

Attested dialects of the Anatolian branch are:

- **Hittite** (*nesili*), attested from ca. 1800 BC to 1100 BC, official language of the Hittite Empire.
- **Luwian** (*luwili*), close relative of Hittite spoken in Arzawa, to the southwest of the core Hittite area.
- **Palaic**, spoken in north-central Anatolia, extinct around the 13th century BC, known only fragmentarily from quoted prayers in Hittite texts.
- **Lycian**, spoken in Lycia in the Iron Age, most likely a descendant of Luwian, extinct in ca. the 1st century BC. A fragmentary language, it is also a likely candidate for the language spoken by Trojans.
- **Lydian**, spoken in Lydia, extinct in ca. the 1st century BC, fragmentary.
- **Carian**, spoken in Caria, fragmentarily attested from graffiti by Carian mercenaries in Egypt from ca. the 7th century BC, extinct ca. in the 3rd century BC.
- **Pisidian** and **Sidetic** (Pamphylian), fragmentary.
- **Milyan**, known from a single inscription.

There were likely other languages of the Anatolian branch that have left no written records, such as the languages of Mysia, Cappadocia and Paphlagonia.



Hittite pictographic writing

Anatolia was heavily Hellenized following the conquests of Alexander the Great, and it is generally thought that by the 1st century BC the native languages of the area were extinct.

Hittite proper is known from cuneiform tablets and inscriptions erected by the Hittite kings and written in an adapted form of Old Assyrian cuneiform orthography. Owing to the predominantly syllabic nature of the script, it is difficult to ascertain the precise phonetic qualities of a portion of the Hittite sound inventory.

NOTE. The script known as "Hieroglyphic Hittite" has now been shown to have been used for writing the closely related Luwian language, rather than Hittite proper. The later languages Lycian and Lydian are also attested in Hittite territory.

The Hittite language has traditionally been stratified – partly on linguistic and partly on paleographic grounds – into Old Hittite, Middle Hittite and New or Neo-Hittite, corresponding to the Old, Middle and New Kingdoms of the Hittite Empire, ca. 1750–1500 BC, 1500–1430 BC and 1430–1180 BC, respectively.

Luwian was spoken by population groups in Arzawa, to the west or southwest of the core Hittite area. In the oldest texts, eg. the Hittite Code, the Luwian-speaking areas including Arzawa and Kizzuwatna were called Luwia. From this homeland, Luwian speakers gradually spread through Anatolia and became a contributing factor to the downfall, after circa 1180 BC, of the Hittite Empire, where it was already widely spoken. Luwian was also the language spoken in the Neo-Hittite states of Syria, such as Milid and Carchemish, as well as in the central Anatolian kingdom of Tabal that flourished around 900 BC. Luwian has been preserved in two forms, named after the writing systems used: Cuneiform Luwian and Hieroglyphic Luwian.

Luwian use according to inscriptions found

For the most part, the immediate ancestor of the known Anatolian languages, **Common Anatolian** (the Late Proto-Anatolian spoken ca. 2500) has been reconstructed on the basis of Hittite. However, the usage of Hittite cuneiform writing system limits the enterprise of understanding and reconstructing

Anatolian phonology, partly due to the deficiency of the adopted Akkadian cuneiform syllabary to represent Hittite sounds, and partly due to the Hittite scribal practices.

NOTE. This especially pertains to what appears to be confusion of voiceless and voiced dental stops, where signs -dV- and -tV- are employed interchangeably different attestations of the same word. Furthermore, in the syllables of the structure VC only the signs with voiceless stops as usually used. Distribution of spellings with single and geminated consonants in the oldest extant monuments indicates that the reflexes of PIE voiceless stops were spelled as double consonants and the reflexes of PIE voiced stops as single consonants. This regularity is the most consistent in in the case of dental stops in older texts; later monuments often show irregular variation of this rule.

Known changes from Middle PIE into Common Anatolian include:

- Voiced aspirates merged with voiced stops: **d^{h}**→*d*, **b^{h}**→*b*, **g^{h}**→*g*.
- Voiceless stops become voiced after accented long-vowel or diphthong: PIH **wēk-** → CA *wēg-*(cf. Hitt. *wēk-*, "*ask for*"); PIH **d^{h}eh$_1$ti,** "*putting*" → CA *dǣdi* (cf. Luw. *taac-* "*votive offfering*").
- Conditioned allophone PIH **tj** → CA *tsj*, as Hittite still shows.
- PIH **h$_1$** is lost in CA, but for **eh$_1$**→*ǣ*, appearing as Hitt., Pal. *ē*, Luw., Lyc., Lyd. *ā*; word-initial **h$_2$**→*x*, non-initial **h$_2$**→*h*; **h$_3$**→*h*.

NOTE 1. Melchert proposes that CA *x* (voiceless fricative) is "lenited" to *h* (voiced fricative) under the same conditions as voiceless stops. Also, word-initial **h$_3$** is assumed by some scholars to have been lost already in CA.

NOTE 2. There is an important assimilation of laryngeals within CA: a sequence –*VRHV*- becomes –*VRRV*-; cf. PIH **sperh$_1$V**- → Hitt. *isparr-*, "*kick flat*"; PIH **sun-h$_3$-V**- → Hitt. *sunna-*, "*fill*", Pal. *sunnuttil-*, "*outpouring*"; etc.

- PIH sonorants are generally stable in CA. Only word-initial **r̥** has been eliminated. Word-initial **je**- shows a trend to become CA *e*-, but the trend is not complete in CA, as Hittite shows.
- Diphthong evolved as PIH **ei** → CA long *ę*; PIH **eu** → CA *ū*. PIH **oi**, **ai**, **ou**, **au**, remain in CA.

NOTE. Common Anatolian preserves PIE vowel system basically intact. Some cite the merger of PIH **o** and **a** as a Common Anatolian innovation, but according to Melchert that merger was secondary shared innovation in Hittite, Palaic and Luwian, but not in Lycian. Also, the lengthening of accented short vowels in open syllables cannot be of Common Anatolian, and neither can lengthening in accented closed syllables.

- The CA nominal system shows an archaic productive declension in ***-i***, ***-u***. There are only two grammatical genders, animate and inanimate.
- Hittite verbs are inflected according to two general verbal classes, the *mi*- and the *hi*-conjugation.

NOTE. Rose (2006) lists 132 *hi*-verbs and interprets the *hi/mi* oppositions as vestiges of a system of grammatical voice, i.e. "centripetal voice" vs. "centrifugal voice". Additionally, the Hittite verbal system displays two voices (active and mediopassive), two moods (indicative and imperative), and two tenses (present and preterite), two infinitive forms, one verbal substantive, a supine, and a participle.

1.8. MODERN INDO-EUROPEAN

1.8.1. Modern Indo-European (MIE) is therefore a set of grammatical rules – including its writing system, noun declension, verbal conjugation and syntax –, designed to systematize the reconstructed PIE language, especially its **Europe's Indo-European** dialect, already described above as the *IE dialect continuum* spoken in Europe until ca. 2000 BC, to adapt it to modern communication needs. Because that language was spoken by a prehistoric society, no genuine sample texts are available, and thus comparative linguistics – in spite of its 200 years' history – is not in the position to reconstruct exactly their formal language (the one used by learned people at the time), but only approximately how the spoken, vulgar language was like, i.e. the language that later evolved into the different attested Indo-European dialects and languages.

NOTE. Reconstructed languages like Modern Hebrew, Modern Cornish, Modern Coptic or Modern Indo-European may be revived in their communities without being as *easy*, as *logical*, as *neutral* or as *philosophical* as the million artificial languages that exist today, and whose main aim is to be supposedly '*better*', or '*easier*', or '*more neutral*' than other artificial or natural languages they want to substitute. Whatever the sociological, psychological, political or practical reasons behind the success of such '*difficult*' and '*non-neutral*' languages instead of 'universal' ones, what is certain is that if somebody learns Hebrew, Cornish, Coptic or Indo-European (or Latin, German, Swahili, Chinese, etc.) whatever the changes in the morphology, syntax or vocabulary that could follow (because of, say, '*better*' or '*purer*' or '*easier*' language systems recommended by their language regulators), the language learnt will still be the same, and the effort made won't be lost in any possible case.

1.8.2. We deemed it worth it to use the Proto-Indo-European reconstruction for the revival of a complete modern language system, because of the obvious need of a common language within the EU, to substitute the current deficient linguistic policy. This language system, called *European* or *European language* (**Eurōpaiom**), is mainly based on the features of the European or Northwestern dialects, whose speakers – as we have already seen – remained in loose contact for some centuries after the first Late PIE migrations, and have influenced each other in the last millenia within Europe.

NOTE. As Indo-Europeanist López-Menchero puts it, "there are 'three (Late) Proto-Indo-European languages' which might be distinguished today:

1) The actual Proto-Indo-European language, spoken by a prehistoric people, the PIE speakers of the Bronze Age, some millennia ago;

2) The reconstructed Proto-Indo-European language, which is that being reconstructed by IE scholars using the linguistic, archaeological and historical data available, and which is imperfect by nature, based on more or less certain hypothesis and schools of thought; and

3) The Modern Indo-European language system which, being based on the later, and trying to come near to the former, is neither one nor the other, but a modern language systematized to be used in the modern world".

NOTE 2. In that sense, some critics have considered the so-called "*Indo-European language revival*" to be different from (and thus not comparable to) other language revivals, like – as they put it – Hebrew or Cornish, because of the 'obvious differences that will exist between that ancient Proto-Indo-European language and the Modern Indo-European or European language'. It is important to note that, even though there is a general belief that Modern Hebrew and Ancient Hebrew are the same languages, among Israeli scholars there have been continuated calls for the "Modern Hebrew" language to be called "Israeli Hebrew" or just (preferably) "Israeli", due to the strong divergences that exist – and further develop with its use – between the modern language spoken in Israel and its theoretical basis, Ancient Hebrew. On that interesting question, Prof. Ghil'ad Zuckermann aconsiders that "Israelis are brainwashed to believe they speak the same language as the prophet Isaiah, a purely Semitic language, but this is false. It's time we acknowledge that Israeli is very different from the Hebrew of the past". He points out to the abiding influence of modern Indo-European dialects – especially Yiddish, Russian and Polish –, in vocabulary, syntax and phonetics, as imported by Israel's founders. The same could certainly be said of Cornish and other language revivals, and even of some death languages with a continuated use, like the Modern Latin language used by the Catholic Church, which is not comparable to the Classical Latin used by Cicero, not to talk about the real, Vulgar Latin used by Romans. See <http://www.zuckermann.org/>.

1.8.5. Words to complete the MIE vocabulary (in case that no common PIE form is found) are to be taken from present-day IE languages. Loan words – from Greek and Latin, like *philosophy*, *hypothesis, aqueduct,* etc. –, as well as modern Indo-European borrowings – from English, like *software*, from French, like *ambassador*, from Spanish, like *armadillo*, from German, like *Kindergarten*, from Italian, like *casino*, from Russian, like *icon*, from Hindi, like *pajamas*, etc. –, should be used in a *pure IE form* when possible. They are all Indo-European dialectal words, whose original meaning is easily understood if translated; as, e.g. Greek loan *photo* could be used as MIE ***phōtos*** ['$p^hō$-tos] or ['fō-tos], a loan word, or as ***bháuotos*** ['b^hawo-tos], a loan translation of Gk. "*bright*"; it is derived from genitive ***bhauotós*** (EIE **bhauesós**), in compound word ***bhauotogrbhíā***, from verb **bhā**, *to shine*, which gives Gk. *phosphorus* and *phot*. The second, translated word, should be preferred. [2] See §2.9.4, point 4.

1.8.6. The use of modern PIE dialects is probably the best option as an International Auxiliary Language too, because French, German, Spanish, and other natural and artificial languages proposed to substitute English dominance, are only supported by their cultural or social communities, whereas IE native speakers make up the majority of the world's population, being thus the most 'democratic' choice for a language spoken within international organizations and between the different existing nations.

NOTE 1. Because Europe's Indo-European had other sister dialects spoken at the same time, **Hellenic** (Modern Proto-Greek) and **Aryan** (Modern Indo-Iranian) languages can also be revived in the regions where they are currently spoken in the form of modern dialects, as they are not different from MIE than Swedish from Danish, or Spanish from Portuguese. They might also serve as *linguae francae* for closely related languages or neighbouring regions, i.e. Aryan for Asia, Hellenic for Albanian- and Armenian-speaking territories.

NOTE 2. Anatolianism (Turkish *Anadoluculuk*) asserts that Turks descend from the indigenous population of ancient Anatolia, based on historical and genetic views. Supported by Turkish intellectuals in the 20th century, it became essential to the process of nation-building in Turkey, but was substituted by the Pan-Turkic nationalism Mustafa Kemal Atatürk discouraged before his death. If accepted again, Turks could embrace their historical culture by adopting **Anatolian** (CA), "*cousin dialect*" of EIE, PGk. and PII, as a modern second language for a modern Turkey, which shares close historical and cultural ties with the European Union and Asia.

NOTE 3. Even though it is clear that our proposal is different from the Hebrew language revival, we think that:

a) Where Jews had only some formal writings, with limited vocabulary, of a language already dead five centuries before they were expelled from Israel in 70 AD, Proto-Indo-European has a continuated history of use and hundreds of living dialects and other very old dead dialects attested, so that its modern use can be considered 'less artificial'. Thus, even if we had tablets dating from 2000 BC in some dialectal predominant formal EIE language (say, from Pre-Proto-Germanic), the current EIE reconstruction should probably still be used as the main source for Indo-European revival in the European Union.

b) The common culture and religion was probably the basis for the Hebrew language revival in Israel. Proto-Indo-European, whilst the mother tongue of some prehistoric tribe with an own culture and religion, spread into different peoples, with different cultures and religions. There was never a concept of "*Indo-European community*" after the migrations. But today Indo-European languages are spoken by the majority of the population – in the world and especially within Europe –, and it is therefore possible to use it as a *natural* and *culturally* (also "*religiously*") neutral language, what may be a significant advantage of IE over any other natural language.

1.7.7. The noun **Eurōpaios** comes from adjective **eurōpaiós**, from special genitive ***Eurōpai*** of Old Greek Εὐρώπη (*Eurṓpē*), Εὐρώπα (*Eurṓpā*), both forms alternating already in the oldest Greek, and both coming from the same PIE feminine ending **ā** (see § 4.7.8). The Greek ending -***ai***-***o***- (see § 4.7.8 for more on this special genitive in -***ai***) turns into Latin -***ae***-***u***-, and so *Europaeus*. The forms **Eurōpā** and **eurōpaiós** are, then, the 'correct' ones in MIE, as they are the original Classical forms of a Greek loan word widely used today in modern Indo-European languages – other dialectal variants, as ***eurōpaís***, ***eurōpaikós***, ***eurōpaiskós***, etc. could be also used.

NOTE 1. For Homer, *Eurṓpē* was a mythological queen of Crete – abducted by Zeus in bull form when still a Phoenician princess –, and not a geographical designation. Later *Europa* stood for mainland Greece, and by 500 BC its meaning had been extended to lands to the north. The name *Europe* is possibly derived from the Greek words ευρύς (*eurús*, "*broad*", from PIH **h₁urhu**-) and ωψ (*ops*, "*face*", from PIH **h₃ekʷ**-), thus maybe reconstructible as MIE *$\bar{\boldsymbol{U}}$***rōqā** – *broad* having been an epithet of Earth in PIE religion. Others suggest it is based on a Semitic word cognate with Akkadian *erebu*, "*sunset*" (cf. Arabic *maghreb*, Hebrew *ma'ariv*), as from the Middle Eastern vantage point, the sun does set over Europe. Likewise, *Asia* is sometimes thought to have derived from a Semitic word such as the Akkadian *asu*, meaning "*sunrise*", and is the land to the east from a Middle Eastern perspective, thus maybe MIE ****Erōbā***. In Greek mythology Ἔρεβος (*Erebos*, "*deep blackness/darkness or shadow*") was the son of Chaos, the personification of darkness and shadow, which filled in all the corners and crannies of the world. The word is probably from PIH **h₁regʷos** (cf. O.N. *rækkr*, Goth. *riqis*, Skr. *rajani*, Toch. *orkäm*), although possibly also a loan from Semitic, cf. Hebrew *erebh* and Akkadian *erebu*, etc.

NOTE 2. '*Europe'* is a common evolution of Latin a-endings in French; as in '*Amerique'* for *America*, 'Belgique' for *Belgica*, '*Italie'* for *Italia*, etc. Eng. *Europe* is thus a French loan word, as may be seen from the other continents' names: *Asia* (not **Asy*), *Africa* (not **Afrik*), *Australia* (not **Australy*), and *America* (not **Amerik*).

NOTE 3. Only Modern Greek maintains the form Ευρώπη (*Európi*) for the subcontinent, but still with adjective ευρωπαϊκό (*europaikó*), with the same old irregular a-declension and IE ethnic ending ***-iko***-. In Latin there were two forms: *Europa*, *Europaeus*, and lesser used *Europe*, *Europensis*. The later is usually seen in scientific terms.

NOTE 4. For adj. "*European*", compare derivatives from O.Gk. *eurōpai-ós* (< IE ***eurōp-ai-ós***), also in Lat. *europaé-us* -> M.Lat. *europé-us*, in turn giving It., Spa. *europeo*, Pt., Cat. *europeu*; from Late Latin base *europé-* (< IE ***eurōp-ái-***) are extended **europe-is*, as Du. *europees*; from extended **europe-anos* are Rom. *europene*, or Fr. *européen* (into Eng. *european*); extended **europe-iskos* gives common Germanic and Slavic forms (cf. Ger. *Europäisch*, Fris. *europeesk*, Sca. *europeisk*, Pl. *europejski*, common Sla. *evropsk-*, etc.); other extended forms are Ir. *Eorpai-gh*, Lith. *europo-s*, Ltv. *eiropa-s*, etc. For European as a noun, compare, from **europé-anos*, Du., Fris. *europeaan*, from **europé-eros*, Ger. *Europäer*, from ethnic **-ikos*, cf. Sla. *evropejk-*, Mod.Gk. *europai-kó*, etc.

The regular genitive of the word **Eurōpā** in Modern Indo-European is **Eurōpās**, following the first declension. The name of the European language system is **Eurōpáiom**, inanimate, because in the oldest IE dialects attested, those which had an independent name for languages used the neuter, cf. Gk. n.pl. Ἑλληνικά (*ʰellēniká*), Skr. n.sg. संस्कृतम् (*saṃskṛtam*), also in Tacitus Lat. *uōcābulum latīnum*.

NOTE. In other IE languages, however, the language name is an adjective which defines the noun "*language*", and therefore its gender follows the general rule of concordance; cf. Lat. f. *latīna lingua*, or the Slavic examples[3]; hence MIE **eurōpaiā́** ***dńghūs*** or proper **eurōpaiā́ dńghwā**, *European language*.

1.7.8. The term Indo-European comes from Greek Ἰνδός (*ʰIndos*), *Indus river*, from Old Persian *Hinduš* - listed as a conquered territory by Darius I in the Persepolis terrace inscription.

NOTE 1. The Persian term (with an aspirated initial [s]) is cognate to *Sindhu*, the Sanskrit name of the Indus river, but also meaning *river* generically in Indo-Aryan (cf. O.Ind. *Saptasindhu*, "*[region of the] seven rivers*"). The Persians, using the word *Hindu* for *Sindhu*, referred to the people who lived near the Sindhu River as *Hindus*, and their religion later became known as *Hinduism*. The words for their language and region, *Hindī* or *Hindustanī* and *Hindustan*, come from the words *Hindu* and *Hindustan*, "*India"* or "*Indian region"* (referring to the Indian subcontinent as a whole, see **stā**) and the adjectival suffix *-ī*, meaning therefore originally "*Indian"*.

NOTE 2. Because the term *Indo-European* (or *Indogermanisch* in German) is common today to refer to the reconstructed language, we decided to use that traditional name to describe the Proto-European language we want to revive, as a way to familiarize the reader with the European or *Europaio* language system as a natural, dead language, to distinguish it clearly from other language inventions. However, when speaking in European language, *Sindhueurōpaiom* ("*Indo-European*"), *Prīmo-Sindhueurōpaiom*[82] ("*Proto-Indo-European*"), or *Eurōpā*s *Sindhueurōpaiom* ("*Europe's Indo-European*") should to the theoretical linguistic concepts that refer to the ancient reconstructed dialects, while *Eurōpaiom* ("European") is clearly the best name for the modern language, just like *Israeli* is probably the most suited name to refer to Modern Hebrew.

2. LETTERS AND SOUNDS

2.1 THE ALPHABETS OF MODERN INDO-EUROPEAN

2.1.1. Indo-European doesn't have an old writing system to be revived with. In the regions where the Europeans dwelled at least four thousand years ago, caves and stones probably still keep their ancient pictographic writings, which used logograms (graphemes) to represent a morpheme or a whole word, as did Egyptian hieroglyphic logographs or Old Chinese characters.

2.1.2. Indo-European dialects have adopted different alphabets during the last millennia, and all of them should be usable today – although the main alphabet for today's European Union is clearly the Latin one. This is a summary table of Proto-Indo-European phonemes and their regular corresponding letters in MIE alphabets: Greek, Latin, Cyrillic, Perso-Arabic and (alphasyllabary) Devanāgarī.

A. VOWELS AND VOCALIC ALLOPHONES

Phoneme	*Greek*	*Latin*	*Persian*	*Armenian*	*Cyrillic*	*Devan.*
[**a**]	Α α	A a		Ա ա	А а	अ
[**e**]	Ε ε	E e		Ե ե	Е е	ए
[**o**]	Ο ο	O o		Ո ո	О о	ओ
[**a**ː]	Ᾱ ᾱ	Ā ā	ا	Ա ա	Ā ā	आ
[**e**ː]	Η η	Ē ē		Է է	Ē ē	ऐ
[**o**ː]	Ω ω	Ō ō		Ո ո	Ō ō	औ
[**i**]	Ι ι	I i		Ի ի	И и	इ
[**i**ː]	Ῑ ῑ	Ī ī	ی	Ի ի	Ӣ ӣ	ई
[**u**]	Υ υ	U u		Ի ւ	У у	उ
[**u**ː]	Ῡ ῡ	Ū ū	و	Ի ւ	Ӯ ӯ	ऊ
[**r̥**]	Ρ ρ	R r	ر	Ռ ռ	Р р	ऋ (ऱ)
[**l̥**]	Λ λ	L l	ل	Լ լ	Л л	ऌ (ऱ)
[**m̥**]	Μ μ	M m	م	Մ մ	М м	म
[**n̥**]	Ν ν	N n	ن	Ն ն	Н н	ण

NOTE. The underdot diacritic (dot below) might be used to mark the sonorants, as Ṛ ṛ, Ḷ ḷ, Ṇ ṇ, Ṃ ṃ, *v.i.*

B. CONSONANTS AND CONSONANTAL SOUNDS

Phoneme	*Greek*	*Latin*	*Persian*	*Armenian*	*Cyrillic*	*Devan.*
[**p**]	Π π	P p	پ	Պ պ	П п	प
[**b**]	Μπ μπ	B b	ب	Բ բ	Б б	ब
[**b^{h}**]	Β β	Bh bh	بـعـ	Բh բh	Бь бь	भ
[**t**]	Τ τ	T t	ت / ط	Տ տ	Т т	त
[**d**]	Ντ ντ	D d	د	Դ դ	Д д	द
[**d^{h}**]	Δ δ	Dh dh	ذ	Դh դh	Дь дь	ध
[**k**]	Κ κ	K k	ک	Կ կ	К к	क
[**g**]	Γγ γγ	G g	گ	Գ գ	Г г	ग
[**g^{h}**]	Γ γ	Gh gh	گـعـ	Գh գh	Гь гь	घ
[**k^{w}**]	Κ κ (Ϙ ϙ)	Q q	ق	Ք ք	К’ к’	क
[**g^{w}**]	Γκ γκ	C c	غ	Ղ ղ	Г’ г’	ग
[**g^{wh}**]	ΓΧ γχ	Ch ch	غـعـ	Ղh դh	Гь’ гь’	घ

[**i̯**]	Ι ι	J j, I i	ژ / ی	Յ յ, Ի իւ	Й й (J j), И и	य
[**u̯**]	Υ υ (Ϝ ϝ)	W w, U u	و	Ւ ւ	У у	व
[**r**]	Ρ ρ	R r	ر	Ռ ռ	Р р	र
[**l**]	Λ λ	L l	ل	Լ լ	Л л	ल
[**m**]	Μ μ	M m	م	Մ մ	М м	म
[**n**]	Ν ν	N n	ن	Ն ն	Н н	न
[**s**]	Σ σ ς	S s	س	Ս ս	С с	स

2.1.2. The Latin Alphabet used for Modern Indo-European is similar to the English, which is in turn borrowed from the Late Latin *abecedarium*. We also consider some digraphs part of the alphabet, as they represent original Proto-Indo-European sounds, in contrast to those digraphs used mainly for transcriptions of loan words.

NOTE 1. The Latin alphabet was borrowed in very early times from a Greek alphabet and did not at first contain the letter G. The letters Y and Z were introduced still later, about 50 BC

NOTE 2. The names of the consonants in Indo-European are as follows - **B**, **be** (pronounced *bay*); **Bh**, **bhe** (*b^{h}ay*); **C**, **ce** (*g^{w}ay*); **Ch**, **che** (*g^{wh}ay*); **D**, **de** (*day*); **Dh**, **dhe** (*d^{h}ay*); **F**, **ef**; **G**, **ge** (*gay*); **Gh**, **ghe** (*g^{h}ay*); **H**, **ha**; **K**, **ka**; **L**, **el**; **M**, **em**; **N**, **en**; **P**, **pe**; **Q**, **qu**; **R**, **er**; **S**, **es**; **T**, **te**; **V**, **ve**; **W**, **wa**; **X**, **xa** (*cha*); **Z**, **zet**.

2.1.3. The Latin character **C** originally meant [g], a value always retained in the abbreviations *C.* (for *Gaius*) and *Cn.* (for *Gnaeus*). That was probably due to Etruscan influence, which copied it from Greek **Γ**, *Gamma*, just as later Cyrillic **Г**, *Ge*.

NOTE 1. In early Latin C came also to be used for [k], and K disappeared except before in a few words, as *Kal.* (*Kalendae*), *Karthago*. Thus there was no distinction in writing between the sounds [g] and [k]. This defect was later remedied by forming (from C, the original [g]-letter) a new character **G**. Y and Z were introduced from the Greek about 50 B.C., and occur mainly in loan words in Modern Indo-European.

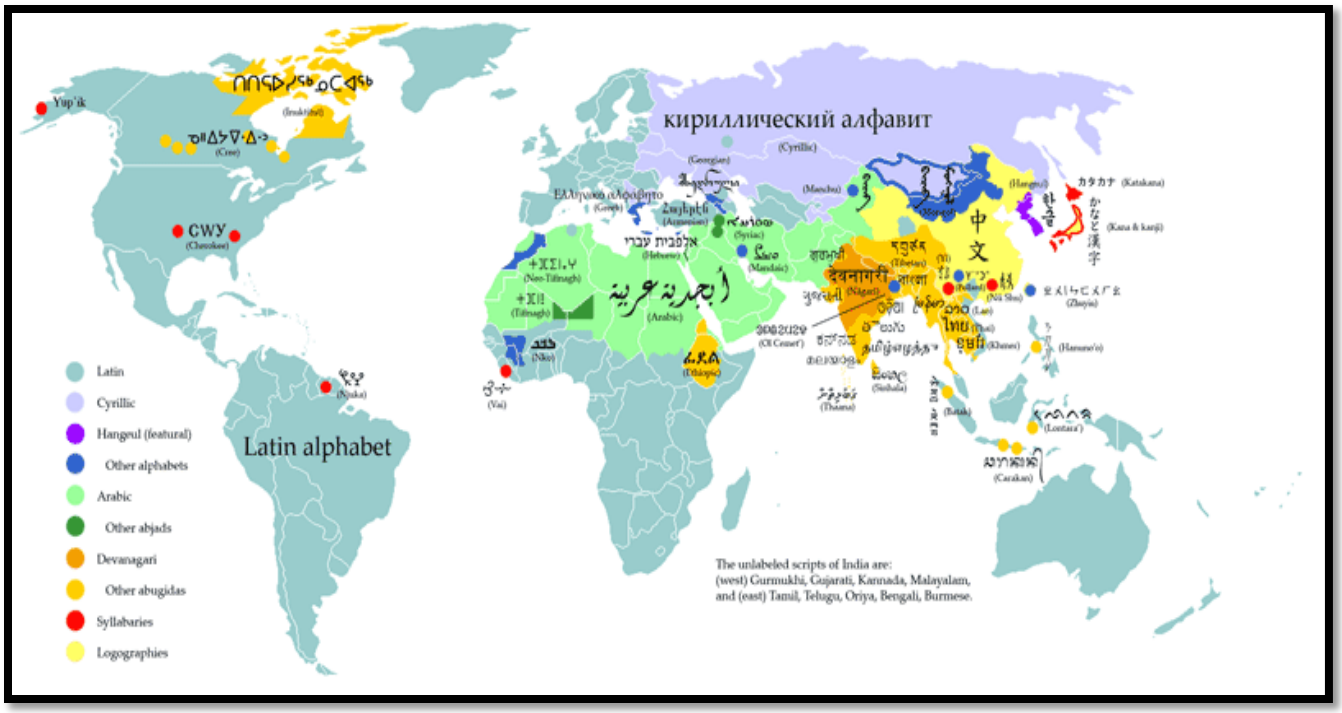
NOTE 2. In Modern Indo-European, **C** is used (taking its oldest value) to represent the Indo-European labiovelar [g^w] in PIE words, while keeping its different European values – [k], [ts], [ce], [tch], etc. – when writing proper names in the different modern IE languages.

2.1.4. The Latin [u̯] sound developed into Romance [v]; therefore V no longer adequately represented [u̯] and the Latin alphabet had to develop an alternative letter. Modern Indo-European uses **V** mainly for loan words, representing [v], while **W** is left for the consonantal sound [u̯].

NOTE. V originally denoted the vowel sound [u] (*oo*), and F stood for the sound of consonant [u̯] (from Gk. ϝ, digamma). When F acquired the value of our [f], V came to be used for consonant [u̯] as well as for the vowel [u].

2.1.5. The consonant cluster [ks] was in Ancient Greece written as Chi 'X' (Western Greek) or Xi 'Ξ' (Eastern Greek). In the end, Chi was standardized as [k^h] ([x] in modern Greek), while Xi represented [ks]. In MIE, the X stands for [x], as in the Greek and Cyrillic alphabets, and not as in English.

NOTE. The Etruscans took over X from Old Western Greek, therefore it stood for [ks] in Etruscan and then in Latin, and also in most languages which today use an alphabet derived from the Roman, including English.



Writing systems of the world today.

2.2. Classification of Sounds

2.2.1. The Vowels are **a**, **e**, **i**, **o**, **u**, and **ā**, **ē**, **ī**, **ō**, **ū**. The other letters are Consonants. The proper Indo-European Diphthongs are **ei**, **oi**, **ai**, **ēi**, **ōi**, **āi**, and **eu**, **ou, au, ēu**, **ōu**, **āu**. In these diphthongs both vowel sounds are heard, one following the other in the same syllable.

2.2.2. Consonants are either voiced (sonant) or voiceless (surd). Voiced consonants are pronounced with vocal cords vibration, as opposed to voiceless consonants, where the vocal cords are relaxed.

a. The voiced consonants are **b**, **bh**, **d**, **dh**, **g**, **gh**, **c**, **ch**, **l**, **r**, **m**, **n**, **z**, and **j**, **w**.

b. The voiceless consonants are **p**, **t**, **k**, **q**, **f**, **h**, **s**, **x**.

c. The digraphs **bh**, **dh**, **gh** and **ch** represent the proper Indo-European voiced aspirates, whereas **ph**, **th**, and **kh** are voiceless aspirates, mostly confined to foreign words, usually from Greek. They are equivalent to *p+h*, *t+h*, *k+h*, i.e. to the corresponding mutes with a following breath, as in English *loo**p-h**ole*, *ho**t-h**ouse*, *blo**ck-h**ouse*.

d. The consonants **r**, **l**, **m**, **n**, and the semivowels **j** and **w**, can function both as consonants and vowels, i.e. they can serve as syllabic border or center. There is a clear difference between the vocalic allophones of the semivowels and the sonants, though: the first, **i** and **u**, are very stable as syllabic center, while **r̥**, **l̥**, **m̥**, **n̥** aren't, as they cannot be pronounced more opened. Hence the big differences in their evolution, depending on the individual dialects.

2.2.3. The Mutes are also classified as follows:

Labials	**p**, **b**, **bh**
Dentals	**t**, **d**, **dh**
Velars	**k**, **g**, **gh**; **q**, **c**, **ch**

2.2.4. The Liquids are **l**, **r**. These sounds are voiced. The group **rh** represents the aspirated [r], mainly in words of Greek origin. Other groups include **rr**, the alveolar trill, and its aspirated counterpart **rrh**. There is also **lj**, the palatal lateral approximant.

2.2.5. The Nasals are **m**,**n**. These are voiced. The pair **nj** represents the palatal nasal (similar to the [n] sound in English *onion* or *canyon*).

2.2.6. The Fricatives are **s**, **h**. These are voiceless, but for the *s* before voiced consonants, where it is usually voiced. It is also possible to write – mainly for loan words – voiceless and voiced pairs: labiodentals, **f** and **v**; dentals, **th** and **dh**; post-alveolar **sh** and **zh**. And also the alveolar voiced **z**, and the dorsal voiceless **x**.

2.2.7. The Semivowels are found written as **i**, **j** and **u**, **w**. These are voiced.

NOTE. The semivowels are usually written with **i** and **u** when using the Latin alphabet. Only Proto-Indo-European roots and their derivatives have **j** and **w**; as in **wḷqos**, *wolf*, **werdhom**, *verb*, **jugóm**, *yoke*, or **trejes**, *three*. When there is a consonantal sound before a sonant, it is always written **j** or **w**; as in **newn̥** [ˈne-un̥], *nine*. For more on this, see § 2.9.4.

2.2.8. There are also some other frequent compounds, such as **ks**, **ts**, **dz**, **tsh**, **dzh**, ...

Phonet. System	*Labials*	*Coronals*	**Palatovelars*	*Velars*	*Labiovelars*	**Laryngeals*
Voiceless	**p**	**t**	**kʲ*	**k**	**kʷ**	
Voiced	**b**	**d**	**gʲ*	**g**	**gʷ**	
Aspirated	**bʰ**	**dʰ**	**gʲʰ*	**gʰ**	**gʷʰ**	
Nasals	**m**	**n**				
Fricatives		**s** , **z**				**h₁*, **h₂*, **h₃*
Liquids		**r** , **l**				
Approximant	**u̯**		**i̯**			

NOTE 1. [z] was already heard in Late Proto-Indo-European, as a different pronunciation (allophone) of [s] before voiced consonants, and because of that it is an alternative writing in MIE, as in PIE **nizdos** (for **ni-sd-os**), *nest*, which comes from PIE roots **ni**, *down*, and zero-grade ***-sd-*** of **sed**, *sit*.

NOTE 2. The existence of a distinctive row of PIE 'satemizable' velars, the so-called palatovelars, has been the subject of much debate over the last century of IE studies. Today the question is, however, usually deemed solved, with a majority of modern scholars supporting only two types of velars in Late PIE – generally Velars and Labiovelars, although other solutions have been proposed. The support of neogrammarians to the 'palatals' in Late PIE, as well as its acceptance in Brugmann's *Grundriß* and Pokorny's *Wörterbuch*, has extended the distinction to many (mainly etymological) works, which don't deal with the phonological reconstruction problem directly. Palatovelars might be found in PII, though, and can be written as Ḳ ḳ, Ǧ ǧ, Ǧh ǧh**.** See Appendix II.2.

The symbols *h₁*, *h₂*, *h₃*, with cover symbol *H* (traditionally ə₁, ə₂, ə₃ and intervocalic ə) stand for the three supposed "laryngeal" phonemes of PIH, which had evolved differently already in Late PIE and in Anatolian. There is no consensus as to what these phonemes were, but it is widely accepted that PIH h_2 was probably uvular or pharyngeal, and that h_3 was labialized. Commonly cited possibilities are ʔ, ʕ, ʕʷ and x, χ~ħ, xʷ; there is some evidence that h_1 may have been two consonants, ʔ and h, that fell together. See Appendix II.3.

2.3. SOUNDS OF THE LETTERS

2.3.1 The following pronunciation scheme is substantially that used by the common Europe's Indo-European speakers in roughly 2500 BC, when the laryngeal phonemes had already disappeared, having coloured following vowels, and lengthened preceding ones.

NOTE. MIE cannot permit dialectal phonetic differences, whether vocalic or consonantal – like Grimm's Law effects in PGmc. consonants, already seen –, because systematization in the pronunciation is especially needed when targeting a comprehensible common language. The situation for sister dialects Hellenic, Aryan and Anatolian is different, though.

2.3.2. Vowels:

[**a**:] as in *father*	[**a**] as in *idea*
[**e**:] as in *they*	[**e**] as in *met*
[**i**:] as in *meet*	[**i**] as in *chip*
[**o**:] as in *note*	[**o**] as in *pot*
[**u**:] as in *rude*	[**u**] as in *put*

NOTE 1. Following the mainstream laryngeals' theory, Proto-Indo-Hittite knew only two vowels, e and o, while the other commonly reconstructed vowels were earlier combinations with laryngeals. Thus, short vowels PIE ***a*** < *h_2e; **e*** < *$(h_1)e$; **o*** < *h_3e, $(h_1)o$*; long vowels ***ā*** < *eh_2; **ē*** < *eh_1; **ō*** < *eh_3, oh*. The output of *h_2o* was either ***a*** or ***o***, after the different schools. Short and long vowels ***i̯*** and ***u̯*** are just variants of the semivowels **j* and **w*.

NOTE 2. The sonants may have been lengthened too (usually because of compensatory lengthenings), especially in the conjugation of verbs, giving thus [r̥:], [l̥:], [m̥:], [n̥:], written as r̄, l̄, m̄, n̄. The semivowels can also have a prolonged pronunciation, giving allophones **ij** and **uw**. For more details on this see § 2.7.2.

NOTE 3. It is recommended to mark long vowels with a macron, ¯, and stressed vowels with a tilde, ´. and reduplicated stems without an original vowel are represented with an apostrophe, ‘ (as in PGk. ***q'qlos***, see **qel-**).

2.3.3. Falling Diphthongs and equivalents in English:

ĕi as in *vein*	**ĕu** *e* (*met*) + *u* (*put*)
ŏi as in *oil*	**ŏu** as *ow* in *know*
ăi as in *Cairo*	**ău** as *ou* in *out*

NOTE. Strictly speaking, **jĕ**, **jŏ**, **jă**, as well as **wĕ**, **wŏ**, **wă** (the so-called rising diphthongs) aren't actually diphthongs, because ***j***- and ***w***- are in fact consonantal sounds. Nevertheless, we consider them diphthongs for syntax analysis; as in **Eu**-**rō**-**pa**-**io**-, where the adjectival ending -***io*** [i̯o] is considered a diphthong.

2.3.4. Triphthongs:

There are no real triphthongs, as a consequence of what was said in the preceding note. The formations usually called triphthongs are **jĕi**, **jŏi**, **jăi**; **jĕu**, **jŏu**, **jău**; or **wĕi**, **wŏi**, **wăi**; **wĕu**, **wŏu** and **wău**; and none can be named strictly triphthong, as there is a consonantal sound [i̯] or [u̯] followed by a diphthong. The rest of possible formations are made up of a diphthong and a vowel.

NOTE. Triphthong can be employed for syntax analysis, too. But a semivowel surrounded by vowels is not one. Thus, in **Eurōpáiom**, [eu-ro:-'pa-i̯om], *European* (neuter noun), there aren't any triphthongs.

There are several ways to generate breathy-voiced sounds, among them:

1. To hold the vocal cords apart, so that they are lax as they are for [h], but to increase the volume of airflow so that they vibrate loosely.

2. To bring the vocal cords closer together along their entire length than in voiceless [h], but not as close as in modally voiced sounds such as vowels. This results in an airflow intermediate between [h] and vowels, and is the case with English intervocalic [h].

3. To constrict the glottis, but separate the arytenoid cartilages that control one end. This results in the vocal cords being drawn together for voicing in the back, but separated to allow the passage of large volumes of air in the front. This is the situation with Hindustani.

2.3.4. Consonants:

1. **b**, **d**, **h**, **l**, **m**, **n**, are pronounced as in English.

2. **n** can also be pronounced as guttural [ŋ] when it is followed by another guttural, as English *sing* or *bank*.

3. **p**, **k**, **t** are plain as in Romance, Slavic or Greek languages, not aspirated as in English; **t** is never pronounced as *sh*, as in English *oration* or *creation*.

4. **g** always as in *get*. It had two dialectal pronunciations, simple velar and palatovelar. Compare the initial consonants in *garlic* and *gear*, whispering the two words, and it will be observed that before *e* and *i* the *g* is sounded farther forward in the mouth (more 'palatal') than before *a* or *o*.

5. **c** is pronounced similar to [g] but with rounded lips. Compare the initial consonant in *good* with those of the preceding example to feel the different articulation. The voiceless **q** has a similar pronunciation to that of **c**, but related to [k]; as *c* in *cool*.

6. **j** as the sound of *y* in *yes*, **w** as *w* in *will*.

7. Proto-Indo-European **r** was probably slightly trilled with the tip of the tongue (as generally in Romance or Slavic languages), but other usual pronunciations of modern Indo-European languages have to be admitted in the revived language, as French or High German *r*.

8. **s** is voiceless as in *sin*, but there are situations in which it is voiced, depending on the surrounding phonemes. Like the aforementioned [r], modern speakers will probably pronounce [s] differently, but this should not usually lead to misunderstandings, as there are no proper IE roots with original **z** or **sh**, although the former appears in some phonetic environments, v.s.

9. **bh**, **dh**, **gh**, **ch** are uncertain in sound, but the recommended pronunciation is that of the Hindustānī's "voiced aspirated stops" *bh, dh, gh*, as they are examples of living voiced aspirates in an Indo-European language (see note). Hindustānī is in fact derived from Sanskrit, one of the earliest attested dialects of Late PIE.

10. **x** represents [x], whether with strong, '*ach-laut*', such as *kh* in Russian *Khrushenko,* or *ch* in Greek *Christós*, or soft, with '*ich-laut*', such as *ch* in German *Kirche* or *Lichtenstein*; but never like *ks*, *gz*, or *z*, as in English.

11. **z**, **v**, **f**, **sh**, are pronounced as in English.

12. **zh** is pronounced as in English *leisure*.

13. **tsh** corresponds to English *ch* in *chain*, and **tzh** to *j* in *jump*

14. The aspirates **ph**, **kh**, **th** are pronounced very nearly like English (aspirated) *p*, *k*, *t*.

15. There is also another value for **th**, which corresponds to English *th* in *thing*, and for **dh**, which sounds as *th* in *this*.

16. **rh**, **rr** and **rrh** have no similar sounds in English, although there are examples of common loan words, such as Spanish *guerrilla*, or Greek *rhotacism* or *Tyrrhenos*.

17. The pronunciation of **nj** is similar to English *onion* or *canyon*; and that of **lj** to English *million*.

18. Doubled letters, like **ll**, **mm**, **tt**, etc., should be so pronounced that both members of the combination are distinctly articulated.

2.4. SYLLABLES

2.4.1. In many modern languages, there are as many syllables in a word as there are separate vowels and diphthongs. This is not exactly so in Modern Indo-European. It follows, indeed, this rule too:

Eu-rō-pa-iós, **wer-dhom**[4], **ne-wās**[6], **ju-góm**[5].

NOTE. The semivowels [u̯] and [i̯] are in general written **i** and **u**, as we already said, when they are used in the formation of new words, i.e., when they are not derived from PIE roots. That is why the adjective *European* is written **Eurōpaiós**, not ~~***Eurōpajós***~~, and so its derived nominalized inanimate form, n. **Eurōpaiom**, *the European (language)*, or **Italia**, *Italy* and not ~~***Italja***~~. In Proto-Indo-European stems and in words derived from them they are written with **j** and **w**; as, **trejes**[155], *three*, **newos**[6], *new*, **dńghuwes** ['dn̥-gʰu-u̯es], *languages*, etc.

2.4.2. Indo-European has also consonant-only syllables. It is possible to hear a similar sound in spoken English or German, as in *Brighton* [*'brai-tn̥*] or *Haben* [*'ha-bn̥*], where the final *n* could be considered vocalic. In this kind of syllables, it is the vocalic sonant (i.e. [r̥], [l̥], [m̥] or [n̥]) the one which functions as syllabic centre, instead of a vowel proper:

bhṛgh[128] [bʰr̥gʰ], *bury*; **wḷqos**[23] ['u̯l̥-kʷos], *wolf*; **dekṃ**[155] ['de-km̥], *ten*; **nŏmn̥**[19] ['no(ː)-mn̥], *name*.

NOTE 1. Words derived from these vocalic consonants differ greatly in modern Indo-European languages. For example, **dn̥ghwā** ['dn̥-gʰu̯aː], *language*, evolved as PGmc. *tungō*, and later English *tongue* or German *Zunge*,

while in archaic Latin it was pronounced *dingwa*, and then the initial *d* became *l* in Classic Latin, written *lingua*, which is in turn the origin of Modern English words "*linguistic"* and *"language"*.

NOTE 2. We maintain the old, difficult and somehow unstable vocalic sounds in search for unity. As such a phonetic system is not easy for speakers of modern Indo-European languages, the proposed alternative pronunciation is to add, if needed, an auxiliary schwa [ᵊ] before or after the sonant. The schwa we are referring to is an unstressed and toneless neutral vowel sound. There are usually two different possible pronunciations, depending on the position of the schwa; as in **wḷqos**, which can be pronounced [ʻu̯ ᵊl-kʷos], the way it probably evolved into PGmc. *wulxʷaz*, and [ʻu̯lᵊ-kʷos], which gave Common Greek *wlukʷos*. Other possible examples are **dekm̥** [ʻde-kᵊm] (cf. Lat. *decem*, Gmc. *texam*), and **nŏ̆mn̥** [ʻno(ː)-mᵊn] (cf. Lat. *nōmen*, Gmc. *namon*).

2.4.3. In the division of words into syllables, these rules apply:

1. A single consonant is joined to the following vowel or diphthong; as **ne-wos**[6], **me-dhjos**[7], etc.

2. Combinations of two or more consonants (other than the vocalic ones) are regularly separated, and the first consonant of the combination is joined to the preceding vowel; as **ok-tō**, *eight*, **pen-qe**, *five*, etc. but **a-gros**[8], *field*, **s-qa-los**[9], *squalus*.

3. In compounds, the parts are usually separated; as Gmc. loan-translation **aqā-lendhom** (***aqiā***[10]+***lendhom***[11]), *island* ("*water thing+land"*), as Gmc. *aujō landom* (cf. O.E. *igland*, *ealand*), or Celtic **ambh-agtos** (***ambhi***[12]+***ag***[13]), *ambassador* ("*about+lead"*), as Lat. *ambactus*, "*servant*".

2.5. QUANTITY

2.5.1. Syllables are distinguished according to the length of time required for their pronunciation. Two degrees of Quantity are recognized, *long* and *short*.

NOTE. In syllables, quantity is measured from the beginning of the vowel or diphthong to the end of the syllable.

2.5.3. A syllable is long usually,

a. if it contains a long vowel; as, **mā-tḗr**[14], *mother*, **dn-ghūs**[3], *tongue*,

b. if it contains a diphthong; as, **Eu-rō-pā**, *Europe*, **leuk-tom**[15]*, light*,

c. if it contains any two non-syllabic consonants (except a mute with ***l*** or ***r***).

2.5.4. A syllable is short usually,

a. if it contains a short vowel followed by a vowel or by a single consonant; as, **cĭ̆wós**[16] [gʷi(ː)-ʻu̯os], *alive*, or **leusō**[17], *loosen,*

b. if it contains a vocalic sonant; as, **ṛtkos**[18] [ʻr̥t-kos], *bear*, **nōmn̥**[19] [ʻnoː-mn̥], **dekm̥** [ʻde-km̥].

2.5.5. Sometimes a syllable varies in quantity, viz. when its vowel is short and is followed by a mute with **l** or **r**, i.e. by **pl**, **kl**, **tl**; **pr**, **kr**, **tr**, etc.; as, **agrī**[8]. Such syllables are called *common*. In prose they are regularly short, but in verse they might be treated as long at the option of the poet.

NOTE. Such distinctions of long and short are not arbitrary and artificial, but are purely natural. Thus, a syllable containing a short vowel followed by two consonants, as *ng*, is *long*, because such a syllable requires more time for its pronunciation; while a syllable containing a short vowel followed by one consonant is *short*, because it takes less time to pronounce it.

2.6. ACCENT

2.6.1. There are stressed as well as unstressed words. The last could indicate words that are always enclitic, i.e., they are always bound to the accent of the preceding word, as **-qe**[20], *and*, **-ṛ**[21] [r̥], *for;* while another can be proclitics, like prepositions. The accent position can thus help to distinguish words.

2.6.2. In Modern Indo-European, each non-clitic word has one and only one accent. The possibility of secondary accents depends on the pronunciation.

Verbs in Main Sentences, as well as Vocatives, appear to have had also different, not fixed accents.

NOTE 1. The attested stress of Indo-European dialects shows a great diversity: Germanic and Old Irish stressed the first syllable, Slavic and Greek had a 'semifree' accent, Latin and Armenian (as Albanian) stressed usually the penultimate, etc.

NOTE 2. Baltic and Slavic dialects still show a Musical accent, while Greek and Sanskrit vocabulary seems to show remains of an old Musical accent. In Proto-Indo-European (as in Latin) there are clear traces of syncopes and timbre variations of short vowels near the accentuated ones, what suggests that Indo-European maybe changed a Musical accent for an Intensive one.

2.6.4. The Stress is free, but that does not mean anarchy. On the contrary, it means that each word has an accent, and one has to know – usually by way of practice – where it goes.

NOTE. Unlike Latin (which followed the 'penultimate rule'), or French, in which the last syllable is usually accentuated, or Polish, Finnish, etc. Indo-European stress is (at least partly) unpredictable. Rather, it is lexical: it comes as part of the word and must be memorized, although orthography can make stress unambiguous for a reader, and some stress patterns are ruled out. Otherwise homophonous words may differ only by the position of the stress, and therefore it is possible to use stress as a grammatical device.

2.6.5. Usually, adjectives are accentuated on the ending; as in **eurōpaiós**, *European*, **angliskós**[22], *English*, etc., while nouns aren't; as, **Eurōpáios** (maybe 'purer PIE' ***Eurōpaios***, with root accent), *European*, **Ángliskos,** *English(man)*. There are some other rules to be followed in the declension of nouns and in the conjugation of verbs, which will be later studied.

2.7. VOWEL CHANGE

2.7.1. Syllable creation is the most common of the various phonetic changes that modern Indo-European languages have undergone all along these millennia of continuated change. Anaptyxis is a type of phonetic epenthesis, involving insertion of a vowel to ease pronunciation. Examples in English are *ath-e-lete*, *mischiev-i-ous*, or *wint-e-ry*. It usually happens by adding first a *supporting vowel* or *transition sound* (glide or *Gleitlaut*). After this, in a second stage, the added vowel acquires a fix tone, becoming a full vowel.

2.7.2. The sonants form unstable syllables, and thus vowel epenthesis is very common. For example, ***dn̥-ghwā*** becomes *tu̯n-gō-* in Germanic and *di̯n-gwa* in Archaic Latin, while ***wl̥-qos***[23] was pronounced *wu̯l-kʷaz* (later *wulfaz*) in Pre-Proto-Germanic and *wlu̯-kʷos* (later *lukos*) in Proto-Greek.

The semivowels [i̯], [u̯] are more stable than sonants when they are syllable centres, i.e. [i] or [u]. But they have also some alternating pronunciations. When they are pronounced *lento*, they give the allophones [ii̯] and [uu̯], always written **ij** and **uw**. Alternating forms like **médhijos** (which gives Lat. *medius*), and **medhjos** (which gives O.Ind. *mádhjas* or Gk. *μέσσος*), probably coexisted already in Late Proto-Indo-European.

NOTE. With the creation of zero-grade stems, vocalization appears, as the original radical vowels disappear and new ones are added. That happens, for example, in root **bhr̥**[24]- [bʰr̥], *carry*, (cognate with English *bear*), which can be reconstructed from IE languages as **bher**-, **bhor**- or **bhr̥**-. The same can be said of the semivowels [i̯] and [u̯] when they are syllable edges, being syllable centres [u] and [i] in zero-grades.

2.7.3. Laryngeals were probably aspirated phonemes (reconstructed as three to nine different sounds) that appear in most current reconstructions of Middle PIE. The effects of some laryngeals are directly attested in the Anatolian languages. In the other Indo-European dialects known – all derived from Late PIE – their old presence is to be seen mostly through the effects they had on neighboring sounds, and on patterns of alternation that they participated in.

NOTE. Because such phonemes weren't heard in Europe's Indo-European and the other Late PIE dialects, and because their original phonetic values remain controversial, we don't deem it useful to write them in a Modern Indo-European language system, but for the explanation of some alternating PIE roots or stems.

2.7.4. Another vocalizations appear in PIE dialects in some phonetic environments, as two occlusives in zero-grade, impossible to pronounce without adding a vowel; as e.g. **skp**, which evolved as Lat. *scabo* or Got. *skaban*. Although the dialectal solutions to such consonantal groups aren't unitary, we can find some general PIE timbres. As **a**, **i** with a following dental (especially in Gk. and BSl.) or **u**, also considered general, but probably influenced by the context, possibly when in contact with a labial,

guttural or labiovelar, as in Greek reduplicate ***q'qlos***[25] [ʻkʷ-kʷlos], *circle*, *wheel*, from **qel**-, *move around*, which was usually pronounced **qúqlos**; etc.

2.7.5. Vocalic prothesis (from Gk. προ-θεσις, *pre-putting*), is the appending of a vowel in front of a word, usually to facilitate the pronunciation. Prothesis differ, not only among PIE dialectal branches, but also frequently within the same language or linguistic group. Especially before [r̥], and before [l̥], [m̥], [n̥] and [u̯], more or less systematically, a vowel is added to ease the pronunciation; as, **ṛtkos**[18], *bear*, which gives Lat. *ursus* (cognate with Eng. *ursine*), Gk. αρκτος (as in Eng. *Arctic*) or Welsh *arth* (as in Eng. *Arthur*). The timbre of the added vowel is related neither to a linguistic group or individual language, nor to a particular phonetic or morphological environment.

NOTE 1. It is therefore not a good practice in Modern Indo-European to add such vowels in front of words, but, as seen in §2.4.2., an additional auxiliary schwa [ᵊ] could be a useful way to facilitate pronunciation.

NOTE 2. The different dialectal evolution such old difficult-to-pronounce words can be explained without a need for more phonemes, just accepting that phonetic changes are not always due to an exact pattern or 'sound law'.

2.7.6. Syllable losses are often observed in IE languages. Syncope refers to the loss of an inner vowel, like brief vowels in Gothic; as, *gasts* from PGmc. *gastiz*, IE **ghostis**[26]. Also after [u̯], long vowel, diphthong or sonant in Latin; as, *prudens* for *prowidens*, *corolla* for *coronala*, or *ullus* for *oinolos*.

Haplology, which consists of the loss of a whole syllable when two consecutive (identical or similar) syllables occur, as Lat. *fastidium* instead of *fastitidium*, or Mycenaean *aporeu* instead of *apiporeu*.

2.8. CONSONANT CHANGE

2.8.1. The so called s-Mobile (*mobile* pronounced as in Italian; the word is a Latin neuter adjective) refers to the phenomenon of alternating word pairs, with and without **s** before initial consonants, in stems with similar or identical meaning. This "*moveable*" prefix ***s***- is always followed by another consonant. Typical combinations are with voiceless stops ***(s)p***-, ***(s)t***-, ***(s)k***-, with liquids and nasals, ***(s)l***-, ***(s)m***-, ***(s)n***-; and rarely ***(s)w***-.

For example, Proto-Indo-European stem (**s**)**tauros**[27], perhaps originally meaning *bison*, gave PGmc. *stiuraz* (cf. Goth. *stiur*, O.E. *steor*, Ger. *Stier*, Eng. *steer*), Av. *staora*, but Gmc. *þiuraz (cf.* O.N. *þjórr*), Lat. *taurus*, Osc. *turuf* , Gk. *tauros*, O.C.S. *turъ*, Lith. *tauras*, Gaul. *tarbos*. Both variants existed side by side in Late PIE, but whereas some dialects have preserved the form with the *s* mobile, others all have words for *bull* which reflect the root without the sibilant.

Such pairs with and without **s** are found even within the same language, as Gk. *(s)tégos*, "roof", *(s)mikrós*, "*little*", O.Ind. *(s)tṛ, "star",* and so on.

IE stem	*Meaning*	*Example with -**s***	*without -**s***
(s)kap-	*tool*	Gk. *skeparnion*	Lat. *capus*
(s)kel-	*crooked*	Ger. *Schielen*	Gk. *kolon*
(s)kep-	*cut, scrape*	Eng. *scab*	Lat. *capulare*
(s)ker-	*cut*	Eng. *shear, sheer*	Lat. *curtus*
(s)ker-	*bend*	Eng. *shrink*	Lat. *curvus*
(s)kleu-	*close*	Ger. *schließen*	Lat. *claudere*
(s)qalo-	*big fish*	Lat. *squalus*	Eng. *whale*
(s)tewd-	*thrust*	Goth. *stautan*	Lat. *tundo*
(s)mer-	*remember*	Skr. *smarati*	Eng. *mourn*
(s)nē-	*spin*	Ir. *snáthad*	Eng. *needle*
(s)melo-	*small animal*	Eng. *small*	Gae. *mial*
(s)neu-	*tendon, sinew*	Gk. *neuron*	Skr. *snavan*
(s)peik-	*magpie*	Ger. *Specht*	Lat. *pica*
(s)pek-	*spy, stare*	O.H.G. *spehon*	Alb. *pashë*
(s)plei-	*split*	Eng. *split, splinter*	Eng. *flint*
(s)perg-	*sparrow*	O.Eng. *spearwa*	Lat. *parra*
(s)tea-	*stand*	Lat. *sto*, Eng. *stand*	Ir. *ta*
(s)ten-	*thunder*	O.H.G. *donar*	O.Sla. *stenjo*
(s)twer-	*whirl*	Eng. *storm*	Lat. *turba*

NOTE 1. For **(s)ten-**, compare O.Ind. *stánati*, Gk. *sténō*, O.Eng. *stenan*, Lith. *stenù*, O.Sla. *stenjo*, and without **s-** in O.Ind. *tányati*, Gk. Eol. *ténnei*, Lat. *tonare*, O.H.G. *donar*, Cel. *Tanaros* (name of a river). For **(s)pek-**, cf. O.Ind. *spáśati*, Av. *spašta*, Gk. *skopós* (<***spokós***), Lat. *spektus*, O.H.G. *spehon*, without **s-** in O.Ind. *páśyati*, Alb. *pashë*. For **(s)ker-**, cf. O.Ind. *ava-*, *apa-skara-*, Gk. *skéraphos*, O.Ir. *scar(a)im*, O.N. *skera*, Lith. *skiriù*, Illyr. *Scardus*, Alb. *hurdhë* (<****skṛd-***), without **s-** in O.Ind. *kṛnáti*, Av. *kərəntaiti*, Gk. *keíro*, Arm. *kcorem*, Alb. *kjëth*, Lat. *caro*, O.Ir. *cert*, O.N. *horund*, Lith. kkarnà, O.Sla. *korŭcŭ*, Hitt. *kartai-*, and so on.

NOTE 2. Some scholars believe it was a prefix in PIE (which would have had a causative value), while others maintain that it is probably caused by assimilations of similar stems – some of them beginning with an ***s-***, and some of them without it. It is possible, however, that the original stem actually had an initial ***s***, and that it was lost by analogy in some situations, because of phonetic changes, probably due to some word compounds where the last ***-s*** of the first word assimilated to the first ***s-*** of the second one. That helps to explain why both stems (with and without s) are recorded in some languages, and why no regular evolution pattern may be ascertained: so for example in **wḷqoms spekiont**, *they saw wolves*, becoming ***wḷqoms ‘pekiont***. See Adrados (1995).

2.8.2. Before a voiced or aspirated voiced consonant, **s** was articulated as voiced, by way of assimilation; as, **nizdos**[28] [ʻniz-dos], *nest*, or **mizdhós** [miz-ʻdʰos], *meed, salary*. When **s** forms a group with sonants there is usually assimilation, but such a trend is sometimes reversed by adding a consonant; as Lat. *cerebrum (<Ita. kereθrom)*, from **kersrom**[29].

2.8.3. The **s** between vowels was very unstable in PIE, evolving differently in individual dialects; as, **snusós**[30], *daughter-in-law* (cf. Lat. *nurus*, O.H.G. *snur*). The most common examples of these phonetic changes appear in PIE ***s*** stems, when followed by a vowel in declension; as **nebhōs**[31], *cloud*, which gives O.C.S. *nebesa*, Gk. *νεφέλη*, or **genōs**[32], *race, stock, kind*, which gives Lat. *genus*, *generis*.

2.8.4. A sequence of two dentals – as ***tt***, ***dt***, ***tdh***, ***ddh***, etc. – was eliminated in all Indo-European dialects, but the process of this suppression differed among branches, some earlier dialects (as Vedic) showing little change, some others an ***st*** or ***sdh***, and others ***ss***. This trend began probably in Late PIE, and thus all EIE speakers knew such evolutions, which we sum up into a common intermediate stage ***st***, ***sdh***, etc., which was followed in some early IE dialects, and probably known to the rest of them.

NOTE. For more on this, see Conventions Used in this Book. For changes in Aryan, see Appendix II.

Examples in MIE are e.g. forms derived from PIE root **weid**[33], *know, see*, (cf. Lat. *vidēre*, Gmc. *wītan*, Eng. *wite*); as, p.p. **w(e)istós**, *known, seen*, from ***w(e)id-tó-***, (cf. O.Ind. *vitta-*, but Gmc. *wīssaz*, Lat. *vīsus*, Gk. ἄ-(ϝ)ιστος, Av. *vista-*, O.Pruss. *waist*, O.Sla. *věstъ*, O.Ir. *rofess*, etc.), which gives e.g. Latin **ad wistom**, *advice* (Lat. *ad visum*), or **wistiōn**, *vision* (Lat. *vīsiō*), in turn giving **qēlewistiōn**[34], *television*; Greek **wístōr,** *wise, learned man*, from Gk. ἵστωρ (*ʰístōr*) or ϝίστωρ (*wístōr*), which gives **wistoríā**, *history*, from Gk. ἱστορία (*ʰistoría*); imperative **weisdhí!**, *see!*, as O.Lith. *weizdi* (< ***weid-dhí***, cf. O.C.S. infinitive *viždo*), Sla. **eghweisti**, *certainly*, as O.C.S. *izvěstъ*, etc.

2.8.5. The manner of articulation of an occlusive or sibilant usually depends on whether the next phoneme is voiced or voiceless. So e.g. voiced **ag**[35], *carry*, gives voiceless **agtos** [ʻakt-os] (not reflected in MIE writings), cf. Gk. ακτος (*aktos*) or Lat. *actus*. The same happens with voiced aspirates, as in **legh**[36], *lie* (cognate to Eng. *log*), giving Gk. λεκτρον (*lektron*), Lat. *lectus*, O.H.G. *Lehter*; also, compare how voiceless **p**- becomes ***-b***, when **pōds**[37], *foot*, is in zero-grade ***-bd-***, as in Gk. επιβδα (*epibda*).

Examples of changes that might affect MIE orthography include sibilants from known s-roots, as ***nizdos*** for **nisdos**, ***kerzrom*** for **kersrom**, already seen; common variants, as **eghs**, **eks**, *of*, *out*, *from*; and doubious cognates, as ***necrós***, *black*, and ***noqts***, *night*, maybe from a common PIE suffixed *nog^{w}-t* or *nog^{wh}-t*.

2.8.6. Some difficult consonantal compounds may be so pronounced in Modern Indo-European as to avoid them, imitating its modern use; as, **klus(sk)ō** [ʻlu-s(k)oː], *listen* (cf. Gmc. *hluza*, O.Ind. *śrṓṣati*, O.Ir. *cluas*, Arm. *lur*, Toch. A *klyoṣ,* Lith. *kláusît*, O.Bul. *slušati*, etc.), from **kleu-**[38], *hear*;

psūghologíā[39] [suː-gʰo-lo-'gi-aː], *psychology* (as Gk. ψυχολογία, from Gk. ψυχή, MIE ***psū-ghā́***, for some IE ****bhs-ū-gh-***), **sm̥weitikós**[40] [s-u̯iː-di-'kos], *sovietic* (O.Rus. съвѣтъ, *suvetu*, for some ****ksu-***, loan-translation of Gk. συμβούλιον, *sumboulion*), **gnātiōn**[41] [naː-'tiːoːn], *nation* (as Lat. *natio*), **prkskṓ**[42] [prs-'koː/pors-'koː/pos-'koː], *ask, demand, inquire* (cf. Skr. *pr̥cchati*, Av. *pərəsaiti*, Pers. *pursēdan*, Lat. *poscere*, O.H.G. *forskōn*, Lith. *peršù*, O.Ir. *arcu*, Toch. *pärk*), etc.

NOTE. Verbs like ****klusinā***, a loan translation of English '*listen*' (from IE ***klu-s-***, *listen*, from **kleu-**, *hear*), should be avoided if possible in Modern Indo-European, for the sake of proper communication, if there is another common PIE verb with the same meaning; in this case, the verb is cognate with other IE verbs derived directly from **klus(sk)ō**, and therefore it is unnecessary to use the English tertiary formation shown. Such forms are too derived to be considered an Europe's Indo-European term proper; it would be like using Romance ****māturikāmi***, *get up early*, loan-translating Spanish "*madrugar*".

2.9. PECULIARITIES OF ORTHOGRAPHY

2.9.1. Indo-European words may show a variable orthography.

2.9.2. In many words the orthography varies because of alternating forms that give different derivatives; as in **dōmos**[43], *house*, but **demspóts**[44] [des-'po-ts], *master, lord, despot*, as Gk. *δεσπότης* (*despótēs*), Skr. *dampati*, Av. *dəŋg patōiš*, (with *fem*. **demspotniă̆**, [des-'po-nia]) or **demrom**, *timber*, as Gmc. *temran*, all from PIE root ***dem-/dōm-***, *house*.

NOTE. The forms shown, Greek ***dems-pót-ā***, as well as Indo-Iranian ***dems-pót-is***, are secondary formations derived from the original Proto-Indo-European form; compare, for an original PIE ending ***-t*** in compounds, Lat. *sacerdōs*<*-***ōts***, O.Ind. *devastút-*, "*who praises the gods*", etc.

2.9.3. In other situations, the meaning is different, while the stems are the same; as, **gher**[45], *enclose, grasp*, which gives **ghortos**, *garden, enclosure*, hence *town* (cf. Gmc. *gardan*, Lat. *hortus*, Gk. *khortos*, Phry. *-gordum*, O.Ir. *gort*, Lith. *gardas*, O.C.S. *gradu*, Alb. *garth*, etc.), and **gher**[46], *bowels*, fig. *like, want*, giving **ghrēdhus**, *hunger*, etc.

2.9.4. In some cases, however, the grammatical rules of Modern Indo-European affect how a word is written. For example, the word **Spaniā**[140], *Spain*, could have been written ~~***Spánjā***~~, or **Brittaniā**, *Britain*, ~~***Brittanjā***~~; but we chose to maintain the letter ***-i*** when possible. We write ***-j*** or ***-w*** only in some specific cases, to differentiate clearly the Proto-Indo-European roots from its derivatives:

NOTE. Modern English *Britain* comes from O.Fr. *Bretaigne*, in turn from L.Lat. *Britannia*, earlier Lat. *Brittania*, itself from **Brittōn**, *Briton*, from Lat. *Britto*, *Brittonem*, from the Celtic name given to the Celtic inhabitants of Great Britain before the Anglo-Saxon invasion, MIE **Britts**, *Briton*. A more Germanic noun in Modern Indo-European would be **Brittonlendhom**, as it was known in Old English, *Breten-lond*, similar to the MIE term for "*England*", **Anglolendhom**, *v.s.*

1. In PIE root vowels; as, **trejes** (possibly from earlier **tri**- or **trei**-), *three*, **jugóm**[5] (from **jeug**), *yoke*, **sāwel**[68], *sun*, **newos**, *new*, (probably from **nu**, *now*), etc. Therefore, PIE roots with different articulations of the semivowel [u̯], [i̯] can be written differently; as, **neu**-/**nou**-, *shout*, but part. ***now-ént***- "*announcing*" (not ~~***nouent***~~), giving **nówentios** [ˈno-u̯en-ti̯os], *messenger*, as Lat. *nūntius*, or **nówentiom**, *message*, as Lat. *nūntium*; also **cei**-[47], *live*, with variant ***cjō***- (not ~~***eiō***~~), giving **cjōiom** [ˈgʷi̯oː-i̯om], *being*, *animal*, as Gk. ζῴον (*zōon*); there is also variant ***cio***- (and not ~~***ejo***~~), as in **cíos**, *life*, from Gk. *βιος*, and hence written **-i-** in compounds, as **ciologíā** [gʷi̯o-lo-'gi-a], *biology*, (in compound with **logos**[134], from Gk. *λόγος*), and not ~~***ejologíā***~~.

NOTE. This rule is also followed in declension; as, Nom. **owis**[149], Gen. **owjós**, not ~~**owios**~~ (for [o-ˈu̯i̯os]), from root **owi-**; or Nom. **pekŭ**[150], Gen. **pekuos**, for [ˈpe-ku̯os], from root **pek**-.

2. In traditionally reconstructed stems with a semivowel; as **serw**-, *protect*, (which some derive from ***ser***-[48]), which gives extended **serwāiō**, *keep*, *preserve*, and **serwos**, *slave*, *servant*, or **cei**-**w**-, *live*, from which zero-grade **cĭwós**, *alive*, *living*; **manu**-[49], *man*, which gives common **manus**, and Gmc. **manwos**, *man*, and adj. **manwiskós**, *human*; but cf. Latin ***situs***, *place* (possibly but unlikely from PIE suffixed ****tki-tus***[77]), is ***situāiō***, *locate*, *situate*, and not ~~***situwā***~~, etc.

NOTE 1. This rule is followed because of tradition in IE studies, and in scarcely attested roots, whose origin is not straightforward – as **serw**-, which could be from PIE **ser**-, but could also be just an Etruscan borrowing.

NOTE 2. Graeco-Latin loans like Lat. ***situāiō***, from ***situs***; Gk. ***pornos***, *porn*, from **pornogrbhós**, *pornograph*, from **pornā́**, *prostitute*; ***rewolutiōn***, *revolution*, from O.Fr. *revolution*, itself from L.Lat. *reuolutiō*, for which Latin had originally *res nouae*; or ***ghostālis***, *hotel*, from Fr. *hôtel*, from L.Lat. *hostalis*, "*guest-house*", from *hostis*, "*guest*", for which Latin used *deuersorium*; etc. Such loan words are common to most modern IE languages, especially within Europe, and may therefore be left so in MIE, instead of trying to use another common older Proto-Indo-European terms.

3. In metathesized forms; as PIE **neu**[50], *tendon, sinew*, which gives stems **neuro**-, and ***nerwo***-, i.e. **neurom**, *neuron*, from Gk. νεῦρον (as in abstract collective **neurā́**), and ***nerwos***, *nerve*, from Lat. *neruus*, probably Ita. *neurus*. Non-metathesized forms should be prefered in MIE, though.

NOTE. Following these first three rules, semivowels from Proto-Indo-European roots (whether inflected or not) should be clearly distinguished from the semivowels of derivatives extended in ***-uo***-, ***-io***-, ***-nu***-, and so on.

4. When there is a consonantal sound before or after a sonant, whether a PIE root or not; as, **newn̥**, *nine*; **stājr̥**[51], *fat*, **pāwr̥**[52], *fire*, **pr̥wós**[155], *first*, **perwn̥tós**[53], *rocky*, etc.

5. When the semivowel ***-j***- is followed or preceded by ***i***, or the semivowel ***-w***- is followed or preceded by ***u***; as, **dreuwos**[54], *confidence*, **leuwā**[55], *lag*, **bolijós**[56], *big*, etc.

NOTE. This happens usually in inflected forms of nouns and verbs ending in [i:] or [u:]; as, **dńghuwes**, *languages*, **bhruwés**, *of the brow*, etc.

6. In word-final position, usually in elisions at the end of imperative verbs, especially in spoken language; as **cemj**' for **cemie**, *come here*; or **takej**' for **takēie**, *shut up*.

NOTE. The omitted letters in a contraction are usually replaced by an apostrophe in European languages.

7. As a general exception, none of these rules should be followed in compounds, when the semivowel is the last sound of the first word; e.g., for **triathlom** (from Gk. *athlon*, "*contest*"), *triathlon,* we won't write ~~***trjathlom***~~. Also, more obviously, **Sindhueurōpáiom**, and not ~~***Sindhweurōpáiom***~~.

NOTE. In Modern Indo-European, compounds may be written with and without hyphen, as in the different modern Indo-European languages; for **Sindhueurōpaiom/Sindhu-Eurōpaiom**, compare Eng. *Indo-European*, Ger. *Indoeuropäisch*, Fr. *Indo-européen*, It., Sp. *indoeuropeo*, Gal.-Pt. *Indo-européu*, Cat. *indoeuropeu*, Du. *Indo-Europees*, Pol. *indoeuropejski*, Lit. *indoeuropiečių*, Ir. *Ind-Eorpach*, Russ. *индоевропейский*, Gk. *ινδοευρωπαϊκή*, Ira. ہندواروپی ایی, Hin. हिन्द-यूरोपीय, etc.

2.9.5. What many books on Late PIE reconstruct as [ə] or *schwa*, is generally written and pronounced in Modern Indo-European with a simple **a** (*v.s.* §1.7.1); as, PIH *ph₂tér-* → PIE *pətér-* → EIE ***patér-***[57], *father*; PIH *bʰh₂tis* → PIE *bʰətis* → EIE ***bʰatis***[58], *appearance*; PIH *anh₂* → PIE *anə* → EIE ***ana-***[59], *breath*, from which derivatives MIE **ánamā**, *soul*, as Lat. *anima* (affected by Ablaut because of the 'penultimate rule' of Classic Latin), MIE **ánamos**, *wind*, as Gk. ἄνεμος, MIE **ánati**, *he breathes*, as Skr. *aniti*, and so on.

2.9.6. The forms with the copulative **-qe**[20], *and*, and disjunctive **-wĕ**, *or*, are usually written by adding it to the preceding word, as in Latin *-que*, but with a hyphen.

2.9.7. The capital letters are used at the beginning of the following kind of words:

a. the names of days[60], months[61], seasons[62] and public holidays; as, **Januarios**, *January*, **Samos**, *Summer*, **Newóm Jērom**, *New Year*, etc.

b. the names of people and places, including stars and planets; as, **Sāwel**, *Sun*, **Djēus***, God*[63], **Teutiskolendhom**, *Germany* (loan-translated O.Ger. *Diut-isk-lant*, v.i. Compound Words §4.10).

NOTE. Unlike English, most European languages don't write adjectives in capital letters; **Eurōpa**, **Eurōpáios**, but **eurōpaiós**; **Teutiskolendhom**, **Teutiskos**, but **teutiskós**; **Brittaniā**, **Brittōn**, but **brittiskós**; etc.

c. people's titles, as **Prōbhastŏr**[64], *Professor*, **Kelomṇelis**[65], *Colonel*, **Rēgtŏr**[66], *rector*, etc.

d. with **Nṛtos** or **Skeuros**, *North*[67]; **Suntos** or **Déksinā**, *South*[68]; **Austos**, *East*[69] and **Westos**, *West*[70] and its derivatives. Also adjectives **Nrtrós**, *Northern*, **Suntrós**, **Deksiós**, *southern*, **Austrós**, *eastern*, **Westrós** or **Wesperós**, *West*.

e. in official or well-established place names; as **Kolossēom**, *Coliseum* (from Lat. *Colossēum*, in turn from ***kolossós***, Gk. κολοσσός), **Plateiā**[71], *the Square* (from Lat. *platea*, from PIE **pel-**, *flat*), etc.

2.9.8. The vocallic allophones [r̥], [l̥], [m̥], [n̥] may be written, as in Latin transliterations of Sanskrit texts, as ***ṛ, ḷ, ṃ,*** and ***ṇ***, to help the reader clearly identify the sonants; therefore, alternative writings **ṇmṛtós**, *inmortal*, **kṃtóm**, *hundred*, **wodṛ**, *water*, etc. are also possible.

2.10. KINDRED FORMS

Compare the following Europe's Indo-European words and their evolution in Germanic and Latin, with their common derivatives in Modern English.

EIE	***PGmc.***	***Gothic***	***O.Eng.***	***Latin***	***English (Lat.)***
patḗr, *father*	faðer	fadar	fæder	pater	father (*paternal*)
septṃ, *seven*	sibun	sibun	seofon	septem	seven (*September*)
trabs, *dwelling, room*	þurp-	þaurp	þorp	trabs/trabēs	thorp (*trabecula*)
globiō, *hold, clench*	klupjō	-	clyppe	globus	clip (*globe*)
bhrātēr, *brother*	brōþēr	brōþar	brōþor	frāter	brother (*fraternal*)
bherō, *carry*	berō	baira	bere	ferō	bear (*infer*)
wertō, *turn*	werþō	wairþa	weorþe	uertō	worth (*versus*)
trejes, *three*	þrejez	þreis	þrēo	trēs	three (*trinity*)
dekṃ, *ten*	texan	taihun	ten,tien	decem	ten (*decimal*)
edō, *eat*	etō	ita	ete	edō	eat (*edible*)
dhēmi, *do, make*	dōmi	-	dōm	faciō (<***dha-k-iō***)	do (*factor*)
dhersō, *be adroit*	dersō	ga-darsa	dearr	festus (<***dhers-tos***)	dare (*manifest*)
leuk-, *light*	leux-	liuh-	lēoh-	lūc-	light (*lucid*)
kṛd, *heart*	xert-	hairt-	heort-	cord-	heart (*core*)
augō, *increase*	aukō	auka	eacie	augeō	eke (*augment*)
gn-, *know*	kunnō	kunna	cunne	(g)nōtus	can (*notice*)
ghostis, *guest*	gastiz	gasts	gæst, giest	hostis	guest (*hostile*)
bhrgh-, *mountain*	burg-	bairga-	beorg	fortis (O.Lat. *forctus*)	barrow (*force*)
leiq-, *leave*	leix^{w}-	līhwa	læne	līqu-	lend (*relic*)
qi-/qo-, *what, who*	h^{w}i-/h^{w}o-	hwi-/hwa-	hwi-/hwæ-	qui-/quo-	why/what (*quote*)
cemiō, *come*	k^{w}emjō	k^{w}ima	-cwem-	ueniō	come (*venue*)
cy̆wós, *alive*	k^{w}i(k)waz	k^{w}ius	cwic	uīuus	quick (*vivacity*)
lech-, *light*	lextaz	līhts	līht, lēoht	leuis	light (*levity*)
chormós, *warm*	warmaz	warm-	wearm	formus	warm (*furnace*)

3. WORDS AND THEIR FORMS

3.1. THE PARTS OF SPEECH

3.1.1. Words are divided into eight Parts of Speech: Nouns, Adjectives (including Participles), Pronouns, Verbs, Adverbs, Prepositions, Conjunctions, and Interjections.

3.1.2. A Noun is the name of a person, place, thing or idea: as, **Anglolendhom**, *England* (cf. O.E. *Engla land*, "*land of the Angles*"); **werdhom**[72], *verb*; **markiā**[73], *mare*, **baktēriom**[74], n.pl. **baktēria**.

Names of particular persons and places are called Proper Nouns; other nouns are called Common.

NOTE. An Abstract Noun is the name of a quality or idea. A Collective Noun is the name of a group or a class.

3.1.3. An Adjective is a word that attributes a quality; as, **patrióm**[57], *parental*, **bhelā́**[75], *bright*, **Teutiskós**[76], *German*, **entergnītiós**[77], *international*.

NOTE 1. A Participle is a word that attributes quality like an adjective, but, being derived from a verb, retains in some degree the power of the verb to assert.

NOTE 2. Etymologically there is no difference between a noun and an adjective, both being formed alike. So, too, all names originally attribute quality, and any common name can still be so used. Thus, **Rēgiā**[66] **Elísabhet II** or ***Elízabhet*** (cf. Gk. *Ελισ(σ)αβετ*, from Hebrew *Eli-sheva*, "*God is an oath*"), *Queen* (< ***Cenis***[78]) *Elizabeth II*, distinguishes this *Elizabeth* from other *Elizabeths*, by the attribute expressed in the name **Rēgiā**, *Queen*.

3.1.4. A Pronoun is a word used to distinguish a person, place, thing or idea without either naming or describing it: as, **egṓ**[161], *I*; **twos**[163], *your*; **wejes**[162], *we*.

Nouns and pronouns are often called Substantives.

3.1.5. A Verb is a word capable of asserting something: as, **bherō**, *I carry, bear*; **bhāti**, *it shines*.

NOTE. In English the verb is usually the only word that asserts anything, and a verb is therefore supposed to be necessary to complete an assertion. Strictly, however, any adjective or noun may, by attributing a quality or giving a name, make a complete assertion; as, **wīros**[79] **dwenós**[80] (**esti**), *the man (is) good*, unlike **dwenós wīros**, *the good man*; or **autom**[81] **ghōdhóm** (**esti**), *the car is good*, unlike **ghōdhóm autom**, *the good car*. In the infancy of language there could have been no other means of asserting, as the verb is comparatively of late development.

3.1.6. An Adverb is a word used to express the time, place, or manner of an assertion or attribute: as, **per**[82], *in front*, **epi**[83], *near*, **anti**[84], *opposite*.

NOTE. These same functions are often performed in Indo-European by cases of nouns, pronouns and adjectives, and by phrases or sentences.

3.1.7. A Preposition is a word which shows the relation between a noun or pronoun and some other word or words in the same sentence; as, e.g., **ad**[85], *at*, *to*, **al**[86], *beyond*, **de**[87], *from*, **kom**[88], *with*, **eghs**[89], *out*, **upo**[90], *up*, and so on.

3.1.8. A Conjunction is a word which connects words, or groups of words, without affecting their grammatical relations: as, **-qe**, *and*; **-wĕ**[91], *or*, **-ma**, *but*, **-r**, *for*.

3.1.9. Interjections are mere exclamations and are not strictly to be classed as parts of speech, and may vary among IE dialects; as, **hej, haj,** (**á**)**hoj** (greeting), **hállo**, **hólla**, (on the telephone); **ō** (vocative); **oh** (surprise); (**k**)**ha** (**k**)**ha** (laugh); **áu**(**tsh**) (pain); etc.

NOTE. Interjections sometimes express an emotion which affects a person or thing mentioned, and so have a grammatical connection like other words.

3.2. INFLECTION

3.2.1. Indo-European is an inflected language. Inflection is a change made in the form of a word to show its grammatical relations.

NOTE. Some modern Indo-European languages, like most Germanic and Romance dialects, have lost partly or completely their earliest attested inflection systems – due to different simplification trends –, in nominal declension as well as in verbal conjugation.

3.2.2. Inflectional changes sometimes take place in the body of a word, or at the beginning, but oftener in its termination:

bhabhā[92], *the* or *a bean*; **snichés**[93], *of the snow*; (**egő**) **weghō**[94], *I ride*; **trātome**[95], *we crossed over*; **date**[96], *give*! (pl.)

3.2.3. Terminations of inflection had possibly originally independent meanings which are now obscured. They probably corresponded nearly to the use of prepositions, auxiliaries and personal pronouns in English.

Thus, in **bhares-m**[97], *the barley* (Acc.), the termination is equivalent to "*the*" or "*to the*"; in **bhleti**[98] [bʰ̥-'e-ti], *it blooms* (Indicative), and **bhlēti** [bʰ̥-'eː-ti] (Subjunctive), the change of vowel grade signifies a change in the mood.

3.2.4. Inflectional changes in the body of a verb usually denote relations of tense or mood, and often correspond to the use of auxiliary verbs in English:

(**tu**) **déresi**[99], *(thou) tear or are tearing*; **dore**, *he tore*; (**gí**)**gnōsketi**[100], *he knows*, **gégona**, *I knew* (see Verbal Inflection for Reduplication and its meaning)

3.2.5. The inflection of Nouns, Adjectives, Pronouns and Participles to denote gender, number and case is called Declension, and these parts of speech are said to be *declined*.

The inflection of Verbs to denote voice, mood, tense, number and person is called Conjugation, and the verb is said to be conjugated.

NOTE. Adjectives are often said to have inflections of comparison. These are, however, properly stem-formations made by derivations.

3.2.6. Adverbs, Prepositions, Conjunctions and Interjections are not inflected, and together form the group of the so-called Particles.

3.3. ROOT, STEM AND BASE

3.3.1. The body of a word, to which the terminations are attached, is called the Stem. The Stem contains the idea of the word without relations; but, except in the first part of compounds (cf. **Niterolendhom**[101], the *Low Land or Netherland*, **klaustrobhocíā**[102], *claustrophobia*, etc.), it cannot ordinarily be used without some termination to express them.

Thus the stem **kaput**[103] (n.) denotes *head*, hence also "*main*"; **kaput** (without ending) means *a head* or *the head*, as the Subject or Agent of an action or as Vocative, as well as *to a head* or *to the head*, as the Direct Object; with ***-os*** it becomes **kaputós**, and signifies *of a* head or *of the head*, and so on.

NOTE. In inflected languages like Indo-European, words are built up from Roots, which at a very early time were possibly used alone to express ideas. Roots are then modified into Stems, which, by inflection, become fully formed words. The process by which roots are modified, in the various forms of derivatives and compounds, is called stem-building. The whole of this process is originally one of composition, by which significant endings are added one after another to forms capable of pronunciation and conveying a meaning.

3.3.2. A Root is the simplest form attainable by analysis of a word into its component parts. Such a form contains the main idea of the word in a very general sense, and is common also to other words either in the same language or in kindred languages; cf. for **kaput**, *head*, **kap**-, from which **kapĕlom**, *bowl, cranium* (cf. O.Ind. *kapālam*, O.E. *hafola*, "*head*", maybe Lat. *capillum*, "*hair of the head*").

NOTE. The reconstruction of Europe's Indo-European looks for a very old language, and this has an obvious consequence on the general assertion that roots don't mean anything. In fact, many reconstructed PIE roots mean something, even without adding a single ending. So, for example, the English word '*special'* has a root *spec-* (also root of words like *speculate* or *species*) which expresses vaguely the idea of looking. In Modern Indo-European, however, the (Latin) adjective **spekiālís**, *special*, coexists with its original PIE root as a productive stem, as in verb **spekiō**, *observe*. Language evolution blurs the original meanings, and many roots had possibly ceased to be recognized as such before IE III - although less so than in modern languages. Consequently, sometimes (not very often) the reconstructed PIE roots which we use as independent words in Modern Indo-European actually lacked a proper meaning already in Late PIE; they are used because sometimes a common IE form is needed and only different words from the same root have been attested.

For example, the root of verb **demō**, *domesticate*, is ***dem***-[104] (PIH *demh₂*-), which does not necessarily mean *to domesticate*, or *I domesticate*, or *domesticating*, but merely expresses vaguely the idea of *domesticating*, and possibly cannot be used as a part of speech without terminations – in fact, ***dem***- (PIH *dem*-) is another root which means *house*, but is unrelated to the verb, at least in Late PIE. With the ending -***ti*** it becomes **démeti**, *he/she/it domesticates*.

3.3.3. The Stem may be the same as the root; as, **sal-s**[105], *salt*, **bhlḗig-e-ti**[106], *he/she/it shines*; but it is more frequently formed from the root.

1. By changing or lengthening its vowel: from root **bhēl-**[107], *blow, swell*, **bhōl-os**, *ball*, or **bhol-ā**, *bullet*, and **bhḷ-os**, *bowl*. Also **dā-**[108], *divide*, gives **dai-mōn**, *demon* (from older Gk. *daimon*, *divider, provider*), and **dī-mōn**, *time, period* (from Gmc. *tīmōn*, which gives O.Eng. *tīma,* O.N. *timi*, Swe. *timme*; unrelated to Lat. *tempus, MIE loan word* ***tempōs***).

2. By the addition of a simple suffix; as, **bher-ā**[109], *bear*, lit. "*brown animal*", **lino-m**[110], *flax*.

3. By two or more of this methods: **chn-tó-s**, (**chen**[111] in zero-grade, with participial ending -***to***, and masculine ending), *beaten*, **gon-iā-s**, *angles* (**genus**[112], *knee*, in o-grade with ending -***io***-, feminine in -**ā**, plural in -***s***).

4. By derivation and composition, following the laws of development peculiar to the language, which we will see in the corresponding chapters.

3.3.4. The Base is that part of a word which is unchanged in inflection: as, **cherm-**[113] in **chermós**, *warm*, **eus-**[114] in **eusō**, *burn*; ***cou***- in **cōus**[115], *cow*,etc.

a. The Base and the Stem are often identical, as in many consonant stems of nouns (as ***cer***- in **cers**[116], *mount*). If, however, the stem ends in a vowel, the latter does not appear in the base, but is variously combined with the inflectional termination. Thus the stem of **nochetós**, *naked*, is **nochet-**[117]; that of **ármos**[118], *arm*, is ***armo***-.

3.3.5. Inflectional terminations are modified differently by combination with the final vowel or consonant of the Stem, and the various forms of Declension and Conjugation are so developed.

3.4. GENDER

3.4.1. The Genders distinguished in Modern Indo-European are three: Masculine, Feminine (both are referred to as Animate) and Neuter or Inanimate.

3.4.2. The gender of Indo-European nouns is either *natural* or *grammatical*.

The masculine functions as the negative term in the opposition, i.e. when the gender is not defined, the masculine is used. This is a grammatical utility, one that is only relevant for concordance, and which has to do with the evolution of the language and its inflection.

The earliest PIE had probably no distinction of gender; when the inanimate appeared, it was marked by a different inflection, and the animates remained as the negative term in the opposition. After that, probably at the same time as the thematic declension (in ***-e/o****) appeared, the feminine was differentiated from the remaining animates, with marks like the different stem vowel (usually* ***-a****) or vowel length (as* ***-ī, -ū****). Therefore, the feminine is the positive term of the opposition within the animates, because when we use it we reduce the spectrum of the animates to the feminine, while the masculine still serves as the negative (non-differentiated) term for both, the general and the animates, when used in this sense, i.e. when not differentiating the masculine from the other genders.*

a. Natural Gender is distinction as to the sex of the object denoted: **bhrātēr**[119] (m.), *brother*; **cenā**[120] (f.), *woman, wife*.

NOTE. Many nouns have both a masculine and a feminine form to distinguish sex: as, **Eurōpaios**, **Eurōpaiā**, *European* (nominalized adjectives), or **ekwos**, **ekwā**, *horse, mare*. [121]

NOTE 2. Names of classes or collections of persons may be of any gender. For example, **armātā** (f.), *army*; from PIE **ar**-, *fit together* (as in **armos**, *arm, upper arm, shoulder*, cf. Gmc. *armaz*, Lat. *armus*, Gk. ἁρμός); also **ghorós** (m.), *choir, chorus, dancing ground*, from PIE **gher**-, *grasp, enclose* – loan translated from Gk. χορός, originally "*an special enclosure for dancing*" in its origin, cf. Gmc. *gardaz*, **ghórdhos**, or Lat. *hortus*, **ghórtos**, both meaning *garden, yard, enclosure*.[122]

b. Grammatical Gender is a formal distinction as to sex where no actual sex exists in the object. It is shown in the form of the adjective joined with the noun: as **swādús**[123] **noqtis**[124] (f.), *a pleasant night*; **mreghús**[125] **kantos**[126] (m.), *brief song* ("*singing*"). The gender of the adjective is simply a gender of concordance: it indicates to which noun of a concrete gender the adjective refers to.

3.4.3. The neuter or inanimate gender differs from the other two in inflection, not in the theme vowel. The gender of the animates, on the contrary, is usually marked by the theme vowel, and sometimes by declension, vocalism and accent.

3.4.4. The neuter does not refer to the lack of sex, but to the lack of liveliness or life. Sometimes, however, animates can be designated as inanimates and *vice versa*.

While the distinction between masculine and feminine is usually straightforward, sometimes the attribution of sex is arbitrary; thus, different words for "*ship*"[127] or "*war*"[128] are found as feminine (as **nāus** or **wersā**), masculine (as **bhoids**, or Greek loan ***pólemos***), and neuter (**wáskolom** or **crīgā**).

3.4.5. The animate nouns can have:

a. An oppositive gender, marked:

I. by the lexicon, as in **patḗr-mātḗr**, *father-mother*, **bhrātēr**[119]**-swesōr**[129], *brother-sister*, **sunus**[130]**-dhúg(a)tēr**[131], *son-daughter*, etc.[132]

II. by the theme vowel, as in **ekwos-ekwā**[121], *horse-mare*, **wl̥qos-wl̥qia**[23], *wolf-she-wolf*.

III. by both at the same time, as in **wīros**[79]**-cenā**[120], *male-female*.

b. An autonomous gender, that does not oppose itself to others, as in **nāus** (f.), *ship*, **pōds** (m.), *foot*, **egnís** (m.), *fire*, **owis** (f.), *sheep*, **jewōs**[133] (n.) or **lēghs** (f.), *law*.[134]

c. A common gender, in nouns that are masculine or feminine depending on the context; as, **dhesós**, *god/goddess* (cf. Gk.Hom. θεός), **cōus**, *cow* or *bull* (cf. Gk. accompanied by ***tauros***, as Scient. Eng. *bos taurus*), **nautā**, *sailor*, **djousnalistā**, *journalist*, **students**[135], *student*, etc.

d. An epicene gender, which, although being masculine or feminine, designates both sexes: as the feminine **sūs**[136], *pig*, or masculine **kakkā**[137], *shit* (as an insult).

3.4.6. The gender of a noun can thus be marked by the stem vowel (or sometimes by inflection), or has to be learnt: it is a feature of a word like any other. In its context, concordance is a new gender mark; a masculine noun has a masculine adjective, and a feminine noun a feminine adjective. However, not all adjectives differentiate between masculine and feminine, a lot of them (those in ***-i-s***, ***-u-s***, ***-ēs***, ***-ōn***, and many thematic in ***-os***) are masculine-feminine: only the context, i.e. the noun with which they agree, helps to disambiguate them. This happens also in nouns with a common gender.

3.4.7. Most endings do not indicate gender, as in **patḗr** and **mātḗr**. Only by knowing the roots in many cases, or by the context in others, is it possible to determine it. Some of the suffixes determine, though, totally or partially if they are masculine or feminine. These are the following:

1. ***-os*** marks masculine when it is opposed to a feminine in ***-ā*** or ***-ī/-iă̆***, as in **ekwos-ekwā**, **wl̥qos-wl̥qiă̆**, **djēus-djewī**, etc. This happens also in adjectives in the same situation, as in **newos-newā**. In isolated nouns, ***-os*** is generally masculine, but some traces of the old indistinctness of gender still remained in Late PIE, as in the names of trees (among others). In adjectives, when the ending ***-os*** is not opposed to feminine, concordance decides.

2. ***-ā*** marks the feminine in oppositions of nouns and adjectives. It is usually also feminine in isolated nouns, in the first declension. But there are also traces of masculines in ***-ā***, as, **ōsagā**, *charioteer*, *driver* (from **ōs**[116], *mouth*, and **ag**[13], *drive*), Lat. *auriga*; **nautā**, "*sailor*", as Gk. ναύτης; or **slugā**, *servant*, as O.Sla. *slŭga*, Lith. *slauga* "*service*", O.Ir. *sluag*, "*army unit*", etc.

3. ***-ī/-iă̆***, is systematically feminine. It is used in nouns, and often in adjectives.

4. Finally, the roots ending in long vowels **-ī** and **-ū** are always feminines.

3.5. GENERAL RULES OF GENDER

3.5.1. Names of Male beings, and of Rivers, Winds, Months, and Mountains are masculine:

patḗr[57], *father*, **Góralos**[1], *Charles*, **Rein**[138], *the Rhine*, **Austros**[69], *south wind*, **Magios**[61], *May*, **Urales**, *the Urals*.

NOTE. The Urals' proper name is **Uraliskā́s Corā́s**, Lat. ***Urales Montes***, "*Urals' Mounts*", *Ural Mountains*, cf. Russ. Ура́льские го́ры (*Uralskiye gory*).

a. A few names of Rivers ending in ***-ā*** (as **Wolgā**), and many Greek names ending in *-ē(s)*, which usually corresponds to IE ***-ā***, are feminine; others are variable or uncertain, generally retaining their oldest attested IE gender in MIE.

NOTE. The Russian hydronym Во́лга is akin to the Slavic words for "*wetness, humidity*" (cf. Russ. *влага*, *вологa*), maybe from the same root as PIE base **wed**-, *wet*, easily borrowed in MIE from Slavic as ***Wolgā***.

b. Some names of Mountains are feminines or neuter: as, **Alpes** (f. *pl.*), *the Alps*

NOTE. **Alpes**, from Latin *Alpes*, may have been related originally to the source of adjectives **albhós**[139] (*white*, cf. Hitt. *alpas*, v.i.) or **altós** (*high*, *grown up*, from IE **al**[79]), possibly from a Celtic or Italic dialect.

3.5.2. Names of Female beings, of Cities, Countries, Plants, Trees and Gems, of many Animals (especially Birds), and of most abstract Qualities, are feminine:

mātḗr[14], *mother*, **Djówiliā**[63], *Julia*, **Prangiā**[140], *France*, **Rōmā**, *Rome*, **pīnus**[141], *pine*, **sanipríjos**, *sapphire* (Gk. *sáppheiros*, ult. from Skr. *sani-priyaḥ*, lit. "*sacred to Saturn*"), **wērós**[128], *true*.

a. Some names of Towns and Countries are masculine: as, **Montinecros**[142], *Montenegro*; or neuter, as, **Jugtós Rēgiom**, *United Kingdom* (English name from masc. ***Oinitós Gningodhőmos***[143]), **Swiorēgiom**[144], *Sweden*, **Finnlendhom**[145], *Finland*.

b A few names of Plants and Gems follow the gender of their termination; as, **kṃtauriom** (n.), *centaury*, **ákantos** (m., Gk. ἄκανθος), *bearsfot*, **úpolos** (m.), *opal*, from PIE **upo**, *up from under*.

NOTE. The gender of most of the above may also be recognized by the terminations, according to the rules given under the different declensions.

3.5.3. Indeclinable nouns, infinitives, terms or phrases used as nouns, and words quoted merely for their form, are neuter: ***porētum***[146], *drive*, *"**wétānom smeughtum**", "smoking prohibited"*; ***gummi***, *gum*.

NOTE 2. Eng. *gum* comes from O.Fr. *gomme*, from L.Lat. *gumma*, from Lat. *gummi*, from Gk. *kommi*, from Coptic *kemai*, hence MIE loans Lat. ***gummis***, or Gk. ***kommis***.

3.5.4. Many nouns may be either masculine or feminine, according to the sex of the object. These are said to be of Common Gender: as, **eksaliom**[147], *exile*; **cōus**[115], *ox* or *cow*; **parents**[148], *parent*.

NOTE. Several names of animals have a grammatical gender, independent of sex. These are called epicene. Thus, **sūs**[136], *swine*, and **wḷpēs**[23], *fox*, are always feminine.

3.5.5. Nouns, Pronouns, Adjectives and Participles are declined in MIE in two Numbers, singular and plural – Late PIE had also possibly a dialectal dual – and up to eight cases, Nominative, Vocative, Accusative, Genitive and Oblique - which is found subdivided into combinations of Dative, Locative, Instrumental and Ablative.

NOTE 1. European dialects show around six cases, but most of the oldest attested ones (PII, PGk, Ita.) and Balto-Slavic show remains of up to eight original cases, although the situation has evolved differently due to migrations and linguistic contacts. Traditional theories maintain that the original common PIE situation is a complex system of eight noun cases. On the contrary, a five-case system is for other scholars the oldest situation (of Middle PIE, as Anatolian dialects seem to show), later changed by some dialects by way of merging or splitting the five original cases. An eight-case system would have been, then, an innovation of individual dialects, just as the phonetic satemization. It is thus a general opinion that in IE III both dialectal trends (split and convergence of Obliques) coexisted. In this Grammar we follow the general, oldest trend, i.e. an eight-case inflection system.

NOTE 2. In the number we use singular and plural, and not dual, not only because of its doubtful existence in IE II and the objections to its reconstruction for Late PIE, but because it is also more practical in terms of modern Indo-European languages.

I. The Nominative is the case of the Subject of a sentence.

II. The Vocative is the case of Direct Address.

III. The Accusative is the case of the Direct Object of a verb. It is used also with many prepositions.

IV. The Genitive may generally be translated by the English Possessive, or by the Objective with the preposition *of*.

V. The Obliques might be found as:

a. The Dative, the case of the Indirect Object. It may usually be translated into English by the Objective with the preposition *to* or *for*.

b. The Locative, the place *where*.

c. The Instrumental, the thing *with*.

d. The Ablative, usually the Objective with *from*, *by*, *with*, *in* or *at*. It is often found with prepositions.

NOTE. The oblique cases appear in the English pronoun set; these pronouns are often called *objective pronouns*; as in *she loves me* (accusative), *give it to me* (dative) or *that dirt wasn't wiped with me* (instrumental), where *me* is not inflected differently in any of these uses; it is used for all grammatical relationships except the genitive case of possession and a non-disjunctive nominative case as the subject.

3.6. VOWEL GRADE

1. The vowel grade or Ablaut is normally the alternation between full, zero or lengthened grade vocalism. Europe's Indo-European had a regular ablaut sequence that contrasted the five usual vowel sounds called *Thematic*, i.e. **e**/**ē**/**o**/**ō**/ø. This means that in different forms of the same word, or in different but related words, the basic vowel, a short **e**, could be replaced by a long **ē**, a short **o** or a long **ō**, or it could be omitted (transcribed as ø).

NOTE. The term *Ablaut* comes from Ger. *Abstufung der Laute*, "*vowel alternation*". In Romance languages, the term *Apophony* is preferred.

2. When a syllable had a short **e**, it is said to be in the "*e-grade*"; when it had no vowel, it is said to be in the "*zero-grade*", when in **o**, in "*o-grade*", and they can also be "*lengthened*". The e-grade is sometimes called "*full grade*".

A classic example of the five grades of *ablaut* in a single root is provided by the following different case forms of EIE **patḗr**, *father*, and **n̥patōr**, *fatherless* .

Ablaut grade	EIE	Greek		Case
e-grade or full grade	**pa-ter-n̥**	*πα-**τέρ**-α*	*pa-**tér**-a*	Accusative
lengthened e-grade	**pa-tḗr**	*πα-**τήρ***	*pa-**tḗr***	Nominative
zero-grade	**pa-tr-ós**	*πα-**τρ**-ός*	*pa-**tr**-ós*	Genitive
o-grade	**n̥-pá-tōr-n̥**	*ἀ-πά-**τορ**-α*	*a-pá-**tor**-a*	Accusative
lengthened o-grade	**n̥-pa-tōr**	*ἀ-πά-**τωρ***	*a-pá-**tōr***	Nominative

3. Late PIE had ablaut differences within the paradigms of verbs and nouns that were probably significant secondary markers. Compare for example for PIE **pertus**, *passing*, *passage*, (from verb **periō**, *go through*):

	PIE	*root (**per-**)*	*suffix (-**tu**)*
Nominative	***per-tu-s***	e-grade	zero-grade
Accusative	***per-tu-m***	e-grade	zero-grade
Genitive	***pr-téu-s***	zero-grade	e-grade
Dative	***pr-t(eu)-ei***	zero-grade	e-grade

4. Some common examples of different vowel grades (including their lengthened form) as found in Proto-Indo-European are the following:

Vowel Grade	Full (F)	Zero (ø)	Lengthened (L)
e*/*o* - ø - *ē*/*ō	***ped, dom***	***pd, dm***	***pēd, dōm***
ie*/*io* - *i* - *iē*/*iō	***djeus***	***diwos*/*djus***	***djē-***
ue*/*uo* - *u* - *uē*/*uō	***kwon***	***kun-***	***kwōn***
ei*/*oi* - *u*/*i* - *ēi*/*ōi	***bheid***	***bhid***	***bhēid***
eu*/*ou* - *u*/*i* - *ēu*/*ōu	***bheud, ous***	***bhud, us***	***bhēud, ōus***
ā*/*ē*/*ō* - *a* - *ā*/*ē*/*ō	***bhle, bha, oku***	***bhla, bha, aku***	***bhlē, bhā, ōku***
au*/*ai* - *u*/*i* - *āu*/*āi	***bhau, aik***	***bhu***	***bhāu, āik***
ēi*/*ōi* - *ū*/*ī* - *ēi*/*ōi	***po(i)***	***pi***	***pōi***

3. There are also some other possible vowel grade changes, as *a-grade*, *i-grade* and *u-grade*, which usually come from old root endings, rather than from systematized phonetic changes.

NOTE. It seems that the alternation **e**/ø in PIE was dependent on the accent. Compare ***klewos*/*klutós***, ***eími*/*imés***, ***paterm̥*/*patrós***, etc., where the unaccented morpheme looses its vowel. This happened only in the oldest formations, though, as Late PIE had probably already lost this morphological pattern, freezing the older alternations into a more or less stable vocabulary without changes in vowel grade.

3.7. WORD FORMATION

3.7.1. Word Formation refers to the creation of new words from older ones. Indo-European scholars show an especial interest in Derivational Affixes (most commonly Suffixes), i.e. morphemes that are attached to a base morpheme, such as a Root or a Stem, to form a new word. The main affixes are:

A. Athematic suffixes:

a. The most simple is the zero-ending, i.e. root nouns like ***dem-s*** (Gk. *des-*), *house*, in consonant, as ***neq-t-s*** (Hitt. *nekuz*), *night*, or ***men-s*** (Av. *maz-*), *mind*, in ***-r***, as ***ghes-ōr*** (Hitt. *kiššar*), *hand*, with apophony, Ac. ***ghes-er-m̥*** (Hitt. *kiššeran*), Loc. ***ghes-r-i*** (Hitt. *kišri*, Gk. *kheirí*), with ending ***-n***, as ***or-ōn*** (Hitt. *ḫara*[*š*], stem *ḫaran-*, from PIH *$h_3$or-o-*, cf. O.H.G. *aro*, Eng. *erne*, Gk. *or-n-*[*is*]), *eagle*. Common examples include ***rēgs***, as Lat. *rex*, Cel. *ri*, Gmc. *rīh*, Skr. *rāt*, ***cōus***, as Lat. *bou*, Cel. *bó*, Gmc. *ko*, Skr. *gáu*/*go*, ***mūs***, Lat. *mūs*, Gk. μῦς, Gmc. *mūs*, Sla. *mys*, Skr. *mū*, etc.

b. Also, the stem **r**/**n**, with ***-r-*** in 'strong' cases (Nom-Acc.) and ***-n-*** in the Obliques, is well represented in Anatolian; see Variable Nouns in the next chapter for more on these *heteroclites*.

c. An old stem in ***-u-*** appears e.g. in the words ***gon-u***, *knee*, ***dor-u***, *wood*, and ***oj-u***, "*lifetime*", cf. Av. *zānū*, *dārū*, *āiiū*, Skr. *jā́nu*, *dā́ru*, *á̄yu*, Gk. *gónу*, *dóry*, *ou*(*kí*), "*no*", etc. Apophonic variants are found as full-grade ***genw-***, ***derw-***, ***ejw-***, cf. Hitt. *genu-*, Lat. *genu-*, Sla. *dérw-o*, Gk. *ai*(*w*)-*eí*, etc.,

and as zero-grade ***gn-ew***, ***dr-ew***, ***(a)j-ew***-, as in Goth. *kniu*, Av. *yaoš*, Hitt. *ganu-t*, etc. Such zero-grades are found within Declension, in Composition (cf. Skr. *jñu-bādh-*, "*kneeled*", Gk. *dru-tómos*, "*timber-cutter*"), and in Derivation, as e.g. ***ju-wen***-, *vigorous*, *young* (cf. Skr. *yuván-*, Lat. *iuuen-is*).

d. A suffix -***it***-, which refers to edible substances, as ***mel-it***, *honey* (cf. Gk. *mélit-*, Hitt. *milit*, Luw. *mallit*, Gmc. *mil-*), ***sep-it***, *wheat* (cf. Hitt. *šeppit*, Gk. *álphit*), etc.

B. Feminine and Abstract (Collectives):

a. A general PIH suffix -*(e)h₂* is found in Feminine, as in ***senā***, *old* (<*seneh₂*, cf. Gk. *hénē*, Skr. *śanā-*, Lith. *senà*), ***swekrū́***-, *husband's mother* (<*swekrúh₂-*, cf. O.Sla. *svekrŭ*, Lat. *socrus*, O.H.G. *swigar*), in Abstract Collectives, as in Gk. ***tomā́***, cut, or ***neurā́***, *rope made from sinew* (cf. **neurom**, Eng. *neuron*), etc., and in the Nom.-Acc. Neuter singular of the collective that functions as Nom.-Acc. Plural (cf. Skr. *yugā́*, Gk. *zygá*, Lat. *iuga*, Goth. *juka*, "*jokes*", Hitt. -*a*, Pal. -*a*/-*ā*, etc.).

b. It is also very well attested a Feminine and Abstract Collective -***ī***, PIH -*ih₂*, with variant -***iă̆***, PIH -*ih₂*/-*jeh₂*, cf. Skr. *devī́* (Gen. *dḗvyās*), "*goddess*", *vṛkīs* (Gen. *vṛkías*), "*she-wolf*", etc.

C. Thematic Suffixes, the most abundant affixes found in PIE Nominal and Adjectival derivation:

a. A simple -**o**-, which appears in some primary and secondary old formations, as ***wl̥q-o-s***, *wolf*, ***ŗtk-o-s***, *bear*, neuters ***jug-ó-m***, *joke*, ***werg-o-m***, *work*, adjectives ***sen-o***-, *old*, ***new-o***-, *new*, etc.

NOTE. The Distinction into primary and secondary is not straightforward, unless there is an older root attested; compare e.g. PIE ***ekwo-s***, *horse*, which is usually deemed a derivation from PIH *h₁ek-*, "*quick*", as in PIE **ōkús**.

Accented -***ó***- is deemed a secondary suffix which marks the possession of the base, as well as adjectives in -***ó***- with lengthened grade root, cf. PIE ***cjā***, *bow's string*, as Skr. *jyá*, but ***cjos***, *bow* (< "*that has a bow's string*"), as Gk. *biós*, or ***swekurós*** (> ***swékuros***), *husband's father*, from **swekrū́s**, *husband's mother*, ***deiwós***, from **djēus**, etc.

b. About the Root Grade, o-grade roots are found in two thematic types, barytone Action Nouns (cf. Gk. ***tomos***, "*slice*"), and oxytones Agent Nouns and Adjectives (cf. Gk. ***tomós***, "*who cuts, acute*"), both from PIE ***tem***-, *cut*; zero-grade in neuters ***jug-óm***, *joke*, from **jeug**-, *join*, and in second elements of compounds like ***ni-sd-ós***, *nest*, from **sed**, *sit*, or ***newo-gn-ós***, "*newborn*", as Gk. *neognós*.

c. Adjectival suffixes -***jo***- and -***ijo***- have a relational sense, as in ***cow-jós***, "*of a cow/ox*", from ***cow***-, *cow*, *ox*, as in Av. *gaoya-*, Skr. *gavyá* or *gávya*, Gk. *hekatóm-boios*, "*that costs a hundred cows*", Arm. kogi (<***cow-ijo***-), "*derived from the cow*", O.Ir. *ambuæ* (<***n̥-cow-ijo***-, as in Skr. *ágos*, Gk. *aboúteō*), "*man without cows*", or e.g. **patriós**, *paternal*, **pediós**, "*of the foot*", etc. As a nominal suffix, cf. Lat. *ingenium*, *officium*, O.Ir. *cride*, *setig*, Skr. *vairya*, *saujanya*, Sla. *stoletie*, *dolia*, etc.

d. Verbal adjectives in ***-tó-*** (Ind.-Ira. ***-nó-***), with zero-grade verbal root, are common in secondary derivation, as in ***klu-tós***, *heard, famous*, from **kleu-**, *hear*, cf. Skr. *śrutá-*, Av. *sruta-*, Gk. *klytós*, Lat. *in-clitus*, M.Ir. *rocloth*, O.H.G. *Hlot-*, Arm. *lu*, etc. They were incorporated to the Verbal inflection as participles and gerunds. For nouns in ***-to-***, ***-no-***, ***-ti(j)-o-***, ***-ni(j)-o-***, ***-tu(w)-o-***, ***-nu(w)-o-***, etc. cf. Skr. *svápn(i)ya*, *prāvīnya*, Lat. *somnium*, *dominium*, O.Ir. *blíad(a)in*, Sla. *sunie*, *cozarenie*, etc.

e. Other common thematic suffixes include ***-nó-***, ***-ro-***, ***-mo-***, and diminutives in ***-ko-***, ***-lo-***, ***-isko-***, etc. which may also be participial, ordinal or adjectival (from nouns) lengthenings. They are usually preceded by a vowel, as in ***-e/onó-***, ***-e/oro-***, and so on. Compare for example from **cher-**, *warm*, adjective ***cher-mós***, *warm*, cf. Skr. *gharmá*, Av. *garəma-*, Gk. *thermós*, Toc. A. *särme*, Phryg. *Germiai*, Arm. *jerm*, Alb. *zjarm*, or o-grade ***chor-mós*** (cf. Gmc. *warmaz*, Lat. *formus*). ***-bhó-*** gives names of animals, as e.g. Gk. *éribhos*, "*kid*".

f. A secondary suffix ***-tero-/-toro-*** marks the opposition of two notions, and is found in Anatolian (cf. Hitt. *nun-taras*, Adv. gen. "*from now*"), ***en-terós/al-terós*** (or ***anterós***), "*the other (of two)*" (cf. Goth. *anþar*, Skr. *ántaras*, Lat. *alter*, etc.) opposed to a simple "*other*", **aliós** (cf. Skr. *anyás*, Lat. *alius*, Gk. *állos*, Goth. *aljis*). This suffix is also found in some syntactic formations, as Gk. *deksiós – aris-terós*, *skaiós – deksi-terós*, both meaning "*right-left*" (Benveniste 1948).

g. The suffix ***-wó-*** is particularly found in words for "*alive*", as ***cĭ-wó-*** (cf. Skr. *jīvás*, Lat. *uīuos*, O.Ir. *béo*, Welsh *buw*, Goth. *qius*) and "*death*", as ***mr-wó-*** (cf. O.Ir. *marb*, Welsh *marw*, and also Lat. *mortuos*, Sla. *mĭrtvŭ*, where the ***-t-*** was possibly inserted influenced by ***mr-tós***, "*mortal*").

h. There are some instrumental suffixes, as ***-tro-***, ***-tlo-***, ***-klo-***, ***-dhro-***, ***-dhlo-***, as Lat. *-trum*, *-c(u)lum*, *-brum*, *-bulum*, etc.; e.g. ***ára-trom***, *plough*, cf. Gk. *árotron*, Lat. *aratrum*, O.Ir. *arathar*, Welsh *aradr*, Arm. *arawr*, Lith. *árklas*, etc.; also, Gk. *báthron*, O.Ind. *bharítram*, Goth. *fōdr*, etc.

i. Other common suffixes (also participial) are ***-mĕ̆n-***, ***-mon-***, ***-mn-***, with secondary ***-mn-to-***, ***-men-o-***, ***-men-t-*** (and ***-wen-t-***), etc., cf. Lat. *augmentum*, or Goth. *hliumant*, equivalent to O.Ind. *śrómatam*, both meaning "*reputation*", from **kleu-**, *hear*, and so on.

NOTE. Detailed information on Proto-Indo-European word morphology with dialectal examples might be found at <http://dnghu.org/indoeuropean_noun_morphology.pdf>.

4. NOUNS

4.1. DECLENSION OF NOUNS

4.1.1. Declension is made by adding terminations to different stem endings, vowel or consonant. The various phonetic changes in the language have given rise to the different declensions. Most of the case-endings, as shown in this Modern Indo-European grammar, contain also the final letter of the stem.

Adjectives are generally declined like nouns, and are etymologically to be classed with them, but they have some peculiarities of inflection which will be later explained.

4.1.2. Nouns and adjectives are inflected in four regular Declensions, distinguished by their final phonemes – characteristic of the Stem –, and by the opposition of different forms in irregular nouns. They are numbered following Graeco-Latin tradition: First or ***a-Declension***, Second or ***o-Declension***, Third or ***i/u-Declension***, Fourth or ***Consonant Declension***, and the variable nouns.

NOTE. The *Second* or *o-Declension* is also the ***Thematic Declension***, opposed to the rest – and probably older in the evolution of PIE nominal inflection –, which form together the ***Athematic Declension***.

Decl.	**Stem ending**	**Nom.**	**Genitive**
1.	**ā, ia/ī/iā (ē, ō)**	***-ø***	***-s***
2.	**e/o (*Thematic*)**	***-s***	***-os, -os(i)o, (-ī)***
3.	**i, u and Diphthong**	*m., f.-**s**, n.-**ø***	***-e/ois, -e/ous, -(t)ios, -(t)uos***
4.	**Sonants & Consonants**	***-s, -ø***	***-(e/o)s***
(5)	*Heteroclites*	***-ø, -r***	***-(e)n***

The Stem of a noun may be found, if a consonant stem, by omitting the case-ending; if a vowel stem, by substituting for the case-ending the characteristic vowel.

NOTE. Most Indo-Europeanists tend to distinguish at least two major types of declension, Thematic and Athematic. Thematic nominal stems are formed with a suffix **-*o***- (in vocative **-*e***), and the stem does not undergo *ablaut*. The Athematic stems are more archaic, and they are classified further by their ablaut behaviour: *acro-dynamic*, *protero-dynamic*, *hystero-dynamic* and *holo-dynamic*, after the positioning of the early PIE accent (*dynamis*) in the paradigm.

4.1.3. The following are General Rules of Declension:

a. The Nominative singular for animates ends in **-*s*** when the stem endings are **i**, **u**, **ī**, **ū**, Diphthong, Occlusive and Thematic (**-*os***), or -ø in **ā**, **a**, Sonant and **s**; while in the plural **-*es*** is general, **-*s*** for those in ***ā***, and **-*os*** for the Thematic ones.

b. The Accusative singular of all masculines and feminines ends in ***-m***; the Accusative plural in ***-ms***.

c. The Vocative singular for animates is always -ø, and in the plural it is identical to the Nominative.

d. The Genitive singular is common to animates and inanimates, it is formed with ***-s***: ***-s***, ***-es***, ***-os***. A very old alternative possibility is extended ***-os-(i)o***. The Genitive plural is formed in ***-ōm*** (also ***-ēm***), and in ***-ām*** in a-stems.

e. The Obliques singular end usually in ***-i***: it can be ***-i***, ***-ei***, ***-ēi***, ***-oi***, ***-ōi*** or ***-āi***. In the plural, there are two series of declensions, with ***-bh-*** (general) and ***-m-*** (only Gmc. and Sla.), generally ***-bhi***, ***-bhis***, ***-bhios***, ***-bhos***, and (Gmc., BSl.) ***-mis***, ***-mos***, and also some forms in ***-si*** (plural mark ***-s-*** plus oblique mark ***-i***), found mainly in Graeco-Aryan dialects.

f. Inanimates have a syncretic form for Nom.-Ac.-Voc. in -ø in Athematic, or ***-m*** in Thematic. The plural forms end in ***-a*** or ***-ā***.

g. All Animates have the same form in the plural for Nom.-Voc., in ***-es***.

4.1.4. The so-called Oblique cases – opposed to the Straight ones, Nom.-Acc.-Voc –, are Genitive and the Obliques, i.e. Dative, Locative, Instrumental and Ablative. However, the Ablative seems to have never been independent, but for thematic stems in some dialectal areas. The other three cases were usually just one local case in different contexts (what we call the Oblique), although Late PIE clearly shows an irregular Oblique declension system.

NOTE 1. There are some traces – in the Indo-European proto-languages which show divided Oblique cases – that could indicate a possible first division – from a hypothetical five-case-IE II– between a Dat. and a Loc.-Ins., and then another, more recent between Loc. and Ins (see Adrados). Languages like Sanskrit or Avestan show 8 cases, while some Italic dialects show up to 8 (cf. Osc. Loc. *aasai for* Lat. '*in ārā*', or Ins. *cadeis amnud* for Lat. '*inimicitiae causae*', *preiuatud* for Lat. '*prīuātō*', etc.), while Latin shows six and a semisystematic Locative notion; Slavic and Baltic dialects show seven, Mycenaean Greek shows at least six cases, while Koiné Greek and Germanic show five.

NOTE 2. We know that the splitting and merging processes that affected the Obliques didn't happen uniformly among the different stems, and it didn't happen at the same time in plural and singular. Therefore, there was neither a homogene and definite declension system in IE III, nor in the dialects and languages that followed. From language to language, from stem to stem, differences over the number of cases and its formation developed. Firstly syncretism obscured the cases, and thereafter the entire system collapsed: after the time when cases broke up in others, as in most modern Slavic languages, another time came when all cases merged or were completely lost: so today in most Romance and Germanic languages, or in Slavic like Bulgarian. However, a Modern Indo-European needs a systematic declension, based on the obvious underlying old system, which usually results in 7-case paradigms (with Dat.-Abl. or Gen.-Abl.) in most inflected forms.

Nominal Desinences (Summary)

	Singular	***Plural***
NOM.	**-*s***, -*Ø*, (*n.* Them **-*m***)	*m., f.* **-*es***, *n.* **-*ă***
ACC.	**-*m*/-*m̥***	*m., f.* **-*ms*/-*m̥s***; *n.* **-*ă***
VOC.	-*Ø*	*m., f.* **-*es***, *n.* **-*ă***
GEN.	-(***e*/*o*)*s***; -(***e*/*o*)*s*(*i*)*o***	**-*ŏm*** (dial **-*ēm***)
OBL.	***-i-*** *(general Obl. mark)*	***-bh-i-****, (dialectal* ***-m-i-****);* ***-s-i/u***
DAT.	**-*ei***	**-*bh*(*i*)*os****,* (dial. **-*mos***)
LOC.	**-*i***	**-*su*/*i***
INS.	**-*e****,* -*bhi***	**-*bhis****,* (dial. **-*mis***);**-*ōis*** (Them.)
ABL.	-(***e*/*o*)*s***; **-*ēd*/-*ōd*/-*ād***	**-*bh*(*i*)*os****,* (dial. **-*mos***)

4.2. FIRST DECLENSION

4.2.1. FIRST DECLENSION

1. They are usually Animate nouns and end in **ā**, and **ia/ī/iā**, and also rarely in **ē**, **ō**. Those in **ā** are very common, generally feminine in nouns and always in adjectives. Those in **ia/ī/iā** are always feminine and are also used to make feminines in the adjectival Motion. Those in **ō** and **ē** are feminine only in lesser used words. Those in **a** are etymologically identical to the Neuter plural in Nom.-Acc.-Voc.

2. MIE First Declension corresponds loosely to the Latin First Declension (cf. Lat. *rosa*, *rosae*, or *puella*, *puellae*), and to the Ancient Greek Alpha Declension (cf. Gk. χώρᾱ, χώρᾱς, or τῑμή, τῑμῆς).

a-Declension Paradigm

	Animate	***Inanimate***
NOM.	-*Ø*	-*Ø*
ACC.	**-*m***	
VOC.	-*Ø*	
GEN.	**-*s***	
DAT.	**-*i***	
LOC.	**-*i***	
INS.	*-Ø,* **-*bhi****, (-****mi****)***	
ABL.	**-*ād***, (**-*s***)	

NOTE 1. The entire stem could have been reduced to MIE **a** (hence *a-Declension*), because this is the origin of the whole PIE stem system in PIH, the ending *-(e)h₂*, see §1.7.1.

NOTE 2. Dat. ***-i*** is sometimes reconstructed as from a regular PIH Dat. ***-ei***; as, **h₁ekweh₂-ei* → **ekwāi**.

3. It is therefore identical to those nouns in **r**, **n**, **s** of the Fourth Declension, but for some details in vocalism: the Gen. has an ***-s*** and not ***-es/-os***; the difference between Nom. and Voc. is that of ***-ā*** and ***-a***. The zero-grade of the Nom.-Acc.-Voc. in **ia/ī** stems is different from the Gen. in ***-iā***.

4.2.2. FIRST DECLENSION IN EXAMPLES

1. Nominative Singular in -ø; as, **ekwā**[73], *mare*, **senā**[79], *old*.

Example of **ia/ī** stems are **potniă̆/potnī**[44], *lady*, **wl̥qiă̆/wl̥qī**, *she-wolf*, **djewiă̆/djewī**, goddess (maybe also Lat. *gallī* in the later extended *gallīna*, *rēgī* in *regīna*, etc.), as well as Pres.Part. feminines, as **príjontiă̆/príjontī**, "*who loves*", *friend*, **wésn̥tiă̆/wésn̥tī**, "*who drives*", driver, etc.

Those in **ē**, **ō**, which aren't found very often, can present an ***-s*** as well; as in Latin ***bhidhēs*** (Lat. *fides*, but also O.Lat. *fidis*), *trust*, ***spekiēs***, *species*, etc.

Nouns in **ā** can also rarely present forms in ***a***; as in Gk. Lesb. ***Dika***.

2. Accusative Singular in ***-m***; as, **ekwām**, **potniă̆m/potnīm**, **bhidhēm**.

3. Vocative Singular in -ø. It is normally identical to the Nominative, but disambiguation could happen with distinct vowel grades, i.e. Nom. in ***-ā***, Voc. in ***-a***.

4. Genitive Singular in ***-s***; as, **ekwās**, **senās**.

The theme in **ia/ī/iā** produces a Genitive Singular in ***-ās***; as, **potniās**.

5. Dative-Ablative Singular in ***-āi***, probably from an original Dat. ***-ei*** ending.

There is also a form ***-ei*** for themes in **ē** and in **iā**.

6. Locative in ***-āi,*** Instrumental in ***-ā, -ā-bhi, -ā-mi***.

	f. ***ekwā***	*f.* ***potnia/potnī***	*f.* ***spekiē-***	*adj. f.* ***cowijā***
NOM.	**ekwā**	**potniă̆/potnī**	**spekiēs**	**cowijá**
ACC.	**ekwām**	**potniă̆m/potnīm**	**spekiēm**	**cowijám**
VOC.	**ekwă̆**	**potniă̆/potnī**	**spekiē**	**cowijá**
GEN.	**ekwās**	**potniās**	**spekiēs**	**cowijás**
DAT.	**ekwāi**	**potniāi**	**spekiei**	**cowijái**
LOC.	**ekwāi**	**potniāi**	**spekiei**	**cowijái**
INS.	**ekwā**	**potniā**	**spekiē**	**cowijá**
ABL.	**ekwād**	**potniās**	**spekiēd**	**cowijád**

4.2.3. THE PLURAL IN THE FIRST DECLENSION

1. The following table presents the plural paradigm of the *a-Declension*.

NOM.	***-s***
ACC.	***-ms***
VOC.	***-s***
GEN.	***-m***
DAT.-ABL.	***-bh(i)os (-mos)***
LOC.	***-su/i***
INS.	***-bhis (-mis)***

NOTE. Nom. Pl. ***-s*** is often reconstructed as derived from older (regular) PIH pl. ***-es***; as, **$h_1$ekweh$_2$-es* → **ekwās**.

2. The Nominative-Vocative Plural in ***-s***: **ekwās**, **newās**, **cowijā́s**.

This form could obviously be confused with the Genitive Singular. In equivocal contexts we change preferably the accent (***ekwā́s***, ***ekwā́ms***, ***ekwā́m***).

3. The Accusative Plural in ***-ms***: **ekwāms**, **newāms**.

4. The Genitive Plural in ***-m***: **ekwām**, **newā́m**.

5. The Dative and Ablative Plural in ***-bhos***, ***-bhios*** (dial. ***-mos***); as, **ékwābh(i)os**, ***ékwāmos***.

6. The Locative Plural in ***-su*** (also ***-si***, ***-se***); as, ***ékwāsi***, **ékwāsu**.

6. The Instrumental Plural in ***-bhis*** (dial. ***-mis***); as, **ékwābhis**, ***ékwāmis***.

The Obliques have also special forms Gk. ***-āisi***, ***-ais***, Lat. ***-ais***; as, Lat. *ros<u>i</u>s*<**rosais*.

	f. ***ekwā***	*f.* ***potnia/potnī***
NOM.	**ekwās**	**potnias/potnīs**
ACC.	**ekwāms**	**potniams/potnīms**
VOC.	**ekwās**	**potnias/potnīs**
GEN.	**ekwā́m**	**potniā́m**
DAT.	**ékwābhios**	**pótniabhios**
LOC.	**ékwāsi**	**pótniasu**
INS.	**ékwābhis**	**pótniabhis**
ABL.	**ékwābhios**	**pótniabhios**

4.3. SECOND DECLENSION

4.3.1. SECOND DECLENSION

1. The Stem of nouns of the Second Declension ends in **e**/**o**, and they are usually called *Thematic*. They can be animates and inanimates, as well as adjectives. The inanimates have an ending ***-m*** only in Nom.-Acc.-Voc. The animates, with a Nominative in ***-s***, are generally masculine in nouns and adjectives, but there are also feminine nouns and animate adjectives in ***-os***, probably remains of the old indistinctness of declension.

2. MIE Second Declension is equivalent to the Second Declension in Latin (cf. Lat. *dominus*, *dominī*, or *uinum*, *uinī*), and to the Omicron Declension in Greek (cf. Gk. λόγος, λόγου, or δῶρον, δῶρου).

o-Declension Paradigm

	Animate	***Inanimate***
NOM.	***-os***	***-om***
ACC.	***-om***	
VOC.	***-e***	
GEN.	***-os, -os(i)o, (-ī)***	
DAT.	***-ōi***	
LOC.	***-ei*/-oi**	
INS.	***-ē*/-ō**	
ABL.	***-ēd*/-ōd**	

NOTE 1. This model could indeed have been written without the initial vowel ***-o-***, given that the probable origin of this vowel is the ending vowel of some thematic stems, while other, primitive athematic stems were reinterpreted thereafter and this vowel was added to stem by way of analogy. So, for thematic stems, as ***wl̥qo-***, this paradigm could be read Nom. ***-s***, Acc. ***-m***, Voc. ***-e***, Gen. ***-s***, ***-sio***, ***-so***, ***-ī***, and so on.

NOTE 2. Dat. ***-ōi*** is often interpreted as from an older PIE (regular) ***-ei***; as, **wl̥k^{w}-o-ei* → ***wl̥qōi***.

3. The Nominative and the Genitive in ***-os*** can be confused. This can only be solved with lengthenings, as in Gen. ***-os-io*** or ***os-o***.

4.3.2. SECOND DECLENSION IN EXAMPLES

1. Nominative Singular Animate in ***-os***; as in **wl̥qos**, *wolf*, **dómūnos**, *lord*, adj. **cl̆wós**, *alive*.

2. Accusative Singular Animate in ***-om***; as in **wl̥qom**, **dómūnom**, **cl̆wóm**.

3. Vocative Singular Animate in ***-e***; as in **wl̥qe**, **dómūne**, **cl̆wé**.

5. The Nom.-Acc.-Voc. Sg. Inanimate in ***-om***; as in **jugóm**[5], *joke*, adj. **newom**, *new*, **mrwóm**, *dead*.

4. Genitive Singular in ***-os***, ***-osio***, ***-e/oso*** (also ***-ī***); as in **wḷqosio**, **mrwós**, ***dómūnī***.

NOTE. The original form ***-os*** is rare, as the Genitive had to be distinguished from the Nominative. This disambiguation happens, as already said, by alternatively lengthening the ending or changing it altogether. The *o-Declension* is probably recent in PIE – even though it happened already in PIH, before the Proto-Anatolian split – and that's why it is homogeneous in most IE dialects, without variations in vocalism or accent.

6. Dative Singular in ***-ōi***, ***-ō***: **wḷqōi**, **dómūnōi**, **newōi**, **mrwṓ**.

7. Locative Singular in ***-oi***, ***-ei***: **wḷqoi**, **dómūnoi**, **newoi**, **mrwói**.

8. Instrumental Singular in ***-ō***: **wḷqō**, **cl̆wṓ**, **newō**, **mrwṓ**.

9. The Ablative Singular is formed in ***-ōd***, and sometimes in ***-ēd***: **wḷqōd**, **cl̆wṓd**, **newōd**.

	m. ***wlqo***	*n.* ***jugo***
NOM.	**wḷqos**	**jugóm**
ACC.	**wḷqom**	**jugóm**
VOC.	**wḷqe**	**jugóm**
GEN.	**wḷqosio**	**jugós**
DAT.	**wḷqōi**	**jugṓi**
LOC.	**wḷqoi**	**jugói**
INS.	**wḷqō**	**jugṓ**
ABL.	**wḷqōd**	**jugṓd**

4.5.3. THE PLURAL IN THE SECOND DECLENSION

1. The Thematic Plural system is usually depicted as follows:

	Animate	***Inanimate***
NOM.	***-ōs, (-oi)***	***-ă̆***
ACC.	***-oms***	
VOC.	***-ōs, (-oi)***	
GEN.	***-ŏ̆m***, (***-ēm***)	
DAT.-ABL.	***-obh(i)os, (-omos)***	
LOC.	***-oisu/i***	
INS.	***-ŏ̆is***	

NOTE. The ending ***-ōs*** is usually reconstructed as from an older (regular) pl. ***-es***; as, **wl̥kʷo-(s)-es* → **wḷqōs.**

2. The Nominative-Vocative Animate Plural in ***-ōs***; as, **wḷqōs**, **dómūnōs**, **wŕōs**.

3. The Accusative Animate Plural in ***-oms***; as, **wḷqoms**, **dómūnoms**, **mrtóms**.

4. The Nom.-Voc.-Acc. Inanimate Plural in ***-ā***, ***-a***; as, **jugā́/jugá**, **newa**, **mrwá**.

5. The Genitive Plural in ***-ōm***/***-om*** (and ***-ēm***); as, **wl̥qōm**, **dómūnōm**, **ceiwṓm**, **jugṓm**.

6. The Instrumental-Locative Plural in ***-ois***/***-oisi***; ***-ōis***/***-ōisi***, and also, as in the other declensions, Obliques in ***-bhis***, ***-bhos***, ***-bhios*** (***-mis***, ***-mos***); as, **wl̥qŏisi**, **wīrōis**, **néwoisu**, **mrwṓis**.

	m. ***wlqo-***	*n.* ***jugo-***
NOM.	**wl̥qōs**	**jugá**
ACC.	**wl̥qōms**	**jugá**
VOC.	**wl̥qōs**	**jugá**
GEN.	**wl̥qōm**	**jugṓm**
DAT.	**wĺqobhios**	**jugóbhios**
LOC.	**wĺqōisi**	**jugóisu**
INS.	**wl̥qōis**	**jugóis**
ABL.	**wĺqobhios**	**jugóbhios**

4.4. THIRD DECLENSION

4.4.1. THIRD DECLENSION PARADIGM

1. Third Declension nouns end in **i**, **u** (also **ī**, **ū**) and Diphthong. The Nominative ending is ***-s***.

2. This declension usually corresponds to Latin nouns of the Third Declension in *-i* (cf. Lat. *ciuis*, *ciuis*, or *pars*, *partis*), and of the Fourth Declension in *-u* (cf. Lat. *cornū*, *cornūs*, or *portus*, *portūs*).

i/u-Declension Paradigm

	Animate	***Inanimate***
NOM.	***-s***	*-Ø*
ACC.	***-m***	
VOC.	*-Ø*	
GEN.	***-s***	
DAT.	***-ei***	
LOC.	*-Ø*, ***-i***	
INS.	***-ī***/***-ū***, *(-**bhi**)*	
ABL.	***-s***	

NOTE. Reduplication or combination with the alternating endings ***-i***, ***-ei***/***-oi*** and ***-u***, ***-eu***/***-ou***, was a common resort in the attested dialects that distinguished Dat. and Loc. in this declension, as in ***-i-ei***, ***-ei-ei***, ***-eu-ei***, and so on, to distinguish similar forms. A common distinction of Loc. ***-i***, Dat. ***-ei***, was known to most dialects of Late PIE,

while a general Instrumental in lengthened **-ī**, **-ū** (from a regular PIH Ins. ending *-e-h₁*) was commonly used; the Ablative, when it appears, shows the same declension as the Genitive.

3. The animates in **i** and **u** are masculine or feminine (indifferent to the distinction in adjectives); those in **ī** and **ū**, always feminine.

4. The ***-s*** can indicate Nominative and Genitive: the distinction is made through the full-grade of the vowel before the declension, i.e. Gen. ***-ei-s*** for **i**, ***-ou-s*** for **u** – but for those in ***-ti***, ***-tu*** (type II), v.i.

NOTE. The Vocative of the animates is the same as the Nom.-Acc.-Voc. of the inanimates. In nouns differentiation isn't necessary, because they have different stem vowels; in adjectives, however, a Vocative singular animate ***-i*** can be an homophone with Nom.-Acc.-Voc. singular neuter ***-i***; as e.g. m.Voc. **albhí**, n.Acc. **albhí**. This is a rare case, though, in which the context is generally enough for disambiguation.

4.4.2. IN I, U

1. Nominative Singular Animate in ***-s***; as in **owis**[149], *ewe*, **noqtis**[124], *night*, **ghostis**[26], *guest*, **sūnus**[130], *son* (Gk. ***suiús***), **medhus**, *mead*, **egnís**, *fire*, **manus**, *hand*, adj. **swādús**, *sweet*, etc.

2. Accusative Singular Animate in ***-m***; as in **owim**, **noqtim**, **ghostim**, **sūnum**, **manum**, etc.

3. Vocative Singular Animate in ***-ei*** or ***-i***, ***-eu*** or ***-u***; as in **owei-owi**, **sūneu/sūnou-sūnu**, sometimes the same Nominative form, as systematically in Latin (cf. Lat. *hostis*).

4. The Nom.-Acc.-Voc. Singular Inanimate in ***-i***, ***-u***; as in **mori**, **pekŭ**[150], **medhu**, **swādú**[123].

5. Genitive Singular in ***-eis*** (***-ois***) or ***-(t)ios***, ***-eus*** (***-ous***), ***-(t)uos***; as in **egnéis**[151], **sūnous**, **owéis** (also dial. ***owios***), **manous**, **pekuos**, adj. **swādéus**.

6. Dative Singular in ***-(ej)ei***, ***-(ew)ei***, ***-owei***, and long vowel, ***-ēi***, ***-ōwi***, **egnéi**, **noqtéi, owéi**, etc.

7. Locative Singular ***-(ē)i***, ***-(ē)wi, -owi***, Instrumental **-ī**, **-ū** or dial. ***-bhi***; as **sūn(ē)ui**, **owí**, **owḯ**, etc.

	Type I		*Type II*		*Neuter*	
	f. ***owi-***	*m.* ***sūnu-***	*f.* ***noq-ti-***	*m.* ***senā-tu-***	*n.* ***mori-***	*n.* ***peku-***
NOM.	**owis**	**sūnus**	**noqtis**	**senātus**	**mori**	**peku**
ACC.	**owim**	**sūnum**	**noqtim**	**senātum**	**mori**	**peku**
VOC.	**owi**	**sūnu**	**noqti**	**senātu**	**mori**	**peku**
GEN.	**owéis**	**sūnous**	**noqtios**	**senātuos**	**morois**	**pekeus**
DAT.	**owéi**	**sū́nouei**	**noqtei**	**senā́touei**	**moréi**	**pékouei**
LOC.	**owí**	**sū́noui**	**noqtí**	**senātui**	**morí**	**pekui**
INS.	**owḯ**	**sūnū**	**noqtī**	**senātū**	**morī**	**pekū**
ABL.	**owéis**	**sūnous**	**noqtios**	**senātuos**	**morois**	**pekeus**

THE STRONG TYPE

1. Its inflection is similar to that of **i**, **u**, but they have no alternating vowels before the declension, and the **ī** and **ū** are substituted before vowel by ***-ij***, ***-uw***. They are always feminine, and they cannot be inanimates nor adjectives. They are mostly PIE roots, and found mainly in Indo-Iranian.

	f. ***bhrū-***[152]	*f.* ***dṇghū-***[3]	*f.* ***swekrū-***[132]	*f.* ***dhī-***
NOM.	**bhrūs**	**dṇghūs**	**swekrū́s**	**dhīs**
ACC.	**bhrūm**	**dṇghūm**	**swekrū́m**	**dhijṃ**
VOC.	**bhrū**	**dṇghū**	**swekrū́**	**dhī**
GEN.	**bhruwés**	**dṇghuwós**	**swekruwés**	**dhijós**
DAT.	**bhruwéi**	**dṇghuwéi**	**swekruwéi**	**dhijéi**
LOC.	**bhruwí**	**dṇghuwí**	**swekruwí**	**dhijí**
INS.	**bhrū(bhi)**	**dṇghū́(bhi)**	**swekrū́(bhi)**	**dhijī́(bhi)**
ABL.	**bhruwés**	**dṇghuwós**	**swekruwés**	**dhijós**

4.4.3. IN DIPHTHONG

1. There are long diphthongs **āu**, **ēu**, **ōu**, **ēi**, which sometimes present short vowels, as well as other endings without diphthong, i.e., **ā**, **ē**, **ō**.

NOTE. The last are probably remains of older diphthongs, from Middle PIE. Therefore, even though from the point of view of Late Proto-Indo-European there are only stems with variants **āu**, **ēu**, **ē**, etc, these can all be classified as Diphthong endings, because the original stems were formed as diphthongs in the language history. This kind of irregularities is usual in today's languages, as it was already four millennia ago.

In zero grade Genitives there are forms with ***-i-*** or ***-ij-*** or ***-u-*** or ***-uw-***, depending on the diphthongs.

	m. ***cōu-***[115]	*m.* ***djēu-***[63]
NOM.	**cōus**	**djēus**
ACC.	**cōm**	**djēm/dijḗm**
VOC.	**cou**	**djeu**
GEN.	**cous**	**diwós**
DAT.	**cowéi**	**diwéi**
LOC.	**cowí**	**djewi/diwí**
INS.	**coū**	**djeū**
ABL.	**cous**	**diwós**

NOTE 1. Some secondary formations – especially found in Greek – are so declined, in ***-eus***, ***-euos*** as in Av. *bāzāus*, Arm.,Gk. *Basileus*, possibly from PIE **-āus** (Perpillou, 1973) but Beekes (2007) considers it Pre-Greek.

NOTE 2. Stang's law governs the word-final sequences of a vowel + semivowel ***j*** or ***w*** + nasal, simplified in PIE so that semivowels are dropped, with compensatory lengthening of a preceding vowel, i.e. *VwM*,*VjM* → **V:M**. It also supposedly applies to PIH laryngeals, *Vh₂m > **V:M**. Cf. PIE *djēm*, not **djewmn̥*; PIE *gʷōm*, not **gʷowmn̥*, etc.

4.4.4. THE PLURAL IN THE THIRD DECLENSION

1. The following table depicts the general plural system, common to the Fourth Declension.

	Animate	***Inanimate***
NOM.	***-es***	***-ă***
ACC.	***-ms***	
VOC.	***-es***	
GEN.	***-ŏm, (-ēm)***	
DAT.-ABL.	***-bh(i)os, (-mos)***	
LOC.	***-su/i***	
INS.	***-bhis, (-mis)***	

NOTE. The inanimate plural forms, ***-a*** and ***-ā***, correspond to an older stem vowel of PIH, *-h₂* and *-eh₂*, following the Laryngeals' Theory.

2. Unlike in the Singular, in which only some Nominatives have an ***-s***, in Nom.-Voc. Plural the ***-s*** is general, and there is always one fix-grade vowel, **e**. So, the opposition Singular-Plural in ***-s***/***-es*** is actually a ø/**e** distinction. This opposition has also sometimes another mark, the vowel before the ending (see § 4.7).

3. The Nom.-Voc. Plural Animate is normally in ***-es***; as in **cowes**, **owes**, **sūnes**, etc.

There are forms in ***-ei***-***es*** for **i** stems, as in **owejes**; in ***-eu***-***es*** for **u** stems, as in **sūneues**; in ***ijes***, ***-uwes*** for **ī, ū**; as in **bhruwes**; etc.

4. The Accusative Plural Animate is in ***-ms***: **owims**, **sūnums**, **cōms/coums**.

NOTE. Some scholars reconstruct a general Accusative Plural ending *-ns*, because most of the attested proto-languages show either *-ns* (as some endings in Sanskrit or Germanic) or long vowel, sometimes followed by *-s*. Most scholars also admit an original, older ***-ms*** form (a logical accusative singular ***-m-*** plus the plural mark ***-s***), but they prefer to reconstruct the attested *-ns*, thus (implicitly) suggesting an intermediate phase common to all proto-languages, i.e. PIE ***-ms*** → **-ns* → *-ns/ ¯s*. We don't know if such an intermediate ns phase happened in PIE or EIE, and if it did, if it was common to all dialects, or limited to those languages which present in some declensions *-ns*, and different endings in other declensions. What we do know with some certainty is that the form ***-ms*** existed, and at least since PIH, as the Anatolian dialects show.

5. Nom.-Voc. Acc. Plural Inanimate in ***-ā***, ***-a***: **pekwā**, **morja**, **medhwā**, **swādwá**, etc.

6. Genitive Plural Animate in ***-om*/*-ōm*** (and Gmc. ***-ēm***): **owjom**, **noqtiom**, **sū́nuwēm/sū́nuwom**, **cowōm**, etc.

NOTE. The ***-m*** of the Acc. sg. Animate, Nom.-Acc.-Voc. sg. Inanimate and this case could sometimes be confused. It is disambiguated with the vocalic grade of the Genitive, full or lengthened, as the singular is always ø.

	f. ***owi-***	*m.* ***sūnu-***	*f.* ***bhrū-***	*m.* ***cou-***
NOM.	**owes**	**sūnes**	**bhruwes**	**cowes**
ACC.	**owims**	**sūnums**	**bhrūms**	**coums**
VOC.	**owes**	**sūnes**	**bhruwes**	**cowes**
GEN.	**owjom**	**sū́nuwēm**	**bhruwōm**	**cowōm**
DAT.	**ówibhios**	**sū́numos**	**bhrūbhos**	**coubhios**
LOC.	**ówisi**	**sū́nusu**	**bhrūse**	**cousi**
INS.	**ówibhis**	**sū́numis**	**bhrūbhis**	**coubhis**
ABL.	**ówibhios**	**sū́numos**	**bhrūbhos**	**coubhios**

7. The Obliques are generally divided into two groups, in ***-bh-*** (that of Lat., Gk., Ind.-Ira., Arm., and Cel.) and in ***-m-*** (that of Gmc. and BSl.). There are, thus, ***-bhis***, ***-bhos***, ***-bhios***, ***-bhi*** , and ***-mis***, ***-mos***; as, **sū́nubhis**, **sū́nubhos**, **sū́nubhios**, ***sū́numis***, ***sū́numos***.

There is also another ending possible, that in ***-s-i***, ***-s-u***, ***s-e***, generally Locative (in Ind.-Ira. and BSl.), but also possibly general Dat.-Loc.-Ins. (as in Greek); as, **sū́nusi**, **sū́nusu**, ***sū́nuse***.

In the Oblique Plural specialized system, which is a common feature of Proto-Balto-Slavic and Proto-Indo-Iranian dialects, (and, to some extent, of Proto-Greek and Proto-Armenian), the Instrumental was probably formed adding the plural mark ***-s*** to the Instrumental Singular of the Second Declension, ***-bhi***, ***-mi***. The Dat.-Abl. was then opposed in vowel stem to the Instrumental: ***-bhos*** or ***-mos*** against ***-bhis*** or ***-mis***. The Locative was made with an ***-s*** marking the plural, and an ***-i*** which is the Loc. mark.

NOTE. Its origin is probably the plural mark ***-s-***, to which the local case ending ***-i*** is added. This is a general oblique ending in the thematic declension.

4.5. FOURTH DECLENSION

4.5.1. THE PARADIGM

1. The Stem of Nouns of the Second Declension ends in Consonant or Sonant, i.e. ***-n***, ***-r***, ***-s***, Occlusive (especially ***-t***), and rarely ***-l***, ***-m***. The inflection of animates is essentially the same as that of the Second or Thematic Declension.

2. Nouns of the Fourth Declension in MIE correspond to Latin nouns of First Declension in *-r* (cf. Lat. *magister*, *magistrī*), and Third Declension in consonant (cf. Lat. *prīnceps*, *prīncipis*, *phoenīx*,

phoenīcis, *cōnāmen*, *cōnāminis,* etc.), and to the Ancient Greek Labial and Velar declension (cf. Gk. Ἄραψ, Ἄραβος, or Φρύξ, Φρυγός).

The Nominative ending is ***-s*** (with Occlusive, ***-m***, ***-l***), but there is also a Nominative Sg. with pure stem vowel (desinence -ø and lengthened ending vowel), so that the full-grade Vocative is differentiated. And there is no confusion in Nom./Gen., as ***-s*** has a different vowel grade (Nom. ***-s***, Gen. ***-es*** or ***-os***).

Consonant-Declension Paradigm

	Occlusive, -m, -l	***-r, -n, -s***
NOM.	***-s***	*-Ø (long vowel)*
ACC.	***-ṃ***	
VOC.	*-Ø*	*-Ø (full grade)*
GEN.-ABL.	***-e/os***	
DAT.	***-ei***	
LOC.	***-i***	
INS.	***-bhi, (-mi)***	

NOTE. These specialized Oblique endings were probably already splitting in Late PIE, at least in a dialect-to-dialect basis. Compare Indo-Iranian Dat. *-ei*, Loc. *-i*; Italic Dat. *-ei*, Loc.-Inst.-Abl. *-i*; Greek Inst. *-bhi*; in Balto-Slavic Inst. *-mi*, and so on. There is no exact original pattern that includes every dialect, but we may reliably imply an original Oblique declension ***-i***, which had split into ***-i*** (Loc.) and ***-ei*** (Dat.) already in Late PIE.

3. Inanimates have pure vowel stems with different vocalic grades. In nouns there should be no confusion at all, as they are different words, but neuter adjectives could be mistaken in Nominative or Vocative Animate. Distinction is thus obtained with vocalism, as in Animate ***-ōn*** vs. Inanimate ***-on***, Animate ***-ēs*** vs. Inanimate ***-es*** (neuter nouns in ***-s*** are in ***-os***).

4.5.2. IN OCCLUSIVE, M, L

1. Nominative Sg.Animates in ***-s***; as, **dōms**, *house*, **pōds**[37], *foot*, **bhṛghs**[128], *fort*, **dōnts**[173], *tooth*.

2. Accusative Singular Animate in ***-ṃ***; as, **dōmṃ**, **pōdṃ**, **bhṛghṃ**, **dōntṃ**.

3. Vocative Singular Animate in -ø; a sin **pōd**, **bhṛgh**, **dōnt**.

4. The Nom.-Acc.-Voc. Singular Inanimate in -ø, with various vocalisms; as in **kṛd**[153]

5. Genitive Singular in ***-es/-os***; as in **ped(e)s/pedés**, **dent(e)s/dentés**, **dem(e)s/demés**.

6. Dative Singular in ***-ei***: **pedéi**, **dontéi**, **bhrghéi**, etc.

7. Locative Singular in ***-i***: **pedí/pédi**, **dōnti**, **bhrghí**, etc.

	m. ***ped-***	*m.* ***dōnt-***	*n.* ***kṛd-***
NOM.	**pōds**	**dōnts**	**kṛd**
ACC.	**pōdm̥**	**dōntm̥**	**kṛd**
VOC.	**pōd**	**dōnt**	**kṛd**
GEN.	**pedés**	**dentós**	**kṛdós**
DAT.	**pedéi**	**dentéi**	**kṛdéi**
LOC.	**pedí**	**dentí**	**kṛdí**
INS.	**pedbhí**	**dentmí**	**kṛdbhí**
ABL.	**pedós**	**dentós**	**kṛdós**

4.5.3. IN R, N, S

1. Nominative Singular Animate in -ø with lengthened vowel; as in **mātḗr** (also ***mā́tēr***[14]), *mother*, **kwōn**[154], *dog*, **ghesōr**, *hand* (cf. Hitt. *kiššar*, Gk. *kheirí*), **orōn**[139], *eagle*.

Stems in **s**, **n̥dhergenḗs**, *degenerate*, **genōs**[32], *kin*, **ausōs**[69], *dawn*, **nebhōs**[31], *cloud*.

2. Accusative Sg. Animate in ***-m***; as in **māterm̥**, **kwonm̥**, **n̥dheregenesm̥**, **áusosm̥**, **gheserm̥**.

3. Vocative Singular Animate in -ø with full vowel; as in **mātér**, **kuon** [‘*ku-on*], **ausos**.

4. The Nom.-Acc.-Voc. Singular Inanimate in -ø; as in **nŏmn̥**, **genōs**.

The adjectives in **-s** have the neuter in ***-es***: **sugenés** (from *h₂su-*, cf. Gk. *eugenes*, O.Ind. *suganaḥ*)

5. Genitive Singular in ***-es***/***-os***; as in **mātrés/mātrós** (also **mātŕs**, **patŕs**, **bhrātr̥s**, etc.), **kunés/kunós**, **nomn̥és/nomn̥ós**, **ornés**.

Nouns and adjectives in ***-s*** have an ***e***, not an ***o***, as the final stem vowel: **genesés**, but **ausosés**.

6. Dative Singular in ***-ei***, Locative Singular in ***-i***: **māterei, māteri**, **kwonei**, **ausoséi**, **ghesri** etc.

8. Instrumental Singular in ***-bhi*** (dialectal ***-mi***): **mātrbhí, kunbhí, ausosbhí**, etc.

	m. ***kwon***	*f.* ***māter***	*n.* ***genes***	*n.* ***nŏmn̥***	*adj. m.* ***ndhergenes***
NOM.	**kwōn**	**mātḗr**	**genōs**	**nŏmn̥**	**n̥dhergenḗs**
ACC.	**kwonm̥**	**māterm̥**	**genōs**	**nŏmn̥**	**n̥dhergenesm̥**
VOC.	**kwon**	**mātér**	**genōs**	**nŏmn̥**	**n̥dhergenés**
GEN.	**kunés**	**mātrós**	**genesós**	**nŏmn̥ós**	**n̥dhergeneses**
DAT.	**kunéi**	**mātréi**	**geneséi**	**nŏmn̥éi**	**n̥dhergenēsei**
LOC.	**kwoni/kuní**	**māt(é)rí**	**genesí**	**nŏmn̥í**	**n̥dhergenēsi**
INS.	**kunmí**	**mātrbhí**	**genesmí**	**nŏmn̥bhí**	**n̥dhergenēsmi**
ABL.	**kunós**	**mātrós**	**genesós**	**nŏmn̥ós**	**n̥dhergenēsos**

4.5.4. THE PLURAL IN THE FOURTH DECLENSION

With a paradigm common to the Third Declension, here are some inflected examples.

	m. ***kwon***	*f.* ***māter***	*n.* ***genos***	*m.* ***dōnt-***	*n.* ***nomn-***
NOM.	**kwones**	**māteres**	**génesa**	**dōntes**	**nōmn̥a**
ACC.	**kwonm̥s**	**mātr̥m̥s**	**génesa**	**dōntm̥s**	**nōmn̥a**
VOC.	**kwones**	**māteres**	**génesa**	**dōntes**	**nōmn̥a**
GEN.	**kunóm**	**mātrṓm**	**genesṓm**	**dōntóm**	**nōmn̥óm**
DAT.	**kunmós**	**mātrbhiós**	**genesbhós**	**dōntbhiós**	**nōmn̥bhiós**
LOC.	**kunsú**	**mātr̥sú**	**genessí**	**dōntsí**	**nōmn̥sí**
INS.	**kunmí**	**mātr̥bhís**	**genesbhís**	**dōntbhís**	**nōmn̥bhís**
ABL.	**kunmós**	**mātr̥bhiós**	**genesbhiós**	**dōntbhiós**	**nōmn̥bhiós**

4.6. VARIABLE NOUNS

4.6.1. Many nouns vary in Declension, and they are called *Heteroclites*.

Note. i.e., "nouns of different inflections" (ἕτερος, "*another*", κλινω, "*to inflect*")

4.6.2. Heteroclitic forms are isolated and archaic, given only in Inanimates, as remains of an older system, well attested in Anatolian.

4.6.3. They consist of one form to mark the Nom.-Acc.-Voc, and another for the Obliques, as e.g.

a. Opposition ø-***n***: **dēru**, **drunós**[54], *tree*; **ōs**, **ōsonós**, *mouth*.

b. Opposition ***r*-*(e)n***: **aghōr**, **aghn̥ós**[60], *day*; **bhēmōr**, **bhēmn̥és** *thigh*, **jēqr̥ (t)**, **jēqn̥(t)ós**, *liver*, **wodōr**, **wodenós** (cf. Got. *wato*/*watins*), **udōr**, **udn̥(t)ós** (cf. Gk. *údōr*, *údatos*), *water*, etc.

NOTE. For PIE root **bhed(h)**, cf. Slav. *bedro*, Lat. *femur*, *feminis*/*femoris*; for PIE **jēqr̥**, cf. Gk. *hēpar*, Lat. *iecur*, Av. *yākarə*, for **jeqr̥** cf. Ved. *yákr̥t*, and compare its Obl. Skr. *yakn-ás*, Gk. *hḗpat-os*<**hēpn̥*(*t*).

4.6.4. The *Heteroclites* follow the form of the Genitive Singular when forming the Obliques. That is so in the lengthening before declension, vocalism, and in the accent too.

4.7. VOCALISM BEFORE THE DECLENSION

4.7.1. The Predeclensional vowel is that which precedes the ending, even the ø ending; i.e., we say that Nom. **patḗr**[57] has a long predeclensional vowel; that the Vocative **patér** has a full one, and that **patŕs** has it ø. Other examples of the three possibilities are ***pōd***, ***pod*** and ***-pd-***.

NOTE 1. The vocalic changes in timbre and grade aren't meaningful by themselves, they are multifunctional: they can only have meaning in a specific declension, and it is not necessarily always the same. They are thus disambiguating elements, which help distinguish homophones (i.e., words that sound alike).

NOTE 2. The lengthening of the predeclensional vowel in **r**/**n**/**s** stems has been explained (Szemerényi's law) as a consequence of an older (*regular*) Nom. -**s** ending; as PIH *ph₂tér-s→ph₂tēr*, *kwōn-s→kwōn*, etc.

4.7.2. Two kinds of nominal inflection have no alternating vowel: that in **i**, **u**, and that of the participles of Reduplicates.

4.7.3. Stems in **r** and **n** have two possibilities, both with a Nom. sg. in -Ø and lengthened vowel.

1. Nom. with lengthened vowel, Acc., Voc. with full vowel, and Gen. -Ø. The timbre can be ***e*** or ***o***, depending on the words.

a. In **r**, as in Nom. **mātḗr**, Acc. **māterṃ**, Voc. **mātér**, Gen. **mātrós**.

b. In **n**, in PIE root stems, as in *dog*: Nom. **kwōn/kuwṓn**, Acc. **kwonṃ/kuwonṃ**, Voc. **kuon/kuwon**, Gen. **kunós**.

2. Sometimes, the Genitive has a full grade as the Accusative and the Vocative. This grade is redundant, not necessary for the disambiguation of the Genitive from the Nominative. There are, as above, different timbres ***e*** and ***o***, sometimes ***o*** in Nom.-Acc.-Voc., and ***e*** in Gen., sometimes ***o*** in Acc.-Voc.-Gen. and ***e*** in Obl.

4.7.4. There is usually the same vocalism in nouns ending in Occlusive.

An exception is made in the adjectives and participles in -***nt***, which present long vowel in the Nominative, full vowel in Accusative and Vocative, and zero-grade in the Genitive; cf. **bherṓnts/bherontṃ/bherṇtós** or **bherḗnts/bherentṃ/bherṇtós**.

NOTE. There are remains of what seems to be an older alternating vocalism in monosyllabics. The variants **ped**/**pod**, **neqt**/**noqt**, etc. suggest an original (i.e. IE II) paradigm Nom. ***pōd-s***, Acc. ***pōd-ṃ***, Gen. ***ped-ós***. This is, again, mostly irrelevant for Modern Indo-European, in which both alternating forms may appear in frozen vocabulary, either with **o** or **e**.

4.7.5. Stems in **s** do not present a zero-grade. Animates, as already said, oppose a lengthened-vowel Nominative to the other cases, which have full vowel, i.e., Nom. -***ēs***, rest -***es***, Nom. -***ōs***, rest -***os***.

4.7.6. We know already what happens with stems in **i**, **u**, which have two general models:

1. Nom. -***i-s***, Acc. -***i-m***, Voc. -***ei*** or -***i***, Gen. -***i-os*** / Nom. -***u-s***, Acc. -***u-m***, Voc. -***ei*** or -***i***, Gen. -***u-os***

2. Nom. -***i-s***, Acc. -***i-m***, Voc. -***eu*** or -***u***, Gen. -***ei-s*** / Nom. -***u-s***, Acc. -***u-m***, Voc. -***eu*** or -***u***, Gen. -***eu-s***

NOTE. This is an inversion of the normal situation: the Nom.-Acc.-Voc. has zero-grade (but for some Voc.), the Gen. ø or full. Distinction is obtained through alternating forms; as in Voc., in which the ending -***ei*** distinguishes it from Neuters in -***i***; or with changes of ***e***/***o***.

4.7.7. Those in Long Diphthong alternate the diphthong (or long vowel) with ***j*** or ***w***, which represents the ø-grade; as in **djēus**[63], **djēm**, **diwós**; or **nāu-s**[127], **naw-ós**. Uniform vocalism (i.e., no vowel change) is generalized, though.

NOTE. These diphthongs reflect an older situation, of a vowel plus a laryngeal, and they are probably related to nouns in **a**, and also to those in **e** and **o**.

4.7.8. Stems in **ā** usually maintain an uniform vocalism: Nom.-Voc. -***ā***, Acc. -***ām***, Gen. -***ās***. But those in **iă̆/ī** may alternate Nom.-Voc. -***iă̯***/-***ī***, Gen. -***iās***.

There are also remains of -***ā*** in Voc. (and even Nom.), as well as -***ai***, cf. Gk. γυναι (*gunai*, an example also found in Armenian), Gk. Ευρωπαι (*Eurōpai*) and other forms in -***ai*** in Latin (as *rosae*<-**rosai*), Old Indian and other IE dialects. The -**ē** and -**ō** endings have also traces of alternating phonetic changes.

NOTE. In O.Gk. Εὐρώπη (*Eurōpē*), Εὐρώπα (*Eurōpā*), the Genitive is *Eurōp-ai*, which gives also the thematic adjective *Eurōpai-ós*, hence Modern Indo-European adjective ***Eurōpaiós***, ***Eurōpaiā́***, ***Eurōpaióm***, and nominalized forms (with accent shift) ***Eurōpáios***/***Eurṓpaios***, -***om***, -***ā***. In Latin this -***ai-o***- corresponds to -*ae-u*-, and so *Europae-us*, -*a*, -*um*. See also § 1.7.7.

4.7.9. Finally, the Neuter stems distinguish the Nom.-Acc.-Voc. forms by having a predeclensional vowel, normally ø (the ending is also ø, but for thematic stems), as we have seen in nouns ending in **i**, **u**, **r**, **n** and Occlusive; as **madhu**, **nŏ̄mn**, **kṛ̆d**. There are exceptions, though:

1. Nouns with lengthened or full vowel; as, Gk. **udōr**[61] (cf. O.Ind. *áhar*) for EIE **udros**.

2. Nouns in **s** cannot have -ø-, they have -***o***- in nouns, -***e***- in adjectives; as in **genōs**, *race*; adj. **sugenḗs**, *of good race*.

3. Finals **e**/**o** have a uniform predeclensional vowel, normally ***o***, plus Nom.-Acc.-Voc ending -***m***.

NOTE 1. In the Oblique cases, neuters are declined like the animates.

NOTE 2. There are no neuters in -**a**, but for those which became common plural nouns, as e.g. n. **Bubliă̆**, *Bible*, lit."*the books*", from Gk. ***bubliom***, *book*.

4.8. VOCALISM IN THE PLURAL

4.8.1. Vocalism in the Plural is generally the same as in the Singular. In Nominative-Vocative and Accusative, the straight cases, the full vowel grade is general (there is no Nominative with lengthened vowel), and in the Genitive the zero-grade is general. But there are also some special situations:

1. There are examples of full vowel in Nom.-Voc.; stems in -***ei-es*** and -***eu-es*** (in **i**, **u** stems); in -***er-es***, -***or-es***; -***en-es***, -***on-es***; -***es-es***.

2. Sometimes, the vowel timbre varies; as, **akmōn**-**ákmenes**, or **kāmōn**-**kāmenes**, (*sharp*) *stone*, which give Lith. *akmuö*/*akmenes* and O.C.S. *kamy*/*kamene* respectively, and so on.

3. There are also some zero-grades, as Gk. *óies*, and some analogical forms, as Gk. *kúnes*, Lat. *carnes*.

4.8.2. The ø-grade, an exception in the Nom.-Voc., is usual in Accusative Plural in **i**, **u** stems; as in derivatives with forms -***i***-***ns***, -***u***-***ns***.

As a general rule, then, the Plural has a full vowel: **ákmenes**, **māteres**, etc.

4.8.3. The stems in **s** of Inanimates in the Nom.-Acc.-Voc. Plural present -***es***-***a***, -***es***-***ā***: they follow the vowel timbre in the whole inflection, but for the Nom.-Acc.-Voc. Singular in -***os***. The rest are in -ø.

4.8.4. The general vocalism of the Genitive Plural is ø. But the full grade is sometimes found, too; as in **ákmenom**. The most common stems in which the full grade can be found are **n** and sometimes **r**; as in **mātrṓm**, which could also be **māterōm**.

To sum up, Nominative Plural is usually opposed to Nominative Singular, while Genitive and Accusative tend to assimilate Singular and Plural. When the last are the same, full vowel is found in the Accusative, and ø in the Genitive.

4.8.5. In the Obliques, where there is a distinction, the form is that of the Nominative Singular Animate or Nom.-Acc.-Voc. Singular Inanimate; and when, in any of them, there is a distinction between full- and ø-grade, they take the last. An example of Animates is **ped**-, which gives Nom. **pōds**, Gen. **pedós**, Obl. Plural **podbhís**. In Inanimates it happens with **s** stems which have -***os*** in Nom.-Acc. and -***es*** in the other cases; as in **genōs**, **genesí**, **genesbhós**. And in Heteroclites that oppose an -***n*** in the cases that are not Nom.-Acc.-Voc. with **r**, **s** or ø.

The zero-grade in the predeclensional syllable is very common, whether it has the Genitive vocalism or the full one; as, **kwōn**/**kunsí**. This ø-grade is also found in **r** stems, as in **patrós**, **patrbhiós**. And so in **i**, **u**, stems too, in Nom. and Acc. Sg., while ***e*** is otherwise found (in Nom. Pl., and sometimes in Gen. Sg. and Pl.). The Obliques Plural have ø; as, **egnibhios**, **egnisi**, **egnibhis**; **ghóstibhis**, etc.

4.9. ACCENT IN DECLENSION

4.9.1. Just like vocalic grades, the accent is used (normally redundantly) to oppose the *Straight* cases (Nom.-Acc.-Voc.) to the *Oblique* ones.

NOTE. This is one of the worst reconstructed parts of PIE, as each language has developed its own accent system. Only Vedic Sanskrit, Greek and Balto-Slavic dialects appear to have more or less retained the oldest accent system, and even these have undergone different systematizations, which obscure the original situation.

4.9.2. In monosyllabics, the alternating system is clearly observed:

Nom. **pōds**, Acc. **pōdm̥**, Gen. **pedés**.

Nom. **kwōn**, Acc. **kwonm̥**, Gen. **kunós**.

4.9.3. In polysyllabics, there is e.g. **dhúgatēr**[131], **dhugatrós**, etc., but also **bhrāter**, **bhrātr̥s** (cf. Skr. *bhartuḥ*, O.N. *bróðor*), or **mātŕs** (cf. O.Ind. *matúr*), **patŕs** (cf. Got. *fadrs*), and so on.

1. Stems in **i**, **u**, had probably a root accent in Nom.-Acc., and a Genitive with accent on declension, as in the rest of examples.

2. Those in **ā** are not clearly reconstructed, therefore the alternating system is maintained.

3. The Vocative could be distinguished with the accent. The general rule, observed in Skr., Gk. and O.C.S., is that it is unstressed, but for the beginning of a sentence; in this case, the accent goes in the first syllable, to differentiate it from the Nominative with accent on declension.

NOTE. The accent in the Vocative is also related to the intonation of the sentence.

4.9.4. In the Plural system no general accent pattern can be found. Each IE dialect developed its own system to distinguish the homophones in Singular and Plural. In the Obliques, however, the accent is that of the Genitive, when it is opposed to the Nom.-Acc; as in **patr̥bhiós**, **mātr̥bhís**, etc.

NOTE. The so-called *qetwóres*-rule had been observed by earlier scholars, but has only recently attracted attention. It is a sound law of PIE accent, stating that in a word of three syllables ***é-o-X*** the accent will be moved to the penultimate, ***e-ó-X***. Examples include **qetwores** < **qétwores**, *four*, singular accusatives of r-stems (cf. **swesorm̥** < **swésorm̥**, *sister*), of r/n-heteroclitica (cf. **ghesorm̥** < **ghésorm̥**, *hand*), of s-stems (cf. **ausosm̥** < **áusosm̥**). This rule is fed by an assumed earlier sound law that changes PIH **e** to PIE **o** after an accented syllable, i.e. **qetwores**<**qétwores**<****qétweres***. Rix (1988) invokes this rule to explain why in the PIE Perfect the o-grade root is accented, e.g. **gegón-**/**gégn-** < **gégen-**/**gégn-**, *created*, *engendered*.

4.10. COMPOUND WORDS

4.10.1. *Nominal Compositum* or nominal composition is the process of putting two or more words together to form another word. The new word, called a Compound Word, is either a Noun or an Adjective, and it does not necessarily have the same meaning as its parts.

4.10.2. The second term of a Compound Word may be

a) a Noun (Gk. *akró-polis*, "*high city, citadel*")

b) an Adjective (Gk. *theo-eíkelos*, "*similar to the gods*") or

c) a Noun adapted to the adjectival inflection (Gk. *arguró-tozos*, "*silver arc*")

NOTE. Sometimes a suffix is added (cf. Gk. *en-neá-boios*, "*of nine cows*"), and the Compound Noun may have a different gender than the second term (cf. Lat. *triuium*, "*cross roads*", from *trēs* and *uia*).

4.10.3. The first term is a Pure Stem, without distinction of word class, gender or number. It may be an Adverb, a Numeral (Gk. *trí-llistos, "supplicated three times", polú-llistos, "very supplicated"*) or a

Pronoun (cf. O.Ind. *tat-puruṣa*, "*that man*"), as well as a Nominal-Verbal stem with Nominal (Gk. *andra-phónos*, "*who kills a man*"), Adjetival (Gk. *akró-polis*), or Verbal function (Gk. *arkhé-kakos*, "*who begins the evil*"), and also an Adjective proper (Gk. *polú-tropos*, "*of many resources*").

4.10.4. Usually, the first term has zero-grade, cf. O.Ind. *ṇr-hán*, Gk. *polú-tropos*, Lat. *aui*-(*caps*), etc. Common exceptions are stems in **-e/os**, as Gk. *sakés-palos*, "*who shakes the shield*" (Gk. *sákos*, "*shield*"), and some suffixes which are substituted by a lengthening in **-i**, cf. Gk. *kudi-áneira*, "*who glorifies men*" (Gk. *kudrós*), Av. *bərəzi-čaxra-*, "*of high wheels*" (Av. *bərəzant-*).

In Thematic stems, however, the thematic **-e/o** appears always, as an ***o*** if Noun or Adjective (Gk. *akró-polis*), as an ***e*** if Verb (Gk. *arkhé-kakos*).

4.10.5. The first term usually defines the second, the contrary is rare; the main Compound types are:

A. Formed by Verbs, cf. O.Ind. *ṇr-hán*, Gk. *andra-phónos* (Gk. *andro-* is newer) Lat. *auceps*, O.Sla. *medv-ědĭ*, "*honey-eater*", bear, and also with the second term defining the first, as Gk. *arkhé-kakos*.

B. Nominal Determiners (first term defines the second), with first term Noun (cf. Gk. *mētro-pátōr*, "*mother's father*", Goth. *þiudan-gardi*, "*kingdom*"), Adective (cf. Gk. *akró-polis*, O.Sla. *dobro-godŭ*, "*good time*", O.Ir. *find-airgit*, "*white plant*", Lat. *angi-portus*, "*narrow pass*"), or Numeral (cf. Lat. *tri-uium*, from *uia*, Gk. *ámaza*, "*chariot frame*", from *ázōn*).

C. Adjectival Determiners (*tatpuruṣa-* for Indian grammarians), with first term Noun (cf. Gk. *theo-eíkelos*, Goth. *gasti-gods* "*good for the guests*"), Adverb (cf. O.Ind. *ájñātas*, Gk. *ágnotos*, "*unknown*", *phroudos*, "*who is on its way*", from *pró* and *odós*).

D. Possessive Compounds (*bahu-vrihi-*, "*which has a lot of rice*", for Indian grammarians), as in Eng. *barefoot*, "*(who goes) with bare feet*", with the first term Noun (cf. Gk. *arguró-tozos*, O.Sla. *črŭno-vladŭ*, "*of black hair*"), Adjective (cf. Lat. *magn-animus*, "*of great spirit*"), Adverb (cf. O.Ind. *durmanā́*s, GK. *dus-menḗs*, "*wicked*").

The accent could also distinguish the Determiners from the Possessives, as in O.Ind. *rāja-putrás*, "*a king's son*", from O.Ind. *rajá-putras*, "*who has a son as king, king's father*".

NOTE. The use of two-word compound words for personal names is common in IE languages. They are found in in Ger. *Alf-red*, "*elf-counsel*", O.H.G. *Hlude-rīch*, "*rich in glory*", O.Eng. *God-gifu*, "*gift of God*" (Eng. *Godiva*), Gaul. *Orgeto-rix*, "*king who harms*", Gaul. *Dumno-rix*, "*king of the world*", Gaul. *Epo-pennus*, "*horse's head*", O.Ir. *Cin-néide* (Eng. *Kennedy*) "*ugly head*", O.Ind. *Asva-ghosa*, "*tamer of horses*", O.Ind. *Asvá-medhas,* "*who has done the horse sacrifice*", O.Pers. *Xša-yāršā* (*Gk. Xérxēs*) *"ruler of heroes",* O.Pers. *Arta-xšacā*, "*whose reign is through truth/law*", Gk. *Sō-krátēs,* "*good ruler*", Gk. *Mene-ptólemos*, "*who faces war*", Gk. *Hipp-archus*, "*horse master*", Gk. *Cleo-patra*, "*from famous lineage*", Gk. *Arkhé-laos*, "*who governs the people*", O.Sla. *Bogu-milŭ*, "*loved by god*", Sla. *Vladi-mir*, "*peaceful ruler*", from *volodi-mirom*, "*possess the world*"; etc.

5. ADJECTIVES

5.1. INFLECTION OF ADJECTIVES

5.1.1. In Proto-Indo-European, the noun could be determined in three different ways: with another noun, as in "*stone wall*"; with a noun in Genitive, as in "*the father's house*"; or with an adjective, as in "*paternal love*". These are all possible in MIE too, but the adjective corresponds to the third way, i.e., to that kind of words – possibly derived from older Genitives – that are declined to make it agree in case, gender and number with the noun they define.

5.1.2. The adjective is from the older stages like a noun, and even today Indo-European languages have the possibility to make an adjective a noun (as *English*), or a noun an adjective (*stone wall*). Furthermore, some words are nouns and adjectives as well: **wr̥sēn**[79], *male, man*, can be the subject of a verb (i.e., a noun), and can determine a noun.

Most stems and suffixes are actually indifferent to the opposition noun/adjective. Their inflection is common, too, and differences are usually secondary. This is the reason why we have already studied the adjective declensions; they follow the same inflection as nouns.

5.1.3. However, since the oldest reconstructible PIE language there were nouns different from adjectives, as PIE **wl̥qos** or **pōds**, and adjectives different from nouns, as **rudhrós**[61], **solwós**, etc. Nouns could, in turn, be used as adjectives, and adjectives be nominalized.

NOTE. There were already in IE II some trends of adjective specialization, with the use of suffixes, vocalism, accent, and sometimes inflection, which changed a noun to an adjective and *vice versa*.

5.2. THE MOTION

5.2.1. In accordance with their use, adjectives distinguish gender by different forms in the same word, and agree with the nouns they define in gender, number and case. This is the *Motion* of the Adjective.

5.2.2. We saw in § 3.4. that there are some rare cases of Motion in the noun. Sometimes the opposition is made between nouns, and this seems to be the older situation; as, ***patḗr-mātḗr***, ***bhrātēr-swesōr***.

But an adjective distinguishes between masculine, feminine and neuter, or at least between animate and neuter (or inanimate). This opposition is of two different kinds:

a. Animates are opposed to Inanimates by declension, vocalism and accent; as, ***-os***/***-om***, ***-is***/***-i***, ***-nts***/***-nt***, ***-ēs***/***-es***.

b. The masculine is opposed to the feminine, when it happens, by the stem vowel; as, ***-os***/***-ā***, ***-nts***/***-ntia*** (or ***-ntī***), ***-us***/***-uī***.

The general system may be so depicted:

	Animates		***Inanimates***
	Maskuline	***Feminine***	***Neuter***
1.	***-os***	***-ā***	***-om***
2.	***-is***	***-is***	***-i***
3.	***-nts***	***-ntiă̆/-ntī***	***-nt***
4.	***-ēs***	***-ēs***	***-es***
5.	***-us***	***-uī***	***-u***

NOTE. The masculine-feminine opposition is possibly new to Late PIE; IE II – as the Anatolian dialects show – had probably only an Animate-Inanimate opposition. The existence of this kind of adjectives is very important for an easy communication because, for example, adjectives in ***-ā*** are only feminine (unlike nouns, which can also be masculine). An **o** stem followed by an ***-s*** in Nom. Sg. is animate or masculine, never feminine only, whilst there are still remains of feminine nouns in ***-os***.

5.2.3. Compare the following examples:

1. For the so-called *thematic adjectives*, in ***-ós***, ***-ā́***, ***-óm***, cf. **kaikós**, **-ā́**, **-óm**, *blind* (cf. Lat. *caecus*, Gk. *καικία, a north wind*), **akrós**, **-ā́**, **-óm**, *sour*, **rudhrós**, **-ā́**, **-óm**, *red*, **koilós**, **-ā́**, **-óm**, *empty* (cf. Gk. κοιλὸς, maybe also Lat. *caelus, caelum*), **elnghrós**, **-ā́**, **-óm**, *light* (cf. Gk. ἐλαφρὸς), etc. But note the older root accent in **néwos**, **-ā**, **-om**, *new*.

2. For adjectives in ***-ús***, ***-uī́***, ***-ú***, cf. **swādús**, **-uī́**, **-ú**, *sweet*, **mreghús**, **-uī́**, **-ú**, *brief*, **lechús**, **-uī́**, **-ú**, *light*, **tnús**, **-uī́**, **-ú**, *stretched*, **mldús**, **-uī́**, **-ú**, *soft*, **ōkús**, **-uī́**, **-ú**, *quick*. Other common examples include **āsús**, *good*, **bhanghús**, *dense*, **gherús**, *small, bad*, **cr̥(āw)ús**, *heavy*, **dalkús**, *sweet*, **dansús**, *dense*, **dhanghús**, *quick*, **lghús**, *light*, **maldús**, *soft*, **pnghús**, *thick*, **tegús**, *fat*, *dense*, **tanghús**, *fat*, *obese*, **udhús**, *quick*, *immediate*, etc.

5.3. ADJECTIVE SPECIALIZATION

5.3.1. The specialization of adjectives from nouns is not absolute, but a question of grade, as e.g.

1. Stems in ***-nt*** are usually adjectives, but they were also assimilated to the verb system and have become (Present) Participles.

2. Words in ***-ter*** are nouns, and adjectives are derived usually in ***-triós*** and others.

3. Nouns in ***-ti*** have adjectives in ***-tikós***, which usually has an ethnic meaning.

4. Sometimes distinction is made with alternating vowels: neuters in ***-om*** and adjectives in ***-ḗs***, ***-és***.

The accent is normally used to distinguish thematic nouns in ***-os*** with adj. in ***-ós*** (mainly ***-tós***, ***-nós***).

NOTE. There are sometimes secondary processes that displace the accent from an adjective to create a noun; cf. Gk. *leukós*, "*white*", *léukos*, "*white spot*". These correlations noun-adjective were often created, but from some point onward the derivation of adjectives was made with suffixes like ***-ment*** (***-uent***), ***-jo***, ***-to***, ***-no***, ***-iko***, etc. There are, however, abundant remains of the old identity between noun and adjective in IE III and therefore in Modern Indo-European. An example of the accent shift is that of ***Eurōpaio-***, which as an adjective is **eurōpaiós**, **eurōpaiā́**, **eurōpaióm**, while as a noun the accent is shifted towards the root.

5.4. COMPARISON OF ADJECTIVES

5.4.1. In Modern Indo-European, as in English, there are three degrees of comparison: the Positive, the Comparative and the Superlative.

NOTE. There weren't degrees in the Anatolian dialects, and therefore probably neither in Middle PIE. It is thus an innovation of Late PIE, further developed by each dialect after the great IE migrations.

5.4.2. The Comparative is generally formed by adding ***-ió-***, which has variants ***-ijó-*** and ***-ison***; as in **sen-iós** (Lat. *senior*), *older*, **meg-iós**, *bigger* (cf. "*major*"), etc.

5.4.3. The same suffix is the base for the Superlative ***-istó-*** (from ***-is-to-***); as in **mreghwistós**, *briefest*, **newistós**, *newest*, etc.

Other dialectal Superlative suffixes include: O.Ind. and Gk. ***-tero-***, Gk. ***-tm̥-to-*** (cf. Gk. *tato*) O.Ind. ***-tmo-*** (cf. O.Sla., O.Ind. ***prījó-tmos***), Ita. and Cel. ***-mo-***, ***-sṃo-***, ***-tṃo-***, and extended ***-is-sṃo-***, ***-uper-mo-***; cf. Lat. *summus* < ***súp-mos***; Skr. *ádhamas*, Lat. *infimus* < ***ńdh-ṃos***; lat. *maximus* < ***mág-s-ṃos***; lat. *intimus* (cf. *intus*)< ***én-/ń-t-ṃos***, *innermost*. These are all derivatives of the suffix ***-mós***, i.e., [*mos*] or [*m̥os*]. The suffix is also present in other adjectives, but it took usually the Superlative degree.

5.4.4. It is interesting to point out that both suffixes, ***-io-*** (also ***-tero-***) and ***-is-to-***, had probably an original nominal meaning. Thus, the elongations in ***-ios*** had a meaning; as in Latin, where ***junioses*** and ***senioses*** were used for groups of age; or those in ***-teros***, as ***mātérterā***, *aunt on the mother's side*, ***ekwā́teros***, *mule*.

NOTE 1. Probably forms like ***junioses*** are not the most common in IE, although indeed attested in different dialects; actually adjectival suffixes ***-iós***, ***-istós*** are added to the root (in e-grade) without the initial suffixes, while ***-teros*** and ***-tm̥ós*** are added with the suffixes. Compare e.g. O.Ir. *sír*, cp. *sía* <***sēiós***, '*longus, longior*'; *lán* (*plēnus* cf. *lín* '*numerus*'), cp. *lia* < ***plēiós*** (Lat *ploios*, Gk. *pléos*); cf. Lat. *ploirume*, zero-grade Lat. *maios*, O.Ir. *mía*. So, for **júwenes** we find Umb. cp. *jovie* <***jowiē-s***, O.Ir. *óac* '*iuuenis*', *óa 'iunior*'; *óam 'iuuenissimus*', O.Ind. *yúva*(*n*)- (*yū́naḥ*), cp. *yáviyas*-, sup. *yáviṣṭa-ḥ*.

NOTE 2. In Latin and Germanic, as already said, the intervocalic ***-s-*** becomes voiced, and then it is pronounced as the trilled consonant, what is known with the name of rhotacism. Hence Lat. *iuniores* and *seniores*.

5.5. NUMERALS

5.5.1. CLASSIFICATION OF NUMERALS

Modern Indo-European Numerals may be classified as follows:

I. Numeral Adjectives:

1. Cardinal Numbers, answering the question *how many?* as, **oinos**, *one*; **dwo**, *two*, etc.

2. Ordinal Numbers, adjectives derived (in most cases) from the Cardinals, and answering the question *which in order?* as, **pr̄wos**, *first*; **álteros**, *second*, etc.

3. Distributive Numerals, answering the question *how many at a time?* as, **semni**, *one at a time*; **dwini** (also ***dwisnoi***), *two by two*, etc.

II. Numeral Adverbs, answering the question *how often?* as, **smís**, *once*; **dwis**, *twice*, etc.

5.5.2. CARDINALS AND ORDINALS

1. These two series are as follows, from one to ten: [155]

	Cardinal	*Eng.*	*Ordinal*	*Eng.*
1.	**oinos**, **oinā**, **oinom**	*one*	**pr̄wós**	*first*
2.	**dwo**, **dwā**, **dwoi**	*two*	**alterós** (***dwoterós***)	*second*
3.	**trejes**, **tresrés/trisores**, **trī**	*three*	**triós**, **trit(i)ós**	*third*
4.	**qetwor** (***qetwores***, ***qetwesores***, ***qetwṓr***)	*four*	**qturós**, **qetwr̥tós**	*fourth*
5.	**penqe**	*five*	**pn̥qós**, **penqtós**	*fifth*
6.	**s(w)eks** (***weks***)	*six*	(****suksós***), **sekstós**	*sixth*
7.	**septm̥/septḿ**	*seven*	**septm̥ós**	*seventh*
8.	**oktō(u)**	*eight*	**oktōwós**	*eighth*
9.	**newn̥**	*nine*	**nown̥ós**, **neuntós**	*ninth*
10.	**dekm̥/dekḿ**	*ten*	**dekm̥ós**, **dekm̥tós**	*tenth*

NOTE. The Ordinals are formed by means of the thematic suffix ***-o***, which causes the syllable coming before the ending to have zero grade. This is the older form, which is combined with a newer suffix ***-to***. For seven and eight there is no zero grade, due probably to their old roots.

2. The forms from eleven to nineteen were usually formed by copulative compounds with the unit plus ***-dekm̥***, *ten*. [156] Hence Modern Indo-European uses the following system:

	Cardinal	*Ordinal*
11.	**óindekm̥**	**oindekm̥(t)ós**
12.	**dwódekm̥**	**dwodekm̥(t)ós**
13.	**trídekm̥**	**tridekm̥(t)ós**
14.	**qetwŕdekm̥**	**qeturdekm̥(t)ós**
15.	**penqédekm̥**	**penqedekm̥(t)ós**
16.	**séksdekm̥**	**seksdekm̥(t)ós**
17.	**septḿdekm̥**	**septm̥dekm̥(t)ós**
18.	**oktṓdekm̥**	**oktōdekm̥(t)ós**
19.	**newńdekm̥**	**newn̥dekm̥(t)ós**

3. The tens were normally formed with the units with lengthened vowel/sonant and a general -***kḿtā***/-***kómt*(*a*)**[157], *"group of ten"*, although some dialectal differences existed. [158]

	Cardinal	*Ordinal*
20.	**(d)wīkm̥tī**	**(d)wīkm̥t(m)ós**
30.	**trīkómt(ă̆)**	**trīkomtós**
40.	**qetwr̄kómt(ă̆)**	**qetwr̄komtós**
50.	**penqēkómt(ă̆)**	**penqēkomtós**
60.	**sekskómt(ă̆)**	**sekskomtós**
70.	**septm̄kómt(ă̆)**	**septm̄komtós**
80.	**oktōkómt(ă̆)**	**oktōkomtós**
90.	**newn̄kómt(ă̆)**	**newn̥komtós**
100.	**(sm̥)km̥tóm**	**km̥tom(t)ós**
1000.	**túsn̥tī**, **(sm̥)gheslo-**	**tusn̥tītós**

4. The hundreds are made as compounds of two numerals, like the tens, but without lengthened vowel. The thousands are made of the numerals plus the indeclinable **túsn̥tī**:

	Cardinal	*Ordinal*
200.	**dwokm̥tī**	**dwokm̥tós**
300.	**trikm̥tī**	**trikm̥tós**
400.	**qetwr̥km̥tī**	**qetwr̥km̥tós**
500.	**penqekm̥tī**	**penqekm̥tós**
600.	**sekskm̥tī**	**sekskm̥tós**
700.	**septm̥km̥tī**	**septm̥km̥tós**
800.	**oktōkm̥tī**	**oktōkm̥tós**

900.	**newn̥km̥tī**	**newn̥km̥tós**
2000.	**dwo/dwei/dwō túsn̥tī**	**dwo tusn̥titói**, **dwei tusn̥titā́s**, **dwō tusn̥titóm**
3000.	**trejes/trisores/trī túsn̥tī**	**trejes tusn̥tītói**, **trisores tusn̥tītā́s**, **trī tusn̥tītóm**

NOTE 1. These MIE uninflected cardinals are equivalent to most European forms; as, for *two hundred*, Lat. *quingenti*, Gk. *πεντακόσια*, and also Eng. *five hundred*, Ger. *fünfhundert*, Russ. *пятьсот*, Pol. *pięćset*, Welsh *pum cant*, Bret. *pemp-kant*. Inflected forms, such as modern Indo-European dialectal Da. *fem hundrede*, Fr. *cinq cents*, It. *cinquecento*, Spa. *quinientos*, Pt. *quinhentos*, Sr.-Cr. *petsto* (f. *pet stotina*), etc. are left for the ordinals in this Modern Indo-European system.

NOTE 2. In Germanic the hundreds are compounds made of a substantive "*hundred*", MIE ***kḿt(m̥)-radhom***, Gmc. *khund(a)-ratham*, v.s., but we have chosen this – for us more straightforward – European form, found in Italic, Balto-Slavic and Greek.

5. The compound numerals are made with the units in the second place, usually followed by the copulative **-qe**:

f. **wīkm̥tī oinā**(**-qe**), *twenty (and) one*; m. **trīkomta qetwor**(**-qe**), *thirty (and) four*; etc.

NOTE. Alternative forms with the unit in the first place are also possible in Modern Indo-European, even though most modern European languages think about numeric compounds with the units at the end. In fact, such lesser used formation is possibly the most archaic, maybe the original Late PIE. Compare e.g. for "*twenty-one*" (m.):

MIE **wīkm̥tī oinos**(**-qe**), as Eng. *twenty-one*, Swe. *tjugoett*, Nor. *tjueen*, Ice. *tuttugu og einn*, Lat. *uiginti unus* (as modern Romance, cf. Fr. *vingt-et-un*, It *ventuno*, Spa. *veintiuno*, Pt. *vinte e um*, Rom. *douăzeci şi unu*), Gk. *εἰκοσι ἑν*, Ltv. *divdesmit viens*, Russ. *двадцать один*, Pol. *dwadzieścia jeden*, etc.

For **oinoswīkm̥tīqe**, maybe the oldest form, compare Gmc. (as Ger. *einundzwanzig*, Du. *eenentwintig*, Fris. *ienentweintich*, Da. *enogtyve*), and Lat. *unus et uiginti*, Skr. *ékaviṅśati*, Bret. *unan-warn-ugent*, etc.

6. In compounds we find:

sm̥-, *one-; **du***-, ***dwi***-, *two-; **tri***-, *three-; **q(e)tur***-, *four-*

5.5.3. DECLENSION OF CARDINALS AND ORDINALS

Of the Cardinals only **oinos**, **dwo**, **trejes** (and dialectally **qetwor**), as well as (**sm̥**)**gheslós**, are declinable.

a. The declension of **oinos**, **-ā**, **-om** has often the meaning of *same* or *only*. The plural is used in this sense; but also, as a simple numeral, to agree with a plural noun of singular meaning. The plural occurs also in phrases like **oinoi alterói-qe**, *one party and the other* (*the ones and the others*).

b. The declension of **sem**- (and o-grade **sōm**-), *one*, is as follows:

PIE ***sem***-/***som***-, *one*		
NOM.	**sems**	**sōms**
ACC.	**semm̥**	**sōmm̥**
GEN.	**sm̥ós**	**somós**
D.-A.	**sm̥éi**	**soméi**
L.-I.	**sm̥í, sémi**	**somí/sōmi**

c. **Dwo**, *two*, and **trejes**, *three*, are thus declined:

	dwo			***trejes***		
	m.	*n.*	*f.*	*m.*	*f.*	*n.*
NOM.	**dwo**	**dwoi**	**dwā**	**trejes**		**trī**
ACC.	**dwom**	**dwoi**	**dwām**	**trims**		**trī**
GEN.	**dwosio**		**dwesās**	**trijom**		
D.-A.	**dwosmei**		**dwesiāi**	**tribhios**		
LOC.	**dwosmi**		**dwesiāi**	**trisu**		
INS.	**dwosmō**		**dwesiā**	**tribhis**		

NOTE. **ámbho**, *both*, is sometimes declined like **dwo**, as in Latin.

d. **Túsn̥tī** , *a thousand*, functions as an indeclinable adjective:

túsn̥tī modois, *in a thousand ways*. **kom túsn̥tī wīrōis**, *with a thousand men*

e. The ordinals are adjectives of the Fourth and Third Declensions, and are regularly declined.

6.3.2. Cardinals and Ordinals have the following uses:

a. In numbers below 100, if units precede tens, the number is generally written as one word; as in f. **dwāwīkm̥tīqe**, *twenty one*; otherwise it is separated: **wīkm̥tī dwā**(**-qe**).

b. In numbers above 100 the highest denomination generally stands first, the next second, etc., as in English; as, *1764,* **túsn̥tī septm̥km̥tī *sekskomta qetwor(-qe)***, or **túsn̥tī septm̥km̥tī *qetworsekskomtaqe***.

NOTE. Observe the following combinations of numerals with substantives:

wīkm̥tī oinos(**-qe**) **wīrōs**, or **wīkm̥tī wīrōs oinos-qe**, *21 men*.

dwo túsnti penqekm̥tī trídekm̥ cenās, *2513 women*.

c. The Proto-Indo-European language had no special words for *million*, *billion*, *trillion*, etc., and these numbers were expressed by multiplication. In Modern Indo-European they are formed with IE common loan from Italic **sm̥ghéslī** (cf. Ita. **(s)mʲghēlī* > O.Lat. *mīhīlī* > Lat. *mille*), a derivative of **sm̥+gheslos** meaning "*one thousand*"; as, **sm̥ghesliōn**, *million*, **dwighesliōn**, *billion*, **trighesliōn**, *trillion*, etc. For the word *milliard*, *one thousand million*, **sm̥ghesliardos** might also be used.

d. Fractions are expressed, as in English, by cardinals in the numerator and ordinals in the denominator. The feminine gender is used to agree with **partis**, *part*, either expressed (with adjective) or understood (nominalized): *two-sevenths*, **dwā séptm̥āi** (or ***dwā septm̥ā́i partes***); *three-eighths*, **trejes oktowāi** (or ***trejes oktowā́i pártes***).

One-half is (**dwi**)**medhjā́ partis** or (**dwi**)**medhjom**.

NOTE. When the numerator is one, it can be omitted and **partis** must then be expressed: *one-third*, **tritā́ partis**; *one-fourth*, **qetwr̥tā́ partis**.

5.5.4. DISTRIBUTIVES

1. Distributive Numerals are usually formed with the zero-grade forms and the suffix **-ni**.

NOTE. These answer to the interrogative **qóteni?**, *how many of each?* or *how many at a time?*

1.	**semni**, *one by one*	20.	**(d)wikḿtīni**
2.	**dwi(s)ni**, *two by two*	21.	**(d)wikḿtīni semni-qe**, etc.
3.	**tri(s)ni**, *three by three*	30.	**trīkm̥tni**
4.	**qturni**	40.	**qetwr̥km̥tni**
5.	**pn̥qeni**	50.	**penqekm̥tni**
6.	**sek(s)ni** (older ****suksni***)	60.	**sekskm̥tni**
7.	**séptm̥ni**	70.	**septm̥km̥tni**
8.	**óktōni**	80.	**oktōkm̥tni**
9.	**néwn̥ni**	90.	**newn̥km̥tni**
10.	**dékm̥ni**	100.	**km̥tm̥ni**
11.	**semni dékm̥ni**	200.	**dukm̥tm̥ni**
12.	**dwini dékm̥ni**	1.000	**túsn̥tīni**
13.	**trini dékm̥ni**	2.000	**dwini túsn̥tīni**
14.	**qturni dékm̥ni**, etc.	10.000	**dékm̥ni túsn̥tīni**

NOTE 1. The word for "*one by one*" can also be **sémgoli**, *one*, *individual*, *separate*, as Lat. *singuli*, from **semgolós**, *alone*, *single*, formed with suffixed ***sem-go-lo-***, although that Lat. *-g-* is generally believed to be a later addition, i.e. proper MIE ***sémoli***, from ***sem-o-lós***.

NOTE 2. Suffixed **trisni**, *three each*, is found in Lat. *trīni*, Skr. *tríṇi*, giving derivative **trisnos**, *trine*, as Lat. *trinus*, as well as **trísnitā**, *trinity*.

2. Distributives are used mainly in the sense of *so many apiece* or *on each side*, and also in multiplications.

5.5.5. NUMERAL ADVERBS

The Numeral Adverbs answer the question *how many times? how often?*, and are usually formed with **i** and sometimes a lengthening in ***-s***.

1.	**sm̥ís**, *once*	20.	**(d)wīkm̥tīs**
2.	**dwis**, *twice*	21.	**(d)wīkm̥tī sm̥ís-qe**,
3.	**tris**, *thrice*	30.	**trīkomti**
4.	**qeturs**, **qetrus**	40.	**qetwr̥komti**
5.	**penqei**	50.	**penqekomti**
6.	**sek(s)i**	60.	**sekskomti**
7.	**séptm̥i**	70.	**septm̥komti**
8:	**oktōi**	80.	**oktōkomti**
9.	**néwn̥i**	90.	**newn̥komti**
10.	**dékm̥i**	100.	**km̥tomi**
11.	**óindekm̥i**	200.	**dukm̥tomi**
12.	**dwódekm̥i**	1.000	**túsn̥tīs**
13.	**trídekm̥i**	2.000	**dwis túsn̥tīs**
14.	**qetúrdekm̥i**, *etc.*	10.000	**dékm̥i túsn̥tīs**

5.5.6. OTHER NUMERALS

1. The following adjectives are called Multiplicatives, formed in PIE with common suffix ***-io***, and also dialectally in compound with PIE root **pel-**[159], *fold*, as zero-grade Gk., Ita., Gmc. and Ira. in ***-plŏs***, full-grade Gk., Gmc. and Cel. in suffixed ***-pol-t-os***:

semiós, sm̥plós, **óinpoltos**, *simple*, **semolós**, *single*, **oinikós**, *unique*; **dwoiós**, **dwiplós/duplós**, **dwéipoltos**, *double*, *twofold* (for full-grade ***dwéi-plos***, cf. Goth. *twei-fls*, O.H.G. *zvī-fal*, "*doubt*", Av. *bi-fra-*, "*comparison*"); **treijós**, **triplós**, **tréjespoltos**, *triple*, *threefold;* **qetworiós**, **qeturplós**, **qétworpoltos**, *quadruple*, *fourfold*, etc.; **ml̥tiplós**, **ml̥tipléks**, *multiple*, **mónoghopoltos**[160], *manifold*, etc.

NOTE. For **óinikos**, *any*, *anyone*, *unique*, compare Gmc. *ainagas* (cf. O.S. *enig*, O.N. *einigr*, O.E. *ænig*, O.Fris. *enich*, O.H.G. *einag*, Du. *enig*, Eng. *any*, Ger. *einig*), Lat. *unicus*; also O.Ir. *óen* into Sco. *aon*, from **oinos**, as Welsh *un*.

2. Other usual numerals (from Latin) are made as follows:

a. Temporals: **dwimós**, **trimós**, *of two or three years' age*; **dwiatnis**, **triatnis**, *lasting two or three years* (from **atnos**[62]); **dwimēnsris**, **trimēnsris**, *of two or three months* (from **mēns**[61]); **dwiatniom**, *a period of two years* , as Lat. *biennium*, **sm̥gheslatniom**, *millenium*.

b. Partitives: **dwisnāsios**, **trisnāsios**, *of two or three parts* (cf. Eng. *binary*).

c. Other possible derivatives are: **oiniōn**, *unity, union*; **dwisniōn**, *the two (of dice)*; **pṛwimanos**, *of the first legion*; **pṛwimāsiós**, *of the first rank*; **dwisnos** (distributive), *double*, **dwisnāsiós**, *of the second rank*, **tritāsiós**, *of the third rang,* etc.

NOTE 1. English *onion* comes from O.Fr. *oignon* (formerly also *oingnon*), from Lat. *unionem* (nom. *unio*), colloquial rustic Roman for a kind of onion; sense connection is the successive layers of an onion, in contrast with garlic or cloves.

NOTE 2. Most of these forms are taken from Latin, as it has influenced all other European languages for centuries, especially in numerals. These forms are neither the only ones, nor are they preferred to others in this Modern Indo-European system; they are mainly indications. To reconstruct every possible numeral usable in Indo-European is not the aim of this Grammar.

6. PRONOUNS

6.1. ABOUT THE PRONOUNS

6.1.1. Pronouns are used as Nouns or as Adjectives. They are divided into the following seven classes:

1. Personal Pronouns: as, **egő**, *I*.

2. Reflexive Pronouns: as, **swe**, *himself*.

3. Possessive Pronouns: as, **mos**, *my*.

4. Demonstrative Pronouns: as, **so**, *this*; **i**, *that*.

5. Relative Pronouns: as, **qis**, *who*.

6. Interrogative Pronouns: as, **qis?**, *who*?

7. Indefinite Pronouns: as, **áliqis**, *some one*.

6.1.2. Pronouns have a special declension.

6.2. PERSONAL PRONOUNS

6.2.1. The Personal pronouns of the first person are **egő**, *I*, **wejes**, *we*; of the second person, **tū**, *thou* or *you*, **juwes**, *you*. The personal pronouns of the third person - *he*, *she*, *it*, *they* - are wanting in Indo-European, an anaphoric (or even a demonstrative) being used instead.

NOTE. IE III had no personal pronouns for the third person, like most of its early dialects. For that purpose, a demonstrative was used instead; as, from ***ki***, ***id***, cf. Anatolian *ki*, Gmc. *khi*-, Lat. *cis*-, *id*, Gk. *ekeinos*, Lith. *sis*, O.C.S. *si*, etc. It is this system the one used in Modern Indo-European; although no unitary form was chosen in Late PIE times, the general pattern (at least in the European or Northwestern dialects) is obvious.

6.2.3. The Personal (Non-Reflexive) Pronouns are declined as follows (with *tonic* variants in italic):

1st PERSON	*Singular* ***eg***-, ***me***-[161]	*Plural* ***we***-, ***ns***-[162]
NOM.	**egő**, **egóm**, *I*	**wejes**, **ṇsmé**, *we*
ACC.	**mewóm**; ***me***, *me*	**nōms**, **ṇsmé**; ***nos***, *us*
GEN.	**mene**; ***mo***, ***mei***, *of me*	**ṇseróm**; ***nos***, *of us*
DAT.	**meghei**; ***moi***	**ṇsméi, nosbhos**
LOC.	**moí**	**ṇsmí, nossi**
INS.	**moio**	**nosbhis**
ABL.	**med**	**ṇsméd**

2nd PERSON	*Singular* ***tu-***, ***te-***[163]	*Plural* ***ju-***, ***ws-***[164]
NOM.	**tū**, *thou*	**juwes**, **jusmé**, *you*
ACC.	**tewóm;** ***t(w)e***, *thee*	**wōms**, **jusmé**; ***wos***, *you*
GEN.	**tewe**; ***t(w)o, t(w)ei***, *of thee*	**wesróm**; ***wos***, *of you*
DAT.	**tebhei**; ***t(w)oi***	**jusméi**, **wosbhos**; ***wos***
LOC.	**t(w)eí**, **t(w)oí**	**jusmí, wossi**
INS.	**t(w)oio**	**wosbhis**
ABL.	**t(w)ed**	**jusméd**

NOTE 1. There is probably an original (regular) Acc. Pl. ending ****nos-m-s*** → **nōms** and ****wos-m-s*** → **wōms**. For detailed etymologies of these forms, see <http://dnghu.org/indoeuropean_personal_pronouns.pdf>.

NOTE 2. Other attested pronouns include 1st P. Nom. **eghóm** (cf. O.Ind. *ahám*, Av. *azəm*, Hom.Gk. *εγων*, Ven. *ehom*); Dat. sg. **meghei**, **tebhei**, **sebhei** in Osco-Umbrian and Slavic; ***-es*** endings in Nom. pl., **nsmés**, **jusmés**, attested in Att.-Ion. Gk. and Gothic. Also, Osco-Umbrian and Old Indian show variant (tonic or accented) series of Acc. Sg. in ***-m***, as ***mēm*(*e*)**, ***twēm***, ***tewe***, ***usóm***, ***s(w)ēm***. The 1st Person Dative form is often found reconstructed as ****mébhi***/****mébhei***, following the second form **tébhei** – for some scholars also ****tébhi***.

For the Personal Pronouns of the third person singular and plural, the demonstrative **i** is used. See §6.5 for more details on its use and inflection.

a. The plural **wejes** is often used for the singular **egṓ**; the plural **juwes** can also be so used for the singular **tū**. Both situations happen usually in formal contexts.

b. The forms **nseróm**, **wesróm**, etc., can be used partitively:

óinosqisqe n̥seróm, *each one of us*.

wesróm opniom, *of all of you*.

c. The genitives **mene**, **tewe**, **n̥seróm**, **wesróm**, are chiefly used objectively:

es mnāmōn n̥seróm, *be mindful of us*.

6.3. REFLEXIVE PRONOUNS

6.3.1. Reflexive Pronouns are used in the accusative and the oblique cases to refer to the subject of the sentence or clause in which they stand; as, **s(w)e lubhḗieti**, *he/she loves himself/herself*; **sewe bhāmi**, *I talk about (of) me*, and so on.

a. In the first and second persons, the oblique cases of the personal pronouns were also commonly used as Reflexives: as, **me widēiō** (for **se widēiō**), *I see myself*; **nos perswādēiomos** (for **swe perswādḗiomos**), *we persuade ourselves*, etc.

b. The Reflexive pronoun of the third person has a special form used only in this sense, the same for both singular and plural. It is thus declined:

swe [165]

ACC.	**s(w)e**, *myself*, *yourself*, *himself/herself/itself*, *ourselves*, *yourselves*, *themselves*.
GEN.	**sewe**, *of myself*, *yourself*, *himself/herself/itself*, *ourselves*, *yourselves*, *themselves*.
DAT.	**sebhei**, **s(w)oi**, *to myself*, *yourself*, *himself/herself/itself*, *ourselves*, *etc.*
LOC.-INS.	**s(w)oí**, *in/with myself*, *yourself*, *himself/herself/itself*, *ourselves*, *etc.*
ABL.	**swed**, *by/from*/etc. *myself*, *yourself*, *himself/herself/itself*, *ourselves*, *etc.*

6.4. POSSESSIVE PRONOUNS

6.4.1. The main Possessive pronouns in Modern Indo-European are:

1st PERSON	**mewijós, meniós**; ***(e)mos***,	**ṇs(e)rós, *nos***, *our*
2nd PERSON	**tewijós, *t(e)wos***, *thy*, *your*	**us(e)ros, usós**, *your*
REFLEXIVE	**sewijós**, ***swos***, *my*, *your*, *his/her/its, our, your, their*	

These are really adjectives of the first type (**-ós**, **-ā́**, **-óm**) , and are so declined.

NOTE 1. There are older Oblique singular forms which were assimilated to the thematic inflection by some Indo-European dialects, as **moi**, **toi**, **soi**, and its derivatives with ***-s***, ***-os***, ***-w-***, etc. Forms in ***-s-(e)ros*** are sometimes reconstructed along with another common ***-s-t(e)ros***, as from Lat. *nostrum*, Cel. *aterom*, etc.

NOTE 2. PIE **sewijós**, ***swos*** is used only as a reflexive pronoun, referring to the subject of the sentence. For a possessive pronoun of the third person not referring to the subject, the genitive of a demonstrative must be used. Thus, (**i**) **paterṃ swom chenti**, (*he*) *kills his* [*own*] *father*; but (**i**) **paterṃ eso chenti**, (*he*) *kills his* [*somebody* (m.) *else's*] *father*.

6.4.3. Other forms are the following:

a. A possessive **qosós**, **-ā́**, **-óm**, *whose*, is formed from the genitive singular of the relative or interrogative pronoun (**qi**/**qo**). It may be either interrogative or relative in force according to its derivation, but is usually the former.

b. The reciprocals *one another* and *each other* may be expressed with **meitós** (cf. Goth. *missō*, O.Ind. *mithá-*, Lat. *mūtuus*, Ltv. *mite-*, Ir. *mith-*, Bal-Sla. *meitu-*, etc.) or other common expressions, as Lat. ***enter s(w)e*** or ***álteros***...***álterom***, Gmc. **oinos**...**álterom** (cf. Eng. *one another*, Ger. *einander*), etc.

álteros álterī automs déukonti[166] (or **oinos álterī automs déukonti**), *they drive each other's cars* (*one... of the other*);

enter se lubhḗionti (or **lubhḗionti álteros álterom**), *they love one another* (*they love among themselves*); and so on.

6.5. ANAPHORIC PRONOUNS

6.5.1. Anaphora is an instance of an expression referring to another, the weak part of the deixis. In general, an anaphoric is represented by a pro-form or some kind of deictic. They usually don't have adjectival use, and are only used as mere abbreviating substitutes of the noun.

NOTE. The old anaphorics are usually substituted in modern Indo-European dialects by demonstratives.

They are usually integrated into the pronoun system with gender; only occasionally some of these anaphorics have been integrated into the Personal Pronouns system in Indo-European languages.

6.5.2. Modern Indo-European has a general anaphoric pronoun based on PIE root **i**. It can also be added to old **e** forms, hence **ei**.

NOTE. This root **i** is also the base for common PIE relative **jo**.

6.5.3. The other demonstrative, **so**/**to**, functions as anaphoric too, but tends to appear leading the sentence, being its origin probably the relative. They are also used for the second term in comparisons.

NOTE. Modern IE languages have sometimes mixed both forms to create a single system, while others maintain the old differentiation.

6.6. DEMONSTRATIVE PRONOUNS

6.6.1. The Demonstrative Pronouns **so**, *this*, and **i**, *that*, are used to point out or designate a person or thing for special attention, either with nouns, as Adjectives, or alone, as Pronouns, and are so declined:

so/**to**[167], *this*

	Singular			*Plural*		
	m.	*n.*	*f.*	*m.*	*n.*	*f.*
NOM.	**so**	**tod**	**sā**	**toi**	**tā**	**tāi**/**sāi**
ACC.	**tom**	**tod**	**tām**	**toms**	**tā**	**tāms**
GEN.	**tosio**		**tesās**	**tesom**		**tesom**
DAT.	**tosmōi**		**tesiāi**	**toibh(i)os**, ***toimos***		**tābh(i)os**, ***tāmos***
LOC.	**tosmi**		**tesiāi**	**toisu**		**tāsu**
INS.	**toi**			**toibhis**, ***toimis***		**tābhis**, ***tāmis***
ABL.	**tosmōd**			**toios**		

NOTE. Different variants are observed in the attested dialects: 1) Nom. **so** is also found as **sos** in Old Indian, Greek and Gothic, and as **se** in Latin (cf. Lat. *ipse*). 2) Nom. **sā** is found as **sī** in Gothic and Celtic, also as **sjā** in Germanic. 3) Nom. Pl. **tāi** is general, while **sāi** is restricted to some dialects, as Attic-Ionic Greek. However, linguists like Beekes or Adrados reconstruct the Nominative form in ***s***- as the original Proto-Indo-European form. 4) Oblique forms in -***bh***-/-***m***- are sometimes reconstructed as -***m***- only (Beekes).

i[168], that

	Singular			*Plural*		
	m.	*n.*	*f.*	*m.*	*n.*	*f.*
NOM.	**i**	**id**	**i**	**ei**	**ī**	**íes**
ACC.	**im**	**id**	**īm**	**ims**	**ī**	**īms**
GEN.	**eso**, **ejos**		**esās**	**esom**		
DAT.	**esmoi**		**esiāi**	**eibh(i)os**, ***eimos***		
LOC.	**esmi**		**esiāi**	**eisu**, **-si**		
INS.	**eí**			**eibhis**, ***eimis***		
ABL.	**esmōd**			**eios**		

Deictic particles which appear frequently with demonstrative pronouns include **ko**, **ki**[169], *here*; **en**, **e**/**ono**[170], *there*; **e**/**owo**, *away*, *again*.

NOTE. Compare for PIE **is**, **se**, *he*, Lat. *is*, O.Ind. *saḥ*, *esaḥ*, Hitt. *apā*, Goth. *is*, O.Ir. *(h)í*; for (**e**)**ke**, **ghei**-(**ke**), **se**, **ete**, *this* (*here*), cf. Lat. *hic* (<**ghe-i-ke*), Gk. *ουτος*, O.Ind. *ay-am*, *id-am*, *esaḥ*, Hitt. *kā*, *eda* (def.), Goth. *hi-*, *sa(h)*, O.Ir. *sin*, O.Russ. *ceŭ*, *ɔmom*; for **oise**, **iste**, **ene**, *this* (*there*), cf. Lat. *iste*, Gk. *οιος* (<**oihos*), O.Ind. *enam* (clit.); for **el**-**ne**, *that*, cf. Lat. *ille* (<***el-ne***), *ollus* (<***ol-nos***), Gk. *εκεινος*, O.Ind. *a-sau*, *u-*, Goth. *jains*

6.7. INTERROGATIVE AND INDEFINITE PRONOUNS

6.7.1. INTRODUCTION

1. There are two forms of the Interrogative-Indefinite Pronoun in Modern Indo-European, and each one corresponds to one different class in our system, **qi** to the Substantive, and **qo** to the Adjective pronouns.

SUBSTANTIVE	*ADJECTIVE*
qis bhéreti? *who carries?*	**qos wīros bhéreti?** *what man carries?*
qim widéiesi? *what/who do you see?*	**qom autom widéiesi?** *which car do you see?*

NOTE 1. In the origin, **qi**/**qo** was possibly a noun which meant "*the unknown*", and its interrogative/indefinite sense depended on the individual sentences. Later both became pronouns with gender, thus functioning as interrogatives (stressed) or as indefinites (unstressed).

NOTE 2. The form **qi** is probably the original independent form (compare the degree of specialization of ***qo***, further extended in IE dialects), for which **qo** could have been originally the o-grade form (see Beekes, Adrados) – hence our choice of clearly dividing a *Substantive-**qi*** from an *Adjective-**qo*** in this Modern Indo-European system. Some Indo-European dialects have chosen the o-stem only, as Germanic, while some others have mixed them together in a single paradigm, as Indo-Iranian, Balto-Slavic or Italic. Compare Gmc. *khwo-* (cf. Goth. *hwas*, O.N.

hverr, O.S. *hwe*, O.E. *hwā*, Dan. *hvo*, O.Fris. *hwa*, O.H.G. *hwër*), Lat. *qui*, *quae*, *quod*; *quis*, *quid*, Osc. *pisi*, Umb. *púí*, *svepis*, Gk. *tis*, Sktr. *kaḥ*, Av. *ko*, O.Pers. *čiy*, Pers. *ki*, Phryg. *kos*, Toch. *kus*/*kŭse*, Arm. *ov*, *inč'*, Lith. *kas*, Ltv. *kas*, O.C.S. *kuto*, Rus. *kto*, Pol. *kto*, O.Ir. *ce*, *cid*, Welsh *pwy*, Alb. *kush*, Kam. *kâča*; in Anatolian, compare Hitt. *kuiš*, Luw. kui-, Lyd. *qi*-, Lyc. *tike*, and Carian *kuo*.

2. The Substantive Interrogative Pronoun **qi-?** *who?, what?*, is declined in the Singular as follows:

	Singular			*Plural*		
	m.	*f.*	*n.*	*m.*	*f.*	*n.*
NOM.	**qis**		**qid**	**qei(es)**		**qī**
ACC.	**qim**			**qims**		
GEN.	**qes(i)o, qeios**			**qeisom**		
DAT.	**qesmei**			**qeibh(i)os, *qeimos***		
LOC.	**qesmi**			**qeisu, qeisi**		
INS.	**q(esm)í**			**qeibhis, *qeimos***		
ABL.	**qosmōd**			**qeibh(i)os, *qeimos***		

3. The Adjective Interrogative Pronoun, **qo-?**, *who (of them)? what kind of? what? which?* is declined throughout like the Relative:

	Singular			*Plural*		
	m.	*f.*	*n.*	*m.*	*f.*	*n.*
NOM.	**qos**	**qā**	**qod**	**qoi**	**qās**	**qā**
ACC.	**qom**	**qām**		**qoms**	**qāms**	
GEN.	**qoso, qosio**			**qosom**		
DAT.	**qosmōi**			**qoibh(i)os, qoimos**		
LOC.	**qosmi**			**qoisu, qoisi**		
INS.	**q(osm)í**			**qoibhis, *qoimis***		
ABL.	**qosmōd**			**qoibh(i)os, qoimos**		

Qóteros?, *who of two?* is derived from the stem ***qo*** with the suffix ***-tero***.

4. The Indefinite Pronouns **qi/qo**, *any one*, *any*, are declined like the corresponding Interrogatives.

SUBSTANTIVE	**qis**, *any one*; **qid**, *anything*
ADJECTIVE	**qos**, **qā**, **qod**, *any*

5. The Adverbial form of the Indefinite-Interrogative pronoun is **qu**.

6.7.2. COMPOUNDS

1. The pronouns **qi** and **qo** appear in various combinations.

a. The forms can be repeated, as in substantive **qisqis**, **qidqid**, or adjective **qosqos**, **qāqā**, **qodqod**; with an usual meaning *whatever*, *whoever*, *whichever*, etc.

b. In some forms the copulative conjunction **-qe** is added to form new pronouns (both as substantives and as adjectives), usually *universals*; as, **qisqe**, *every one*: **qoterqe**, *each of two*, or *both*. **Qisqe** is declined like the interrogative **qi**: substantive, **qisqe**, **qidqe**, adjective, **qosqe**, **qāqe**, **qodqe**

c. Other forms are those with prefixes – deemed more modern –, like **aliqis** (substantive), *some one*, **aliqod** (adjective), *some*.

d. Forms with the numerals **oino-**, **sem-**, *one*, are also frequently pronouns; as in **oinos**, **oinā**, **oinom**, and **sēms** (gen. **semós**), *some*, *somebody*, *someone*.

óinosqisqe, *each one*

c. The negatives are usually composed with negation particles, as **ne** or modal **mē**. As in **neqis**, **neqos**, **mēqis**, **n(ĕ)oin(os)** (cf. Eng. *none*, Ger. *nein*, maybe Lat. *nōn*), **noin(o)los** (Lat. *nullus*).

In the compound **óinosqisqe**, *each one, every single one*, both parts are declined (genitive **óinosoqeisoqe**), and they may be separated by other words:

ne en oinō qisqis qosqe, *not even in a single one*.

h. The relative and interrogative have a possessive adjective **qosos** (**-ā**, **-om**), *whose*.

i. Other Latin forms are **qāmtos**, *how great*, and **qālis**, *of what sort*, both derivative adjectives from the interrogative. They are either interrogative or relative, corresponding respectively to the demonstratives **tāmtos**, **tā́lis**, from **to**. Indefinite compounds are **qāmtoskomqe** and **qā́liskomqe**.

j. It is also found as in compound with relative **jo**, as in **jos qis**, **jod qid**, *anyone*, *anything*.

h. An interrogative **mo-** is also attested in Anatolian and Tocharian.

6.7.3. CORRELATIVES

1. Many Pronouns, Pronominal Adjectives and Adverbs have corresponding demonstrative, relative, interrogative, and indefinite forms in most Indo-European languages. Such parallel forms are called Correlatives. Some of those usable in Modern Indo-European are shown in the following table.

NOTE. Other common PIE forms include **(sol)wos**, *all*, cf. Gk. *ολοι*, O.Ind. *visva*, *sarva*, Hitt. *hūmant-*, O.Ir. *u(i)le*; **qāqos**, *each one*, cf. Gk. *εκατερος*, *εκαστος*, O.Ind. *pratieka*, Hitt. *kuissa*, Gaul. *papon*, O.Ir. *cách*, Ru. *какоў*, Goth. *ainhvaþaruh*; **qisqis**, *anyone*, cf. Gk. *τις, οστις*, O.Ind. *kacit*, *kaścana*, *kopi*, Hitt. *kuis kuis*, *kuis-as kuis*, Lat. *quisquis*, *quīlĭbĕt, quīvis*, Goth. *hvazuh*, *hvarjizuh*; **qiskomqe**, **qisimmoqe**, *whoever*, cf. Gk. *τις αν*, *τις*

εαν, O.Ind. *yaḥ kaś cit*, *yo yaḥ*, *yadanga*, Hitt. *kuis imma*, *kuis imma kuis*, *kuis-as imma* (*kuis*), Lat. *quiscumque*, Goth. *sahvazuh saei,* Ger. *wer auch immer,* O.Ir. *cibé duine,* Russ. *кто бы ни*; **qéjespeioi**, *some*, cf. Gk. *οιτινες*, O.Ind. *katipaya*, Hitt. *kuis ki*, Russ. *несколько*; (**ed**)**qis**, *some(one) among many*, cf. Gk. *τις*, O.Ind. *anyatama*, Hitt. *kuis ki*, Lat. *ecquis*, *quis*, *aliquis*, Goth. *hvashun*, Russ. *edvá*, O.Ir. *nech*, *duine;* **enis**, *certain*, cf. Gk. *ενιαυτον*, O.Ind. *ekaścana* Lat. *quīdam*; **somós**, *the same*, cf. O.Ind. *sama*, Goth. *sama*, Russ. *самый*; **se epse**, **epe**, **s**(**w**)**el** (**e**)**pe**, (*him*)*self*, cf. Hitt. *apāsila*, O.Lat. *sapsa*, *sumpse*, *ipse*, Goth. *silba*, O.Ir. *fessin*, *fadessin* (>*féin*), Russ. *сам*, **neqis**, *noone*, cf. Gk. *ουδεις*, O.Ind. *na kaḥ*, Hitt. *UL kuiski*, Goth. (*ni*) *hvashun*, Gaul. *nepon*, O.Ir. *ní aon duine*, Lat. *nec quisquam*, Russ. *никто*; **álteros**, **ónteros**, *the other*, **alios**, **onios**, *some other*, etc.

Demonstrative	*Relative*	*Interrogative*	*Indefinite Relative*	*Indefinite*
i	**qis**	**qis?**	**qisqis**	**aliqís**
that	*who? what?*	*who? what?*	*whoever, whatever*	*some one, something*
tāmtos	**qāmtos**	**qāmtos?**	**qāmtoskomqe**	**aliqāmtos**
so great	*how (as) great*	*how great?*	*however great*	*some/other*
tālis/swo	**qālis**	**qālis?**	**qāliskomqe**	-
such, so, this way	*as*	*of what sort?*	*of whatever kind*	-
tom/toeno	**qom/qieno**	**qāmdō/qieno?**	**qā́mdōkomqe/éneno**	**aliqāmdō**
then ('this there')	*when*	*when?*	*whenever*	*at some/other time*
totrō(**d**)	**qitro**	**qitro?**	**qitṛqiter**	**aliqiter**
thither	*whither*	*whither?*	*whithersoever*	*(to) somewhere*
ī	**qā**	**qā?**	**qāqā**	**aliqā́**
that way	*which way*	*which way?*	*whithersoever*	*(to) anywhere*
tóendes	**qíendes**	**qíendes?**	**qíendekomqe**	**aliqíende**
thence	*whence*	*whence?*	*whencesoever*	*from somewhere*
qidhei[i]**/toko**	**qodhei/qisko**	**qodhei/qisko?**	**qódheiqisqe**	**aliqidhei/aliqodhei**
there ('this here')	*where*	*where?*	*wherever*	*other place/somewhere*
tot	**qot**	**qot?**	**qotqot**	**aliqót**
so many	*as*	*how many?*	*however many*	*other, some, several*
tótients	**qótients**	**qótients?**	**qótientskomqe**	**aliqótients**
so often	*as*	*how often?*	*however often*	*at several times*
so	**qos**	**qos**	**qosqos**	**aliqós**
this	*who? which?*	*who? which?*	*whoever, whichever*	*some (of them)*

[i] Latin (*c*)*ibī*, (*c*)*ubī* is frequently reconstructed as a conceivable PIE ****qibhi***, ****qobhi***, but it is not difficult to find a common origin in PIE ***qi-dhei***, ***qo-dhei*** for similar forms attested in different IE dialects; cf. Lat. *ubī*, Osc. *puf*, O.Ind. *kuha*, O.Sla. *kude*, etc. See <http://dnghu.org/indoeuropean_pronouns.pdf> for more information.

6.8. RELATIVE PRONOUNS

6.8.1. There are two general pronominal stems used as relative pronouns, one related to the anaphorics and one to the interrogative-indefinites.

6.8.2. Relative Pronoun **jo**, the o-stem derivative from **i**. It is inflected like **so**/**to** and **qo**.

	Singular			*Plural*		
	m.	*n.*	*f.*	*m.*	*n.*	*f.*
NOM.	**jos**	**jod**	**jā**	**jói**	**jā**	**sấi**
ACC.	**jom**	**jod**	**jām**	**joms**	**jā**	**jāms**
GEN.	**josio**		**jesās**	**jesom**		
DAT.	**josmōi**		**jesiāi**	**jeibh(i)os**, ***jeimos***		
LOC.	**josmi**		**jesiāi**	**jeisu**, **jeisi**		
INS.	**jeí**			**jeibhis**, ***jeimis***		
ABL.	**jesmōd**			**jeios**		

6.8.3. **qo**/**qi**, *who*, *which*, has its origin in the interrogative pronouns, and are declined alike.

NOTE. Relative pronoun **jo**-, maybe from an older **h₁jo-*, is found in Gk. *hós*, Skr. *yá-*, Av. *ya-*, Phryg. *ios*, Cel. *io*. Italic and Germanic dialects use **qo**- as relative, in compound with -**qe** in Germanic. In Balto-Slavic, this pronouns is suffixed in some adjectives to create indefinites. It is also found as indefinite in compound with **qi**/**qo**, as in ***jós qis***, ***jód qid***, *anyone*, *anything*, as Gk. *hóstis hótti*, Skr. *yás cit*, *yác cit*.

6.9. IDENTITY PRONOUNS

6.9.1. With Identity pronoun we are referring to the English *self*, which is formed differently in most Indo-European dialects. The different possibilities are:

1. Those which come from a Pronoun, which are only valid for the third person, formed basically by the anaphoric pronoun lengthened with another particle:

   a. Greek **autós**, as Gk. αὐτός, from adverb **au**, *newly*, and the anaphoric **to**.

   b. Latin identity **idem** formed by **id** and ending -***em***.

2. Those formed from a Noun, with the sense *equal*, *same*, able to modify demonstrative or personal pronouns, and even having an autonomous pronominal use, with a pronoun declension:

The common Indo-European form is derived from adjective **somós**, *same*, *similar*.

NOTE. Common adjective **somós**, *same*, and different derivatives from PIE root **sem**, give Gmc. *samaz* (cf. O.S., O.H.G., Goth. *sama*, O.N. *sǿmr*, O.E. *same*, O.H.G. *samant*, Ger. *samt*, Du. *zamelen*), Lat. *similis*, (IE ***sm̥ilís***) Gk. ὁμός, ὁμοῦ, ὁμαλός, Skr. *samaḥ*, Av. *hama*, O.C.S., O.Russ. *самъ*, Pol. *sam*, *sama*, O.Ir. *som, sāim* (from IE ***sōmi***).

6.10. OPPOSITIVE PRONOUNS

6.10.1. There are two forms to express the opposition of two deictic or anaphoric pronouns.

6.10.2. The first type of opposition is made with the same word, meaning *what is different*. This is the same as the English *either…either* sentences.

6.10.3. Modern Indo-European has also terms itself oppositives, apart from the correlation sentences:

a. Derived from the oppositive suffix -***tero***:

sńteros, *different*, from which Gmc. *sunteraz*, Ger. *sonder*, Gk *ατερ* (cf. Gk. ἕτερος, "*other*, *different*, *uneven*"), Lat. *sine*, "*without"*, O.Ind. *sanutar*, O.Sla. *svene*, O.Ir. *sain*, *"different"*.

qóteros*, either (of two)*, and **qúteros** (as Lat. *uter*), formed with adverb **qu** (from interrogative-indefinite **qi**/**qo**). The later appears also in common Indo-European loan from Lat. *neuter*, MIE **nequ̇teros**, "*neither one nor the other"*.

NOTE. The oldest interrogative form is probably **qóteros?**, *who of two?*, attested in different IE dialects.

álteros, *the other*, already seen.

NOTE. Another form is that of the deictic **en**-/**eno**- and -**teros**, as in **enteros**, also **anteros** (influenced by **alteros**), found in Germanic and Balto-Slavic dialects.

b. The Stem **al**-, **ali**- is very common in Modern Indo-European, the -***i*** being a characteristic lengthening of the pronouns and not an adjectival one. Some usual forms are **alios**, **álidhei** (sometimes reconstructed as *****álibhi***, but cf. Lat. *alibi*, Gk. *αλλυδις*, Goth. *aljaþ*, etc.), **aliqis**, etc.

7. VERBS

7.1. INTRODUCTION

7.1.1. VOICE, MOOD, TENSE, PERSON, NUMBER

1. The inflection of the Verb is called its Conjugation.

2. Through its conjugation the Verb expresses Voice, Mood, Tense, Person and Number.

3. The Voices are two: Active and Middle (or *Mediopassive*).

4. The Moods can be four: Indicative and Imperative are the oldest ones, while Subjunctive and Optative, which are more recent, are not common to all Indo-European dialects.

5. The General Tenses are three, *viz.*:

   a. The Present

   b. The Past or Preterite.

   c. The Future

NOTE. The Future Stem is generally believed to have appeared in Late PIE, not being able to spread to some dialects before the general split of the proto-languages; the distinction between a Present and a Future tense, however, is common to all IE languages.

6. The Aspects were up to three:

   a. For continued, not completed action, the Present.

   b. For the state derived from the action, the Perfect.

   c. For completed action, the Aorist.

NOTE 1. There is some confusion on whether the Aorist (from Gk. *αοριστος*, "*indefinite or unlimited*") is a tense or an aspect. This reflects the double nature of the aorist in Ancient Greek. In the indicative, the Ancient Greek aorist represents a combination of tense and aspect: past tense, perfective aspect. In other moods (subjunctive, optative and imperative), however, as well as in the infinitive and (largely) the participle, the aorist is purely aspectual, with no reference to any particular tense. Modern Greek has inherited the same system. In Proto-Indo-European, the aorist was originally just an aspect, but before the split of Late PIE dialects it was already spread as a combination of tense and aspect, just as in Ancient Greek, since a similar system is also found in Sanskrit.

NOTE 2. The original meanings of the past tenses (Aorist, Perfect and Imperfect) are often assumed to match their meanings in Greek. That is, the Aorist represents a single action in the past, viewed as a discrete event; the Imperfect represents a repeated past action or a past action viewed as extending over time, with the focus on some point in the middle of the action; and the Perfect represents a present state resulting from a past action. This

corresponds, approximately, to the English distinction between “I ate”, “I was eating” and “I have eaten”, respectively. Note that the English “I have eaten” often has the meaning, or at least the strong implication, of “I am in the state resulting from having eaten”, in other words “I am now full”. Similarly, “I have sent the letter” means approximately “The letter is now (in the state of having been) sent”. However, the Greek, and presumably PIE, perfect, more strongly emphasizes the *state* resulting from an action, rather than the action itself, and can shade into a present tense.

In Greek the difference between the present, aorist and perfect tenses when used outside of the indicative (that is, in the subjunctive, optative, imperative, infinitive and participles) is almost entirely one of grammatical aspect, not of tense. That is, the aorist refers to a simple action, the present to an ongoing action, and the perfect to a state resulting from a previous action. An aorist infinitive or imperative, for example, does *not* refer to a past action, and in fact for many verbs (e.g. “*kill*”) would likely be more common than a present infinitive or imperative. In some participial constructions, however, an aorist participle can have either a tensal or aspectual meaning. It is assumed that this distinction of aspect was the original significance of the Early PIE “tenses”, rather than any actual tense distinction, and that tense distinctions were originally indicated by means of adverbs, as in Chinese. However, it appears that by Late PIE, the different tenses had already acquired a tensal meaning in particular contexts, as in Greek, and in later Indo-European languages this became dominant.

The meanings of the three tenses in the oldest Vedic Sanskrit, however, differs somewhat from their meanings in Greek, and thus it is not clear whether the PIE meanings corresponded exactly to the Greek meanings. In particular, the Vedic imperfect had a meaning that was close to the Greek aorist, and the Vedic aorist had a meaning that was close to the Greek perfect. Meanwhile, the Vedic perfect was often indistinguishable from a present tense (Whitney 1924). In the moods other than the indicative, the present, aorist and perfect were almost indistinguishable from each other. The lack of semantic distinction between different grammatical forms in a literary language often indicates that some of these forms no longer existed in the spoken language of the time. In fact, in Classical Sanskrit, the subjunctive dropped out, as did all tenses of the optative and imperative other than the present; meanwhile, in the indicative the imperfect, aorist and perfect became largely interchangeable, and in later Classical Sanskrit, all three could be freely replaced by a participial construction. All of these developments appear to reflect changes in spoken Middle Indo-Aryan; among the past tenses, for example, only the aorist survived into early Middle Indo-Aryan, which was later displaced by a participial past tense.

7. There are four IE Verbal Stems we will deal with in this grammar:

I. The Present Stem, which gives the Present with primary endings and the Imperfect with secondary endings.

II. The Aorist Stem, always Past, with secondary endings, giving the Aorist, usually in zero-grade, with dialectal augment and sometimes reduplication.

III. The Perfect Stem, giving the Perfect, only later specialized in Present and Past.

IV. The Future Stem, an innovation of Late PIE.

NOTE. Under the point of view of most scholars, then, from this original PIE verbal system, the Aorist merged with the Imperfect Stem in Balto-Slavic, and further with the Perfect Stem in Germanic, Italic, Celtic and Tocharian dialects. The Aorist, meaning the completed action, is then reconstructed as a third PIE *tense-aspect*, following mainly the findings of Old Indian, Greek, and also – mixed with the Imperfect and Perfect Stems – Latin.

8. The Persons are three: First, Second, and Third.

9. The Numbers in Modern Indo-European are two: Singular and Plural, and it is the only common class with the name. It is marked very differently, though.

NOTE. The reconstructed Dual, as in nouns, whether an innovation or (unlikely) an archaism of Late Proto-Indo-European dialects, is not systematized in MIE, due to its limited dialectal spread and early disappearance.

7.1.2. NOUN AND ADJECTIVE FORMS

1. The following Noun and Adjective forms are also included in the inflection of the Indo-European Verb:

A. Verbal Nouns existed in Proto-Indo-European, but there is no single common prototype for a PIE Infinitive, as they were originally nouns which later entered the verbal conjugation and began to be inflected as verbs. There are some successful infinitive endings, though, that will be later explained.

NOTE 1. It is common to most IE languages that a special case-form (usually dative or accusative) of the verbal nouns froze, thus entering the verbal inflection and becoming infinitives. Although some endings of those successful precedents of the infinitives may be reproduced with some certainty for PIE, the (later selected) dialectal case-forms may not, as no general pattern is found.

NOTE 2. A common practice in Proto-Indo-European manuals (following the Latin tradition) is to name the verbs conjugated in first person present, e.g. **esmi**, *I am*, for the verb **es**, *to be*, or **bherō** (also probably older Athematic **bhérmi**), *I carry*, for the verb **bhér-**, *to carry*.

B. The Participles are older adjectives which were later included in the verbal inflection.

I. The oldest known is the Present Participle, in ***-nt***.

II. The Perfect Participle, more recent, shows multiple endings, as ***-ues***, ***-uos***, ***-uet***, ***-uot***.

III. Middle Participles, an innovation in Late PIE, end in ***-meno***, ***-mōno***, ***-mno***; and also some in ***-to***, ***-no***, ***-lo***, ***-mo***, etc.

C. The Gerund and the Absolutive, not generalized in Late PIE, indicated possibility or necessity.

2. The Participles are used as follows:

A. The Present Participle has commonly the same meaning and use as the English participle in *-ing*; as, **woqā́nts**, *calling*, **legénts**[134], *reading*.

B. The Perfect Participle has two uses:

I. It is sometimes equivalent to the English perfect passive participle; as, **tektós**[34], *sheltered*, **adkēptós**, *accepted*, and often has simply an adjective meaning.

II. It is used with the verb **es**, *to be*, to form the static passive; as, **i woqātós esti**, *he is called*.

NOTE 1. Some questions about the participles are not easily conciled: in Latin, they are formed with **e** ending and are stems in **i**; in Greek, they are formed in **o** and are consonantal stems. Greek, on the other hand, still shows remains of the thematic vowel in participles of *verba vocalia* ***-āiont-***, ***-ēiont-***, etc. Latin doesn't.

NOTE 2. The static passive is a new independent formation of many Indo-European dialects, not common to Late PIE, but probably a common resource of Europe's Indo-European, easily loan translated from Romance, Germanic and Balto-Slavic languages into Modern Indo-European as auxiliary verb *to be* + *perfect participle*.

C. The Gerundive is often used as an adjective implying obligation, necessity, or propriety (*ought* or *must*); as, **i awisdhíjendhos esti**, *he must be heard*.

NOTE. The verb is usually at the end of the sentence, as in Latin, Greek and Sanskrit. In Hittite, it is behind the particles (up to seven in succession). In Old Irish it was either at the beginning of the sentence or in second place after a particle. For more on this, see PIE Syntax in Appendix I.

7.1.3. VOICES

1. In grammar, Voice is the relationship between the action or state expressed by a verb and its arguments. When the subject is the agent or actor of the verb, the verb is said to be in the Active. When the subject is the patient or target of the action, it is said to be in the Passive.

2. The Active and Middle (or *Mediopassive*) Voices in Modern Indo-European generally correspond to the active and passive in English, but:

a. The Middle voice often has a reflexive meaning. It generally refers to an action whose object is the subject, or an action in which the subject has an interest or a special participation:

(**i**) **wértetoi**, *she/he turns (herself/himself)*.

(**ei**) **wésn̥toi**, *they dress (themselves)*.

NOTE. This reflexive sense could also carry a sense of benefaction for the subject, as in the sentence "I sacrificed a goat (for my own benefit)". These constructions would have used the active form of "sacrificed" when the action was performed for some reason other than the subject's benefit.

b. The Mediopassive with Passive endings (in -***r***) is reserved for a very specific use in Modern Indo-European, the Dynamic or Eventive passives; as

(**egṓ**) **bhéromar 20tós Djówilioi**, *I became born on July 20th (or **20 Djówiliī**, "20 of July*").

moiros[171] **píngetor** [172], *the wall is being painted* or *someone paints the wall*, lit. "*the wall paints* (impersonal mark)".

NOTE 1. The dynamic passive usually means that an action is done, while the static or stative passive means that the action was done at a point in time, that it is already made. The last is obtained in MIE (as usually in Germanic, Romance and Balto-Slavic dialects) with a periphrasis, including the verb **es**, *be*. Following the above examples:

(**egṓ**) **gn̥(a)tā́/bh(e)r̥tā́ esmi 20ós Djówilios**, *I (f.) was born on July 20.*

moiros pigtós[i] (**esti**), *the wall (is) [already] painted.*

[i] The infix -**n** is lost outside the Present Stem; thus, the Participle is not ~~***pingtós***~~, but **pigtós**. Nevertheless, when the **n** is part of the Basic Stem, it remains. See the Verbal Stems for more details on the Nasal Infix.

NOTE 2. The Modern Indo-European Passive Voice endings (in -***r***) are older Impersonal and PIE Middle Voice alternative endings, found in Italic, Celtic, Tocharian, Germanic, Indo-Iranian and Anatolian, later dialectally specialized for the passive in some of those dialects. The concepts underlying modern IE Passives are, though, general to the Northern dialects (although differently expressed in Germanic and Balto-Slavic), and therefore MIE needs a common translation to express it. For the stative passive, the use of the verb **es**-, *to be*, is common, but dynamic passives have different formations in each dialect. The specialized Mediopassive dialectal endings seems thus the best option keeping thus tradition and unity. See §§ 7.2.2 and 7.2.7.3.

c. Some verbs are only active, as, **esmi**[44], *be*, **edmi**[173], *eat*, or **dōmi**[96], *give*

d. Many verbs are middle in form, but active or reflexive in meaning. These are called Deponents: as, **kejai**[77], *lay*; **séqomai**[60], *follow*, etc.

7.1.4. MOODS

1. While IE II had possibly only Indicative and Imperative, a Subjunctive and an Optative were added in the third stage of Proto-Indo-European, both used in the Present, Perfect and Aorist. Not all dialects, however, developed those new formations further.

2. The Imperative is usually formed with a pure stem, adding sometimes adverbial or pronominal elements.

3. Some common Subjunctive marks are the stem endings -***ā***, -***ē***, and -***s***, but it is more usually formed with the opposition Indicative Athematic vs. Subjunctive Thematic, or Indicative Thematic vs. Subjunctive Thematic with lengthened vowel.

4. The Optative is differentiated from the Subjunctive by its characteristic suffix ***-iē*/-ī**; in thematic Tenses it is ***-oi***, i.e. originally the same Subjunctive suffix added to the thematic vowel ***-o***.

5. The Moods are used as follows:

a. The Indicative Mood is used for most direct assertions and interrogations.

b. The Subjunctive Mood has many idiomatic uses, as in commands, conditions, and various dependent clauses. It is often translated by the English Indicative; frequently by means of the auxiliaries *may*, *might*, *would*, *should*; sometimes by the (rare) Subjunctive; sometimes by the Infinitive; and often by the Imperative, especially in prohibitions.

c. The Imperative is used for exhortation, entreaty, or command; but the Subjunctive could be used instead.

d. The Infinitive is used chiefly as an indeclinable noun, as the subject or complement of another verb.

7.1.5. TENSES OF THE FINITE VERB

1. The Tenses of the Indicative have, in general, the same meaning as the corresponding tenses in English:

a. Of continued action,

I. Present: **bherō**[24], *I bear*, *I am bearing*, *I do bear*.

II. Imperfect: **bheróm**, *I was bearing*.

III. Future: **bhersō**, *I shall bear*.

b. Of completed action or the state derived from the action,

IV. Perfect: (**bhé**)**bhora**, *I have borne*.

V. Aorist: (**é**)**bheróm**, *I bore*.

NOTE. Although the Aorist formation was probably generalized in Late PIE, Augment is a dialectal feature only found in Ind.-Ira., Gk., Arm and Phryg. It seems that the great success of that particular augment (similar to other additions like Lat. *per-* or Gmc. *ga-*) happened later in the proto-languages. Vedic Sanskrit shows that Augment was not obligatory, and for Proto-Greek, cf. Mycenaean *do-ke*/*a-pe-do-ke*, Myc. *qi-ri-ja-to*, Hom. Gk. *πριατο*, etc.

7.2. FORMS OF THE VERB

7.2.1. THE VERBAL STEMS

1. The Forms of the verb may be referred to four basic Stems, called (1) the Present, (2) the Aorist, (3) the Perfect and (4) the Future.

NOTE. There are some forms characteristic of each stem, like the suffix ***-n-*** or ***-sko***, which give generally Present stems. Generally, however, forms give different stems only when opposed to others.

2. There are some monothematic verbs as **esmi**, *to be*, or **edmi**, *eat* – supposedly remains of the older situation of IE II. And there are also some traces of recent or even nonexistent mood oppositions. To obtain this opposition there are not only reduplications, lengthenings and alternations, but also vowel changes and accent shifts.

3. There are also some other verbs, not derived from root words, the Denominatives and Deverbatives. The first are derived from nouns; as, **strowiō**, *strew, sprinkle*, from **strou-**, *structure*; the last are derived from verbs, as, **wediō,** *inform* (from **weid-**[33], *know, see*), also *guard, look after*.

NOTE. It is not clear whether these Deverbatives – Causatives, Desideratives, Intensives, Iteratives, etc. – are actually derivatives of older PIE roots, or are frozen remains, formed by compounds of older (IE II or Early PIE) independent verbs added to other verbs, the ones regarded as basic.

5. Reduplication is another common resource; it consists of the repetition of the root, either complete or abbreviated; as, **sisdō**, *sit down, settle down* (or **sizdō**, as Lat. *sisto*, Gk. *hidzein*, found in **nísdos/nízdos**, *nest*, from **sed-**[44], *sit*), **gígnoskō**, *know* (as Gk. *gignosko*, from **gnō-**[100]), **mímnāskō**, *remember* (from **men-**[178], *think*), etc.

6. The Stem Vowel has no meaning in itself, but it helps to build different stems, whether thematic or semithematic (those which can be thematic and athematic), opposed to athematics. Thus, It can be used to oppose a) Indicative Athematic to Subjunctive Thematic, b) Present Thematic to Imperfect Athematic, c) Active to Middle voice, etc. Sometimes an accent shift helps to create a distinctive meaning, too.

7. Stems are inflected, as in the declension of nouns, with the help of lengthenings and endings (or "*desinences*").

7.2.2. VERB-ENDINGS

1. Every form of the finite verb is made up of two parts:

I. The Stem. This is either the root or a modification or development of it.

II. The Ending or *Desinence*, consisting of:

a. The signs of Mood and Tense.

b. The Personal Ending.

Thus in the verb **bhér-se-ti**, *he will carry*, the root is ***bher-***, *carry*, modified into the thematic future verb-stem ***bher-s-e/o-***, *will carry*, which by the addition of the personal primary ending ***-ti*** becomes the meaningful **bhérseti**; the ending ***-ti***, in turn, consists of the (probably) tense-sign ***-i*** and the personal ending of the third person singular, ***-t***.

2. Verbal endings can thus define the verb Stem, Tense and Mood.

The primary series indicates present and future, and ***-mi, -si, -ti***, and 3rd Pl. ***-nti*** are the most obvious formations of Late PIE. The secondary endings indicate Past; as, ***-m, -s, -t*** and 3rd Pl. ***-nt***. The subjunctive and optative are usually marked with the secondary endings, but in the subjunctive primary desinences are attested sometimes. The imperative has ø or special endings.

NOTE. Although not easily reconstructed, Late Proto-Indo-European had already independent formations for the first and second person plural. However, there were probably no common endings used in all attested dialects, and therefore a selection has to be made for MIE, v.i.

They can also mark the person; those above mark the first, second and third person singular and third plural. Also, with thematic vowels, they mark the voice: ***-ti*** Active Prim. | ***-toi*** Middle Prim. | ***-tor*** Passive, and so on.

3. The Augment was used in the southern dialects – i.e. Indo-Iranian, Greek & Armenian – to mark the Past Tense (i.e., the Aorist and the Imperfect). It was placed before the Stem, and consisted generally of a stressed ***é-***, which is a dialectal Graeco-Aryan feature not generally used in MIE.

NOTE. Some common variants existed, as lengthened ***ḗ-***, cf. Gk. η<**ē**/**ā** and ω<**ō** , the so-called Wackernagel contractions of the Augment and the beginning of the verbal root, which happened already by 2000 BC. These are different from those which happened in Attic Greek by 1000 BC.

4. Modern Indo-European verbal endings, as they are formed by the signs for mood and tense combined with personal endings, may be organized in five series.

		ACTIVE		*MIDDLE (or Middle-Passive)*		
		Primary	Secondary	Primary	Secondary	*Passive-only*
Sg.	1.	***-mi***	***-m***	***-(m)ai***	***-ma***	***-(m)ar***
	2.	***-si***	***-s***	***-soi***	***-so***	***-sor***
	3.	***-ti***	***-t***	***-toi***	***-to***	***-tor***
Pl.	1.	***-mes/-mos***	***-me/-mo***	***-mesdha***	***-medha***	***-mosṛ/-mor***
	2.	***-te***	***-te***	***-dhe***	***-dhue***	***-dhuer***
	3.	***-nti***	***-nt***	***-ntoi***	***-nto***	***-ntor***

NOTE. The Middle is easily reconstructed for the singular and the third person plural of the secondary endings. For the rest of the Primary Endings there is no consensus as how they looked like in PIE. What we do know is:

1.that the Southern and Anatolian dialects show Middle Primary Endings in ***-i***, and second plural forms in ***-medha*** (PIH *med$^{h}h_{2}$*), ***-mesdha*** (PIH *mesd$^{h}h_{2}$*), which may be also substituted by the common PIE forms in ***-men-***, which is found as Gk. *-men*, Hitt. *-meni*.

2. that Latin, Italic, Celtic and Tocharian had Mediopassive Primary Endings in ***-r***, whilst in Indo-Iranian and Anatolian, such endings coexisted with the general thematic ***-oi***.

3. that therefore both Mediopassive endings (***-r*** and ***-oi***) coexisted already in the earliest reconstructible Proto-Indo-European; and

4. that the Middle endings were used for the Middle Voice in Graeco-Aryan dialects, while in the Northern dialects they were sometimes specialized as Passives or otherwise disappeared.

Thus, following the need for clarity in Modern Indo-European, we reserve the PIE endings in ***-r*** for the dynamic passive, and keep those in ***-i*** for the original Middle Voice.

5. The Perfect endings are as follows:

		Perfect
sg.	1.	***-a***
	2.	***-ta***
	3.	***-e***
pl.	1.	***-mé***
	2.	***-té***
	3.	***-(ḗ)r***

6. The Thematic and Athematic endings of Active, Middle and Passive are:

Active		*Athematic*		*Thematic*	
		Primary	Secondary	Primary	Secondary
sg.	1.	***-mi***	***-m***	***-ō, -omi***	***-om***
	2.	***-si***	***-s***	***-esi***	***-es***
	3.	***-ti***	***-t***	***-eti***	***-et***
pl.	1.	***-mes/-mos***	***-me/-mo***	***-omes/-omos***	***-ome/-omo***
	2.	***-te***		***-ete***	
	3.	***-n̥ti***	***-n̥t***	***-onti***	***-ont***

NOTE. Athematic Desinences in **-**enti***, as found in Mycenaean and usually reconstructed as proper PIE endings, weren't probably common PIE forms. Compare Att.Gk. *-aasi* (<*-ansi*<*-anti*), or O.Ind. *-ati*, both remade

from an original zero-grade PIE *-n̥ti*. In fact, Mycenaean shows some clearly remade examples, as Myc. *e-e-esi*<**esenti* (cf. Ion. εων), or *ki-ti-je-si* (<*ktíensi*)

Mediopass.		*Athematic*		*Thematic*		*PASSIVE**	
		Primary	Secondary	Primary	Secondary	*Athematic*	*Thematic*
sg.	1.	***-mai***	***-ma***	***-ai, -omai***	***-oma***	***-mar***	***-ar, -omar***
	2.	***-soi***	***-so***	***-esoi***	***-eso***	***-sor***	***-esor***
	3.	***-toi***	***-to***	***-etoi***	***-eto***	***-tor***	***-etor***
pl.	1.	***-mesdha***	***-medha***	***-omesdha***	***-omedha***	***-mo(s)r***	***-omo(s)r***
	2.	***-dhe***	***-dhue***	***-edhe***	***-edhue***	***-dhuer***	***-edhuer***
	3.	***-n̥toi***	***-n̥to***	***-ontoi***	***-onto***	***-n̥tor***	***-ontor***

a. The secondary endings are actually a negative term opposed to the primaries. They may be opposed to the present or future of indicative, they may indicate indifference to Tense, and they might also be used in Present.

NOTE 1. It is generally accepted that the Secondary Endings appeared first, and then an ***-i*** (or an ***-r***) was added to them. Being opposed to the newer formations, the older endings received a Preterite (or Past) value, and became then Secondary.

NOTE 2. Forms with secondary endings – i.e. without a time marker ***-i*** or ***-r*** (without distinction of time) –, not used with a Preterite value, are traditionally called Injunctives, and have mainly a modal value. The Injunctive seems to have never been an independent mood, though, but just another possible use of the original endings in Proto-Indo-European.

b. The Middle-Active Opposition is not always straightforward, as there are only-active and only-middle verbs, as well as verbs with both voices but without semantic differences between them.

7.2.3. THE THEMATIC VOWEL

1. Stem vowels are – as in nouns – the vowel endings of the Stem, especially when they are derivatives. They may be **i**, **u**, **ā**, **ē** (and also **ō** in Roots). But the most extended stem vowel is **e**/**o** (also lengthened **ē**/**ō**), called Thematic Vowel, which existed in PIH before the split of the Anatolian dialects, and which overshadowed the (older) athematic stems by Late PIE. The thematization of stems, so to speak, relegated the athematic forms especially to the aorist and to the perfect; most of the old athematics, even those in ***-ā-*** and ***-ē-***, are usually found extended with thematic endings ***-ie-*** or ***-io-*** in IE III.

NOTE. The old thematics were usually remade, but there are some which resisted this trend; as **bherō**, *I bear*, **dō**, *I give*, or **i!**, *go!*

The stem vowel has sometimes a meaning, as with ***-ē-*** and ***-ā-***, which can indicate state. There are also some old specializations of meanings, based on oppositions:

a. Thematic vs. Athematic:

- Athematic Indicative vs. Thematic Subjunctive. The contrary is rare.

- Thematic Present vs. Athematic Aorist, and *vice versa*.

- Thematic 1st Person Sg. & Pl. and 3rd Person Pl., and Athematic the rest.

- It may also be found in the Middle-Active voice opposition.

b. Thematic stem with variants:

- The first person, thematic in lengthened ***-ō***.

- Thematic **o** in 1st Person Sg. & Pl. and 3rd Person Pl.; **e** in 2nd and 3rd Person Sg. and 2nd Pl. There is also an archaic 3rd Person Pl. in **e**, as in **senti**, *they are*.

c. Opposition of Thematic stems. This is obtained with different vowel grades of the root and by the accent position.

2. In the Semithematic inflection the Athematic forms alternate with Thematic ones.

NOTE. The semithematic is for some an innovation of Late PIE, which didn't reach some of the dialects, while for others it represents a situation in which the opposition Thematic-Athematic and the Accent Shifts of an older system have been forgotten, leaving only some mixed remains.

7.2.4. VERB CREATION

1. With Verb Creation we refer to the way verbs are created from Nouns and other Verbs by adding suffixes and through reduplication of stems.

2. There are generally two kinds of suffixes: Root and Derivative; they are so classified because they are primarily added to the Roots or to Derivatives of them. Most of the suffixes we have seen (like ***-u***, ***-i***, ***-n***, ***-s***, etc.) is a root suffix.

Derivative suffixes may be:

a. Denominatives, which help create new verbs from nouns; as, ***-ie***/***-io***.

b. Deverbatives, those which help create new verbs from other verbs; as, ***-ei-*** (plus root vocalism **o**), ***-i-***, ***-s-***, ***-sk-***, ***-ā-***, ***-ē-*** etc.

3. Reduplication is usual in many modern languages. It generally serves to indicate intensity or repetition in nouns; in the Proto-Indo-European verb it had two uses:

a. It helped create a Deverbative, opposed to root verbs, generally in the Present, especially in intensives; as, **bhérbher**- from **bher**-, *carry*, or **gálgal**- (cf. O.C.S. *glagoljǫ*) from **gal**-[174], *call*; etc.

NOTE. It is doubtful whether these are remains of an older system based on the opposition Root/Deverbative, prior to the more complicated developments of Late PIE in suffixes and endings, or, on the contrary, it is the influence of the early noun derivations.

b. Essentially, though, reduplication has lost its old value and marks the different stems, whether Present, Aorist or Perfect. There are some rules in reduplication:

- In the Present, it can be combined with roots and accent; as, **bhíbher-mi**, **gígnō-mi**, etc.

- In the Perfect, generally with root vocalism and special endings; as, **bhébhor-a**, **gégon-a**, etc.

NOTE. Reduplicated Perfects show usually o-grade root vowel (as in Gk., Gmc. and O.Ind.), but there are exceptions with zero-grade vocalism, cf. Lat. *tutudi*, Gk. *mémikha*, *tétaka*, *gégaa*.

- Full reduplications of intensives (cf. ***bher-bher-***, ***mor-mor-***) are different from simple reduplications of verbal Stems, which are formed by the initial consonant and **i** in the Present (cf. ***bhi-bher-***, ***mi-mno-***, ***pí-bo-***), or **e** in the Perfect and in the Aorist (cf. ***bhe-bher-***, ***gé-gon***, ***ké-klow-***).

NOTE. In other cases, reduplicated stems might be opposed, for example, to the Aorist to form Perfects or *vice versa*, or to disambiguate other elements of the stem or ending.

7.2.5. SEPARABLE VERBS

1. A Separable Verb is a verb that is composed of a Verb Stem and a Separable Affix. In some verb forms, the verb appears in one word, whilst in others the verb stem and the affix are separated.

NOTE. A Prefix is a type of affix that precedes the morphemes to which it can attach. A separable affix is an affix that can be detached from the word it attaches to and located elsewhere in the sentence in a certain situation.

2. Many Modern Indo-European verbs are separable verbs, as in Homeric Greek, in Hittite, in the oldest Vedic and in modern German '*trennbare Verben*'.

Thus, for example, the (Latin) verb **supplakātus**, *beg humbly*, *supplicate* (from **suppláks**, *suppliant*, from PIE **plăk**-, *be flat*), gives **sup wos** (**egṓ**) **plakāiō** (cf. O.Lat. *sub uos placō*), *I entreat you*, and not (~~***egṓ***~~) ~~***wos supplakāiō***~~, as Classic Lat. *uos supplicō*.

NOTE. German is well known for having many separable affixes. In the sentence Ger. *Ich komme gut zu Hause an* the prefix *an* in the verb *ankommen* is detached. However, in the participle, as in *Er ist angekommen*, "*He has arrived*", it is not separated. In Dutch, compare *Hij is aangekomen*, "*He has arrived*", but *Ik kom* morgen *aan*, *I shall arrive tomorrow*.

English has many phrasal or compound verb forms that act in this way. For example, the adverb (or adverbial particle) *up* in the phrasal verb *to screw up* can appear after the subject ("*things*") in the sentence: "*He is always screwing things up*".

Non-personal forms, i.e. Nouns and Adjectives, formed a *karmadharaya* with the preposition, as O.Ind. *prasādaḥ*, "*favour*", Lat *subsidium*, *praesidium*, O.Ind. *apaciti*, Gk. *apotisis* , "*reprisal*", etc.

NOTE. There are, indeed, many non-separable verbs, like those formed with non-separable prefixes; as, ***re***-.

7.3. THE CONJUGATIONS

7.3.1. Conjugation is the traditional name of a group of verbs that share a similar conjugation pattern in a particular language, a Verb Class. This is the sense in which we say that Modern Indo-European verbs are divided into twelve *Regular Conjugations*; it means that any *regular* Modern Indo-European verb may be conjugated in any person, number, tense, mood and voice by knowing which of the twelve conjugation groups it belongs to, and its main stems.

NOTE. The meaning of Regular and Irregular becomes, thus, a matter of choice, although the selection is obviously not free. We could have divided the verbs into ten conjugations, or twenty, or just two (say Thematic and Athematic), and have left the less common types within them for a huge group of irregular verbs. We believe that our choice is in the middle between a simplified system (thus too artificial), with many irregular conjugations – which would need in turn more PIE data for the correct inflection of verbs –, and an extensive conjugation system – trying to include every possible inflection attested in Late PIE –, being thus too complicated and therefore difficult to learn.

It is clear that the way a language is systematized influences its evolution; to avoid such artificial influence we try to offer verbal groupings as natural as possible – of those verbs frequent in the Late Proto-Indo-European verbal system –, without being too flexible to create a defined and stable (and thus usable) system.

7.3.2. Modern Indo-European verbs are divided into two Conjugation Groups: the Thematic, newer and abundant in Late PIE, and the (older) Athematic Verbs. These groups are, in turn, subdivided into eight and four subgroups respectively.

NOTE. It is important to note that the fact that a root is of a certain type doesn't imply necessarily that it belongs to a specific conjugation, as they might be found in different subgroups depending on the dialects (for Eng. *love*, cf. Lat. *lubet*, Skr. *lubhyati*, Gmc. *liuban*), and even within the same dialect (cf. Lat. *scatō*, *scateō*). That's why Old Indian verbs are not enunciated by their personal forms, but by their roots.

Verbs cannot appear in different Conjugation Groups; they are either Thematic or Athematic.

NOTE 1. Some verbs (mainly PIE roots) are believed to have had an older Athematic conjugation which was later reinterpreted as Thematic, thus giving two inflection types and maybe the so-called Semithematic inflection (v.i.). Therefore, old root verbs like **bher**-, *carry*, may appear as **bhersi** or **bhéresi**, *you carry*, and so on.

NOTE 2. Instead of this simple classification of verbs into modern groupings (the MIE Conjugations), a common, more traditional approach is used in this grammar to explain how Proto-Indo-European verbs and verbal stems were usually built from roots and regularly conjugated.

I. THE THEMATIC CONJUGATION

The First or ***Thematic*** Conjugation Group is formed by the following 8 subgroups:

1) Root Verbs with root vowel **e** in the Present and **o** in the Perfect:

- Triliteral: **deikō**, **dikóm**, **doika**, **deiksō**, *show*, etc.
- Concave: **teqō**, **teqóm**, **toqa/tōqa**, **teqsō**, *escape*, **séqomai**, *follow*, etc.

NOTE. For IE **teqō**, cf. O.Ir. *téchid/táich*(<**e/ō**).

2) Concave Root Verbs with non-regular Perfect vocalism. Different variants include:

- **labhō**, **lābha**, *take*; **lawō**, **lāwa**, *enjoy*, **slabai**, **slāboma**, *fall* (Middle Voice); **aidai**, *praise*.

NOTE. Compare Gk. *αιδομαι*, O.ind. *ile*, Gmc. part. *idja-*. The first sentence of the Rigveda may already be translated to Modern Indo-European with the aforementioned verbs.

- **kano**, **kékana/kékāna**, *sing*.
- **legō**, **lēga**, *join*, *read*, *decide*.
- **lowō**, **lōwa**, *wash*.
- **rādō**, **rāda**, *shuffle, scrape, scratch*.
- **rēpō**, **rēpa**, *grab*, *rip out*.
- **rōdō**, **rōda**, *gnaw*.

3) *Verba Vocalia* (i.e., extended forms ***-á-io-***, ***-é-io-***, ***-í-jo-***, ***-ú-io-***)

- **amāiō**, *love*.
- **lubhēiō**, *love, desire*.
- **sāgijō**, *look for, search*.
- **arguiō** *reason*, *argue* (cf. Lat. *arguō*, Hitt. *arkuwai*).

4) Verbs in ***-io***:

- Triliteral: **kupiō**, **kup(i)óm**, **koupa**, **keupsō**, *be worried*.
- Concave: **jakiō**, **jēka**, *throw*.
- *Lamed-he*: **pariō**, **pepra/péprōka** , *produce*.
- Reduplicated Intensives: **kárkariō**, *proclaim*, *announce* (cf. Gk. καρκαίρω, but Skr. *carkarti*)

NOTE. Examples of thematic reduplicated intensives include also common forms like Greek *πορφυρω*, *παμπαινω*, *γαργαιρω*, *μορμορω*, *μερμηριζω*, *καγχαλαω*, *μαρμαιρω*, *δενδιλλω*, *λαλεω*, and, in other IE dialects, Slavic *glagoljo*, Latin ('broken' reduplication with different variants) *bombico*, *bombio*, *cachinno*, *cacillo*, *cracerro*, *crocito*, *cucullio*, *cucurrio*, *curculio*, *didintrio*, *lallo*, *imbubino*, *murmillo*, *palpor*, *pipito*, *plipio*, *pipio*, *tetrinnio*, *tetrissito*, *tintinnio*, *titio*, *titubo*, and so on.

5) Intensives-Inchoatives in ***-sko***.

- Of Mobile Suffix: **swēdhskō**, **swēdhióm**, **swēdhua**, **swēdhsō**, *get used to*.
- Of Permanent Suffix: **pṛkskṓ**, *inquire*.

6) With nasal infix or suffix.

- Perfect with o vocalism: **jungō**, **jugóm**, **jouga**, **jeugsō**, *join*.
- Reduplicated Perfect: **tundō**, **tét(o)uda/tút(o)uda**, *strike*.
- Convex: **bhrangō**, **bhrēga**, *break*.
- Nasal Infix and Perfect with **o** root: **gusnō**, **gousa** (cf. Lat. *dēgūnō*, *dēgustus*)
- Nasal Infix and Reduplicated Perfect: cf. Lat. *tollō*, *sustulii* (***supsi***+***tét***-), *lift*.

7) With Reduplicated Present

- **sisō**, **sēwa**, *sow*.
- **gignō**, **gegna**, **gégnāka**, *produce*.

8) Other Thematics:

- **pḷdō**, **pép(o)la**,
- **w(e)idēiō**, **woida**,
- etc.

II. THE ATHEMATIC CONJUGATION

Verbs of the Second or ***Athematic*** Conjugation Group may be subdivided into:

1) Monosyllabic:

- In Consonant: **esmi**, *be*, **edmi**, *eat*, **ēsmai**, *find oneself, be*.
- In **ā** (i.e. PIH *h_2): **snāmi**, *swim*, **bhamai**, *speak*.
- In **ē** (i.e. PIH *h_1): **bhlēmi**, *cry*, (**s**)**remai**, *calculate*.
- With Nasal infix: **leiq-** (***lineqti***/***linqṇti***), *leave*, **klew-** (***kluneuti***/***klununti***), *hear*, **pew-** (***punāti***/***punānti***), *purify*, etc. – but, see the suffixed (4.III) type below.

  NOTE. These verbal types appear mostly in Indo-Iranian and Hittite examples, and could therefore be more properly included in the suffixed (4.III) type below.

- Others: **eími**, *go*, etc.

2) Reduplicated:

- (**sí**)**stāmi**, *stand*.
- (**dhí**)**dhēmi**, *set*, *place*, **jíjēmi**, *throw*.

- **(dí)dōmi**, *give*.
- **(bhí)bheimi**, *fear*.
- **kíkumi/kuwóm/kékuwa**, *strengthen*.

3) Bisyllabic:

- **wémāmi**, *vomit*.

NOTE. Possibly Latin forms with infinitive *-āre*, Preterite *-ui* and participle *-itus* are within this group; as, *crepō*, *fricō*, *domō*, *tonō*, etc.

- **bhélumi**, *weaken*, (cf. Goth. *bliggwan*, "*whip*")

NOTE. This verb might possibly be more correctly classified as bheluiō, within the Verba Vocalia, type 3) in ***-u-io*** of the Thematic Group.

4) Suffixed:

- In **nā** (<PIH *neh₂*): **pérnāmi**, *grant*, *sell* (cf. Gk. *περνημι*, O.Ir. *ren(a)id*, etc.), **qrḯnāmi**, *buy* (cf. O.Ind. *krīnāti*, O.Ind. *cren*(*a*)*im*, gr. πρίαμαι, etc).
- In **nu**: **árnumi/órnumi**, *rise (up)*.
- With nasal infix: **lineqmi** (***linqō***), **bhenegmi** (***bhegō***), **amneghti** (***amghō***)

NOTE. For these verbs Old Indian shows zero-grade root vowel and alternating suffixes. Greek shows the opposite behaviour, which should be preferred in Modern Indo-European because of its ease of use.

7.4. THE FOUR STEMS

7.4.1. THE FOUR STEMS

1. The Stems of the Present may be:

I. Roots, especially Thematic, but also Athematic and Semithematic.

II. Reduplicated Roots, especially Athematic.

III. Consonantal stems, all Thematic. They may end in occlusive, or ***-s*** and its lengthenings, like ***-ske/o***; as, **prk-skó-**, *ask for*, *inquire*, from zero-grade of **prek-**, *ask*.

IV. In Vowel, Thematic in ***-i-***, ***-u-***, and Athematic in ***-ā***, ***-ē***.

V. In Nasal, Thematic and Athematic (especially in ***-neu/-nu***, ***-nā/-na***).

2. The Aorist Stem is opposed to the Present:

A. Aorist Athematic Roots vs. Present Roots and Reduplicates.

B. Aorist Thematic Roots vs. Athematic Presents.

C. Aorist Thematic Reduplicated Roots vs. Athematic Reduplicated Present.

D. Aorist with -***s*** and its lengthenings, both Thematic & Athematic.

E. Aorist with -***t*** and -***k*** are rare, as Lat. *feci*.

F. Aorist with -***ā***, -***ē***, and -***i***, -***u***, & their lengthenings.

3. The Stems of the Perfect have usually root vowel -**ŏ**/-ø, with dialectal reduplication – mainly Indo-Iranian and Greek –, and some especial endings.

4. Modern Indo-European uses a general Future Stem with a suffix -***s***-, usually Thematic.

NOTE. The future might also be formed with the present in some situations, as in English *I go to the museum*, which could mean *I am going to the museum* or *I will go to the museum*. The Present is, thus, a simple way of creating (especially immediate) future sentences in most modern Indo-European languages, as it was already in Late PIE times.

5. To sum up, there are four inflected Stems, but each one has in turn five inflected forms (Indicative, Imperative, Subjunctive, Optative and Participle), and one not inflected (Verbal Noun). Verbal inflection is made with desinences (including ø), which indicate Person, Time and Voice. The person is thus combined with the other two.

NOTE. The imperfect stem had neither a subjunctive nor an optative formation in Late PIE.

An example of the four stems are (for PIE verbal root **leiq**-[156], *leave*) **léiqe**/**o**- (or nasal **linéqe**/**o**-) for the Present, (**é**)**liqé**/**ó**- for the Aorist, (**lé**)**lóiq**- for the Perfect, and **léiqse**/**o**- for the Future.

7.4.2. THE PRESENT STEM

I. PRESENT STEM FORMATION PARADIGM

1. Verbal Roots (Athematic, Semithematic and Thematic) were not very common in Late PIE. They might have only one Stem, or they might have multiple Stems opposed to each other.

2. Reduplicates are usually different depending on the stems: those ending in occlusive or -***u***- are derived from extended roots, and are used mainly in verbs; those in -***s*** and -***u*** are rare, and are mainly used for the remaining stems.

3. The most prolific stems in Late PIE were those ending in -***i***, -***ē*** and -***ā***, closely related. Athematics in -***ē*** and -***ā*** have mostly Present uses (cf. **dhē**-[134], *put*, *do*, **cā**-[82], go), as Thematics in -***ske/o*** (as **gnō**-**sko**-, *know*, **prk**-**skó**-[42], *inquire*) and Athematics or Thematics with nasal infix (i.e. in -***n***-, as **li**-**n**-**eq**-, *leave*, from **leiq**, or **bhu**-**n**-**dho**-, *make* aware, from **bheudh**-[60]).

II. PRESENT ROOT STEM

1. A pure Root Stem, with or without thematic vowel, can be used as a Present, opposed to the Aorist, Perfect and sometimes to the Future Stems. The Aorist Stem may also be Root, and it is then distinguished from the Present Stem with 1) vowel opposition, i.e., full grade, o-grade or zero-grade, 2) thematism-athematism, or 3) with secondary phonetic differentiations (as accent shift).

Present verbal roots may be athematic, semithematic and thematic. The athematics were, in Late PIE, only the remains of an older system, and so the semithematics.

2. In Monosyllabic Roots ending in consonant or sonant, the inflection is usually made:

a. in the Active Voice Sg., with root vowel ***e*** and root accent

b. in the Active and Middle Voice Pl., root vowel ø and accent on the ending.

The most common example is **es**-, *be*, which has a singular in ***es***- and plural in ***s***-. There are also other monosyllabic verbs, as **chen**-[111], *strike*, **ed**-[173], *eat*. Other roots, as **eí**-[61], *go*, follow this inflection too.

		ed-, *eat*	**chen**-, *knok*	**eí**-, *go*	**es**-, *be*	**dhē**-, *set, put*	**dō**-, *give*
sg.	1.	**edmi**	**chenmi**	**eími**	**esmi**	**(dhí)dhēmi**	**(dí)dōmi**
	2.	**edsi**	**chensi**	**eísi**	**essi**	**(dhí)dhēsi**	**(dí)dōsi**
	3.	**esti**[i]	**chenti**	**eíti**	**esti**	**(dhí)dhēti**	**(dí)dōti**
pl.	1.	**dme**	**chn̥més**	**imés**	**sme**	**(dhí)dhames**	**(dí)dames**
	2.	**dte**	**chn̥té**	**ité**	**ste**	**(dhí)dhate**	**(dí)date**
	3.	**denti**	**chn̥onti**	**jenti**	**senti**	**(dhí)dhanti**	**(dí)danti**

[i] MIE **ésti** < PIE ****édti***

NOTE. Most verbs are usually reconstructed with a mobile accent (as in Sanskrit), but we preserve the easier Greek columnar accent; it usually reads ***dhidhamés***, ***dhidhaté***, ***dhidhánti***, or ***didamés***, ***didaté***, ***didánti***.

3. There is also another rare verbal type, Root Athematic with full or long root vowel and fixed root accent, usually called Proterodynamic. It appears frequently in the Middle Voice.

4. Monosyllabic Roots with Long Vowel (as **dhē**- and **dō**-) are inflected in Sg. with long vowel, and in Pl. and Middle with -***a***. They are rare in Present, usually reserved for the Aorist.

5. Disyllabic Roots which preserve an athematic inflection have the Present in full/ø-vowel. The alternative ø/full-vowel is generally reserved for the Aorist.

6. In the Semithematic Root Stem, the 3rd Person Pl. has often an ending preceded by Thematic **e**/**o**. That happens also in the 1st Person Sg., which often has -***o*** or -***o-m(i)***; and in the 1st Person Pl., which may end in -***o-mos***, -***o-mo***.

NOTE. In an old inflection like that of the verbal root **es**, i.e. **esmi-smés**, sometimes a Semithematic alternative is found. Compare the paradigm of the verb *be* in Latin, where zero-grade and o vowel forms are found: ***s-omi*** (cf. Lat. *sum*), not **es-mi**; ***s-omes*** (cf. Lat. *sumus*), not **s-me**; and ***s-onti*** (cf. Lat. *sunt*), not **s-enti**. Such inflection, not limited to Latin, has had little success in the Indo-European verbal system, at least in the dialects that have been attested. There are, however, many examples of semithematic inflection in non-root verbs, what could mean that an independent semithematic inflection existed in PIE, or, on the contrary, that old athematic forms were remade and mixed with the newer thematic inflection (Adrados).

7. Thematic verbal roots have generally an ***-e/o*** added before the endings. Therefore, in Athematic stems ***e/o*** may be found in the 3rd P.Pl., in Semithematics in the 1st P.Sg. and Pl., and in Thematic it appears always.

Thematic inflection shows two general formations:

a. Root vowel ***e*** and root accent; as in **déiketi**, *he/she/it shows*.

b. Root vowel ø and accent on the thematic vowel, as in **dikóm** *he/she/it showed*.

The first appears usually in the Present, and the second in the Aorist, although both could appear in any of them in PIE. In fact, when both appear in the Present, the a-type is usually a Durative – meaning an action not finished –, while b-type verbs are Terminatives or Punctuals – meaning the conclusion of the action. This semantic value is not general, though, and is often found in Graeco-Aryan dialects.

NOTE. The newer inflection is, thus (in a singular/plural scheme), that of full/full vocalism for Present, ø/ø for Aorist. The (mainly) Root Athematic - and Semithematic - inflection in full/ø appears to be older than the Thematic one. The Thematic inflection probably overshadowed the Athematic and Semithematic ones in IE III, and there are lots of examples of coexisting formations, some of the newer being opposed to the older in meaning.

III. PRESENT REDUPLICATED STEM

1. Depending on its Formation, present stems may have either Full Reduplication, sometimes maintained throughout the conjugation, or Simple Reduplication, which normally consists of the initial consonant of the root followed by ***-i-***.

Depending on its Meaning, reduplication may have a general value (of Iteration or Intensity), or simply opposed values in individual pairs of *Basic Verb-Deverbative*. Therefore, it helps to distinguish the verb in its different forms.

2. How Reduplication is made:

I. Full Reduplication, normally found in the Present Stem, repeats the Root or at least the group *consonant/sonorant+vowel+consonant/sonorant*; as, **gal-gal-**, *talk*, **bher-bher-**, *endure*, **mor-mor-**/**mur-mur-**, *whisper*, etc.

Full reduplication is also that which repeats a Root with *vowel+consonant/sonorant*; as, **ul-ul-**, *cry aloud* (cf. Lat. *ululāre*).

II. Simple Reduplication is made:

a. With *consonant* + ***i***,

- in Athematic verbs; as, **bhi-bher**, *carry* (from **bher**),

- in Thematic verbs; as, **gi-gnō-sko-**, *know* (from **gnō**), etc. **si-sdo-**, *sit down, settle* (from zero-grade of **sed**, *sit*),

- Some Intensives have half full, half simple Reduplication, as in **dei-dik-**, *show* (from **deik-**).

- There are other forms with ***-w, -u***, as in **leu-luk-**, *shine* (from **leuk-**, *light*).

- There are also some Perfect stems with ***i***.

b. With *consonant* + ***e/ē***, as **dhe-dhē-**, **de-dō-**, etc.

Simple Reduplication in ***e*** appears mainly in the Perfect, while ***i*** is characteristic of Present stems. Reduplication in ***e*** is also often found in Intensives in southern dialects.

NOTE. Formal reduplication in ***-i*** is optional in Modern Indo-European, as it is mostly a Graeco-Aryan feature; as, **gignōskō/gnōskō**, **didō/dō**, **pibō/pō(i)**[175], etc.

NOTE. Reduplication doesn't affect the different root vowel grades in inflection, and general rules are followed; as, **bíbherti-bibhrmés**, **(s)ístāmi-(s)istamés**, etc.

3. The different Meaning of Reduplicates found in PIE are:

- Indo-Iranian and Greek show a systematic opposition *Basic Verb - Deverbative Reduplicated*, to obtain an Iterative or Intensive verb.

- Desideratives are Reduplicates with ***i*** + Root + ***-se/o***, as e.g. **men** vs. **mi-mn̥-so-**, *think*. Such Reduplicates are called Terminatives.

NOTE. Although the Iterative-Intensives, Desideratives and sometimes Terminatives did not succeed in the attested European dialects, we consider it an old resource of Late PIE, probably older than the opposition Present-Perfect. We therefore include this feature in the global MIE system.

IV. PRESENT CONSONANT STEM

1. Indo-European Roots may be lengthened with an occlusive to give a verb stem, either general or Present-only. Such stems are usually made adding a dental ***-t***, ***-d***, ***-dh***, or a guttural ***-k***, ***-g***, ***-gh*** (also ***-k***, ***-g***, ***-gh***), but only rarely with labials or labiovelars. They are all Thematic, and the lengthenings are added to the Root.

NOTE. Such lengthenings were probably optional in an earlier stage of the language, before they became frozen as differentiated vocabulary by Late PIE. Some endings (like ***-sko***, ***-io***, etc.) were still optional in IE III, v.i.

2. Here are some examples:

- ***t*** : **plek-tō**, *weave*, **kan-tō**, *sing*; **klus-tiō**, *hear*, *listen*, etc.

- ***d*** : **sal-dō**, *to salt*, **ekskel-dō**, *be eminent*, **pel-dō**, *beat*, etc.

NOTE. The lengthening in ***-d*** sometimes is integrated completely to the root (cf. Lat. *stridō*, *tendō*), or it appears only in some tenses, cf. Lat. *pellō*/*pepuli*/*pulsus*, but frec. *pulsō* & *pultō*,*-āre*.

- ***dh*** : **ghṛ-dhiō**, *gird*, **gawi-dhē**, *rejoice*; **wol-dhō**, *dominate*, etc.

- ***k*** : **ped-kā**, *stumble*, **pleu-kō**, *fly*, **gel-kiō**, freeze, etc.

- ***g*** : **tmā-gō**, from **tem-**, *cut*, etc.

- ***gh*** : **smē-ghō**, **nē-ghō**, *negate*, **stena-ghō**, etc.

- ***p*** : **wel-pō**, *wait*, from **wel-**, *wish*, *will*, etc.

- **bh** : **gnei-bhō**, *shave* (cf. **gneid-**, *scratch*), **skre(i)-bhō**, *scratch to write* (from **sker-**, *scratch*, *scrape*), **ster-bhō**, *die* (from **ster-**, *get stiff*), etc.

NOTE. These lengthenings are considered by some linguists as equally possible root modifiers in Proto-Indo-European to those in ***-s***, ***-sk***, ***-n-***, ***-nu***, ***-nā***, etc. However, it is obvious that these ones (vide infra) appear more often, and that they appear usually as part of the conjugation, while the former become almost always part of the root and are modified accordingly. Whatever the nature and antiquity of all of them, those above are in Modern Indo-European usually just part of existing stems (i.e., part of the IE morphology), while the following extensions are often part of the conjugation.

3. Imperfect Stems in ***-s*** and its derivatives, as ***-sk-*** and ***-st-***, are almost all Thematic.

NOTE. Thematic suffix ***-ste/o*** has usually an Expressive sense, meaning *sounds* most of the times; as, **brestō**, *tremble*, **bhrestō**, *burst*, *break*, etc.

4. Stems in ***-s*** have a common specialized use (opposed to Basic stems), marking the Preterite, the Future, and sometimes the Subjunctive.

NOTE 1. Aorist stems in ***-s*** are usually Athematic.

NOTE 2. Because of its common use in verbal inflection, deverbatives with a lengthening in ***-s-*** aren't generally opposed in Meaning to their basic stems. There may be found some individual meanings in such opposed stem pairs, though, already in Late PIE; as, Insistents or Iteratives (cf. **wéid-s-o**, *"want to see, go to see"*, hence *"visit"*, as Lat. *vīsere*, Goth. *gaweisōn*, O.S. O.H.G. *wīsōn*, vs. Pres. **w(e)id-é-io**, *see, know*, as Lat. *vidēre*), Causatives, and especially Desideratives (which were also used to form the Future stem in the Southern Dialect). There is, however, no general common meaning reserved for the extended stem in ***-s***. Compare also Lat. *pressī* <* *pres-sai* vs. Lat. *premō*; Lat. *tremō* vs. a Gk. τρεω<**tre-sō*, O.Ind. trásate, '*he is frightened*'.

PRESENT CONSONANT LENGTHENINGS

A. Thematic suffix ***-ske/o-*** is added to Roots in zero-grade, especially to monosyllabics and disyllabics; as, **pṛk-skṓ** (from **prek**[42]), **cm-skṓ**, (from **cem**[82]), **gnṓ-skō** (from **gnō**[100]). It can also be added to Reduplicated stems, as **dí-dk-skō** (from **dek**[89]), **gí-gnō-skō**, and to lengthened Roots, especially in **ī**, **u**, **ē**, **ā**, as **krē-skō** (from **ker**[175]).

Sometimes these Deverbatives show limited general patterns, creating especially Iteratives, but also Inchoatives, Causatives, and even Determinatives or Terminatives.

This lengthening in ***-sk-*** seems to have been part of Present-only stems in Late PIE; cf. Lat. *flōrescō/flōruī*, Gk. *κικλησκω/κεκληκα*, and so on.

NOTE 1. Cases like IE verb **pṛkskṓ**, *ask*, *demand* (cf. O.H.G. *forscōn*, Ger. *forschen*, Lat. *poscō>por(c)scō*, O.Ind. *pṛcch*, Arm. *harc'anem*, O.Ir. *arcu*), which appear throughout the whole conjugation in different IE dialects, are apparently exceptions of the Late Proto-Indo-European verbal system; supporting a common formation of zero-grade root Iterative presents, compare also the form **(e)skó-** (<*h₁skó*), the verb **es-** with 'existencial' sense, as O.Lat. *escit*, "*is*", Gk. *ẽske*, "*was*", Hom. Gk. *éske*, Pal. *išk*a, etc.

NOTE 2. Supporting the theory that ***-sk*** has a newer development than other lengthenings is e.g. the Hittite formation *duskiski*(*ta*) (cf. O.Ind. *túsyate*, *'silenter'*, O.Ir. *inna tuai 'silentia'*), which indicates that in Anatolian (hence possibly in IE III as well) such an ending – unlike the other endings shown - is still actively in formation.

B. Stems in ***-n*** are said to have a *nasal suffix* or a *nasal infix* – if added within the root. They may be Athematic or Thematic, and the most common forms are ***-n***, ***-neu/-nu***, ***-nā***: as in **stṛ-neu-mi/ster-nu-ō**, *spread*; **li-n-eq-mi/li-n-q-ō**, *leave*; **mḷ-n-ā-iō**, *soften*; **dhre-n-g-āiō**, *hold*; **pu-n-g-ō**, *prik*; **bhu-n-dh-ō**, *be aware*, **pla-n-tā-iō**, *plant*; etc. These verbs can be found also without the nasal suffix or infix, viz. ***streu***, ***leiq***, ***mlā***, ***dhreg***, ***peug***, ***plat***.

There are other, not so common nasal formations; as, ***-ne/o***, i.e. -[no] or -[n̥-o], and (possibly derived from inflected ***-neu*** and ***-nei***) the forms ***-nue/o***, ***-nie/o***. So for example in **sper-nō**, *scatter*, **p(e)ḷ-nō**, *fill*.

NOTE. These formations are very recent to Late Proto-Indo-European In Greek it is frequent the nasal suffix **-an**. Others as ***-nue/o***, and ***-nie/o*** appear often, too; as Gk. *phthínuo*, Goth. *winnan* (from **wenwan*); Gk. *iaíno*, *phaínomai*, (see **bhā**) and Old Indian verbs in *-niati*.

V. PRESENT VOWEL STEM

1. Some roots and derivatives (deverbatives or denominatives) form the Thematic verb stems with ***-ie/o***, and Semithematics in ***–ī,*** usually added to the stem in consonant .

The preceding vowel may be an -***ā***-, -***ē***-, -***i***- or -***u***-, sometimes as part of the root or derivative, sometimes as part of the suffix. Possible suffixes in -***io*** are then also (the so-called *Verba Vocalia*) -***áio***, -***éio***, -***íjo*** and -***úio***.

NOTE 1. Verbs in -***io*** are usually classified as a different type of deverbatives (not included in *verba vocalia*); in these cases, the Root grade is usually ø; as, **bhudhiō**, *wake up*, from **bheudh**-; but the full grade is also possible, as in **spekiō**, *look*.

NOTE 2. Deverbatives in -***io*** give usually Statives, and sometimes Causatives and Iteratives, which survive mainly in the European dialects (but cf. Gk. *ωθεω*, O.Ind. *vadhayati*, etc), as the especial secondary formation Causative-Iterative, with o-grade Root and suffix -***ĕie***/***o***, cf. from **wes**-, *dress*, Active **wosḗieti** (cf. Hitt. *waššizzi*, Skr. *vāsáiati*, Ger. *wazjan*, Alb. *vesh*), from **leuk**-, *light*, Active **loukḗieti** (cf. Hitt. *lukiizzi*, Skr. *rocáyati*, Av. *raočayeiti*, O.Lat. *lūmina lūcent*), etc. There are also many deverbatives in -***io*** without a general meaning when opposed to its basic verb.

NOTE 2. The Thematic inflection of these verbs is regular, and usually accompanied by the Semithematic in the Northern dialects, but not in the Southern ones, which don't combine them with -***i***-, -***ē***-, nor -***ā***-.

2. Thematic root verbs in -***io*** are old, but have coexisted with the semithematics -***io***/-***i***/-***ī***. These verbs may be deverbatives – normally Iteratives or Causatives – or Denominatives.

NOTE. They served especially to form verbs from nouns and adjectives, as **wesnóm**, *price*, and **wesnēiṓ**, *value* (cf. Skr. *vasna-yá*), **nomn̥**, *name*, **nómn̥iō**, *name* (cf. Got. *namnjan*), or **melit**, *honey*, **ml̥itiō**, *take honey from the honeycomb* (as Gk. *blíttō*), etc.

The deverbative inflection could have -***io***, -***éio***, or its semithematic variant.

NOTE 1. The State or Status value of these verbs is a feature mainly found in Balto-Slavic dialects, with verbs in -***ē*** and -***ā***, whose inflection is sometimes combined with thematic -***ie***/***o***.

NOTE 2. About the usual distinction -***éiō***/-***éiō***, it is apparently attested in Anatolian, Indo-Iranian, Greek and Armenian (cf. Arm. Gen. *siroy*, "*love*", *sirem*, "*I love*" <****kejre-ié***-); Greek loses the -***j***- and follows (as Latin) the rule '*uocālis ante uocālem corripitur*', what helps metrics. However, Greek had probably a present with long **ē** (as in non-liquid future and perfect). Mycenaean doesn't clarify the question; moreover, it is often accepted that forms like O.Ind. in *-ayati* are isolated. For pragmatic purposes, Modern Indo-European should follow always an ending -***ēiō***, which fits better into EIE reconstruction and Western poetry, which follows the Classical Greek and Latin metrics, as it is not so easy to include ***lubheieti*** (with three syllables) in the common classic hexameter... However, for modern dialectal purposes (i.e. to write in Hellenic, Aryan or Anatolian) it is probably safe to assume a common, old PIE dialectal (and very limited) trend to use -***éio***.

3. Stems in -***u*** are rarely found in the Present, but are often found in the Preterite and Perfect stems.

NOTE. Stems in -***u*** have, thus, an opposed behaviour to those in -***i***, which are usually found in Present and rarely in Preterite and Perfect.

In Present stems, ***-u*** is found in roots or as a suffix, whether thematic or athematic (but not semithematic), giving a stem that may normally appear as the general stem of the verb. It is therefore generally either part of the root or a stable lengthening of it.

NOTE. Common exceptions to this general rule concerning Late PIE verbs in ***-u***, usually general stems, are different pairs **gheu**-**ghō**, **pleu**-**plō**, etc.

4. Root or stems in ***-ē***, Athematic or mixed with ***-i***-. Sometimes the ***-ē*** is part of the Root, sometimes it is a suffix added or substituting the ***-e*** of the Stem.

They may be verbs of State; as, **albhēiō**, *be white*, with a stative value. There are also Iterative-Causatives; Denominatives are usually derived from thematic adjectives in **e**/**o**.

NOTE. These are probably related with stems in **-i** (i.e., in ***-ēie***/***o***) as in **albhēiō**, *be white*, **monēiō**, *remind, advise*, **senēiō**, *be old*.

Athematic examples are **lubhēiō**, *be dear, be pleasing*; **rudhēiō**, *blush, redden*; **galēiō**, *call* (not denominative).

5. Roots or stems in ***-ā***, Athematic or mixed with ***-i***-. They are spread throughout the general Verb system; as, **bhā**(**iō**), *draw*; **dukā**(**iō**), *drag, draw*; **amā́**(**iō**), *love*, etc.

NOTE. Some find apparently irregular formations as Lat. *amō*, "*I love*", from an older ***amā́-iō***, mixed with ***-i***-; however, they are sometimes reconstructed (viz. Adrados) as from ****amō***, i.e. in **-ā** without ending (cf. Lat. *amas, amat,...*); against it, compare common IE formations as Umb. *suboca* , "*invoke*", Russ. *délaiu*, and so on.

About their Meaning, they may be (specially in Latin) Statives or Duratives, and sometimes Factitives opposed to Statives in **-ē** (cf. Hitt. *maršaḫ-marše-*, Lat. *clarāre-clarēre*, *albāre-albēre*, *nigrāre-nigrēre*, *liquāre-liquēre*). But there are also many deverbatives in **-ā** without a special value opposed to the basic verb.

Stems in **-ā** help create Subjunctives, Aorists, and Imperfectives. The use of **-ā** to make Iterative and Stative deverbatives and denominatives is not so common as the use **-ē**.

NOTE. There is a relation with verbs in ***-i***- (i.e. in - ***āio***), as with stems in ***-ē***.

7.4.3. THE AORIST STEM

I. AORIST STEM FORMATION PARADIGM

1. The Aorist describes a completed action in the past, at the moment when it is already finished, as e.g. Eng. *I did send*/*had sent that e-mail before*/*when you appeared*.

NOTE. As opposed to the Aorist, the Imperfect refers to a durative action in the past (either not finished at that moment or not finished yet), as e.g. Eng. *I sent*/*was sending the e-mail when you appeared*.

2. The Aorist is made usually in Ø/Ø, Secondary Endings, Augment and sometimes Reduplication; as, 1st. P.Sg. **(é)bheróm**.

NOTE. Augment was obviously obligatory neither in Imperfect nor in Aorist formations in Late PIE (cf. Oldest Greek and Vedic Sanskrit forms), but it is usually shown in this grammar because tradition in IE studies has made Augment obligatory, and because a) the Aorist is mostly a litterary resource, b) only Greek and Sanskrit further specialized it, and c) these dialects made Augment obligatory. It is clear, however, that for a Modern Indo-European of Europe it would be better to select an 'Augment' (if we had to) in ***pro***-, as common Celtic *ro*-, in ***kom***-, as regular Germanic *ga*-, or in ***per***- as frequently found in Latin, instead of the Graeco-Aryan in ***é***-.

3. The opposition of Present and Preterite stems is made with:

a. Present Reduplicated Root vs. Aorist Basic Root; as, **sí-stā-mi**, *I stand*, vs. **stā-m**, *I have stood*.

b. Thematic Present vs. Athematic Aorist in **-s**; as, **leiq-ō**, *I leave*, **lēiq-s-ṃ**, *I was leaving*.

c. Both stems Thematic, but with different vowel degrees; as, **leiq-ō**, *I leave*, **liq-óm**, *I have left*.

NOTE. Every stem could usually be Present or Aorist in PIE, provided that they were opposed to each other. And there could be more than one Present and Aorist stem from the same Root; as, for Thematic Present **leiq-ō**, *I leave*, which shows two old formations, one Athematic extended **lēiq-s-ṃ** (the so-called sigmatic Aorist), and other Thematic zero-grade **liq-óm**.

4. There was a logical trend to specialize the roles of the different formations, so that those Stems which are rarely found in Present are usual in Aorists. For example, Thematic roots for the Present, and Aorists extended in (athematic) ***-s***-.

NOTE. In fact, there was actually only one confusion problem when distinguishing stems in Proto-Indo-European, *viz.* when they ended in ***-ē*** or ***-ā***, as they appeared in Presents and Aorists alike. It was through oppositions and formal specializations of individual pairs that they could be distinguished.

II. AORIST ROOT STEM

1. Athematic Aorist Root stems were generally opposed to Athematic Reduplicated Present stems, but it wasn't the only possible opposition in PIE.

NOTE. Such athematic Root stems aren't found with endings in consonant, though.

2. Monosyllabic Root Aorists are usually opposed to Presents:

a. In **-neu**; as, **kluneuō**, from **kleu**-, *hear*, or **qṛneuō**, from **qer**-, *make, do*; etc.

NOTE. For ***kluneu***- cf. Buddh. Skr. *śruṇ*; Av. *surunaoiti*; Shughni *çin*; O.Ir. *cluinethar*; Toch. A and B *käln*. Skr. *śRṇo-*/*śRṇu-* < ***kluneu***-/***klunu***- shows a loss of *u* analogous to the loss of *i* in *tRtī́ya-* '*third*' < IE ***tritĭjo***-.

b. Reduplicated or in ***-sko***, ***-io***; as, **camskṓ**, from **cem**-, *come*, or **bhesiō**, from **bhes**-, *breathe*; etc.

c. Thematic Present; as, **ghewō**, from **ghew**-, *pour*; **bhawō**, from **bhā**-, *proclaim*.

3. Disyllabic Root Presents show a similar opposition pattern; as, **gígnōskō**-**gnō**, **bhaliō**-**bhlē**, etc.

The thematic vowel is the regular system in inflection, i.e. Present Sg. Active with full vowel, and ø in the rest.

NOTE. It seems that Proto-Indo-European disyllabic roots tended to generalize a unique form, disregarding the opposition pattern; as, **gnō**-, **bhlē**-, etc.

4. Thematic Aorist stems are the same ones as those of the Present, i.e. full-grade and zero-grade, e.g. ***leiq***- and ***liq***-, always opposed to the Present:

a. The ***liqé***/***ó***- form (i.e. zero-grade) is usually reserved for the Aorist stem;

b. The ***leiqe***/***o***- form (i.e. full-grade) is rarely found in the Aorist – but, when it is found, the Present has to be logically differentiated from it; e.g. from the Imperfect with Augment, viz. from **bhértus**, *to carry*, Pres. **bhéreti**/**bherti**, *he carries*, Imperf. **bherét**/**bhert**, *he was carrying*, Aorist **ébheret**/**ébhert**, *he carried*.

III. AORIST REDUPLICATED STEM

1. Aorist Reduplicated stems – thematic and athematic – are found mainly in Greek and Indo-Iranian, but also sporadically in Latin.

NOTE. Southern dialects have also (as in the Present) a specialized vowel for Reduplicated Aorists, v.i., but in this case it is unique to them, as the other dialects attested apparently followed different schemes. In Modern Indo-European the attested dialectal schemes are followed.

2. Aorist Thematic Reduplicates have a general vowel ***e*** (opposed to the ***i*** of the Present), zero-grade root vowel (general in Aorists), and sometimes also accent before the ending; as, **chechnō**, *I killed*, from **chen**-.

In roots which begin with vowel, reduplication is of the type *vowel+consonant*.

NOTE. This resource for the Aorist formation seems not to have spread successfully outside Graeco-Aryan dialects; however, the opposition of Present Reduplication in ***i***, Preterite Reduplication in ***e*** (cf. Perfect Stem) was indeed generalized in Late Proto-Indo-European.

3. Some roots which begin with vowel form also Reduplicated Aorists; as **ágagom** (as Gk. ηγαγον, where η<ā<**é**+**a** – Wackernagel, hence ****é-agagom***)

4. Also, Causatives form frequently Reduplicated Aorists, cf. Lat. *momorit*, *totondit*, *spopondit*, etc., or O.Ind. *atitaram*, *ajijanam*, etc.

IV. AORIST CONSONANT STEM

1. As we have seen, Present Thematic stems in ***-s-*** are often Desideratives (also used as immediate Futures). The same stems serve as Aorists with secondary endings, usually reserved for the Aorist, generally called the Sigmatic Aorist (from Gk. σίγμα, "*sigma*", i.e. *Σ*, *σ* or *ς*).

NOTE. Forms in ***-so*** are often found in Slavic; as, *vedu-veso*, *reco-reso*, etc.

2. The ***-s-*** is added:

a. to a Consonant ending and lengthened root vowel, in contrast with the Present in full vowel.

b. to a vowel **ā**, **ē**, **ō**, with the same stem as the Present, or to the noun from which the verb is derived. Those in **ē** and **ā** must have ø root grade.

There is also a second Aorist mark: an ***-e-*** before the ***-s-*** (possibly an older Aorist mark, to which another mark was added); as, **alkō**, **alkesṓ**, *grow*, from **al-**; **mńiō**, **mnesṓ**, *be mad*, from **men-**; etc.

NOTE. Thematic Aorist stems are mostly used as Presents in Indo-Iranian, Greek, Slavic, and Latin (cf. Lat. *dīxī*).

3. Athematic stems in ***-s-*** are widespread in Late PIE. They were formerly added to the Root, whether monosyllabic or disyllabic, in consonant or vowel, opposed thus to the Present.

Monosyllabic or Disyllabic Aorist root stems in **i**, **u**, **ā**, **ē**, **ō**, have a fixed vowel grade (like most Athematic Root Aorists); e.g. the 3rd P.Pl. **plēnt**, from redupl. **pí(m)plēmi**, *fill* (i.e. in zero-/full-grade), or 3rd P.Pl. **pewisn̥t** from **pōnāmi**, *purify* (i.e. in full-/zero-grade).

The most frequent Aorist stems in PIE were monosyllabic roots ending in consonant or sonant.

NOTE 1. They usually have in Graeco-Aryan lengthened root vowel in the active voice, and zero-grade in the rest; as, **leiq-**, *leave*, from which **liq-** & **lēiq-s-m̥**; so too from **qer-**, *make*, giving **qēr-s-ō**; or from **bher-**, *carry*, **bhēr-s-ō**, etc. Such lengthened vocalism in sigmatic aorists is probably an innovation in Late PIE.

NOTE 2. Aorists in ***-s-*** are then a modern feature of Late PIE, found in all its dialects (as Imperfects or Perfects in European dialects), but for Germanic and Baltic, possibly the dialects spoken far away from the core of the remaining Europe's Indo-European dialect continuum, in close contact with other Late PIE dialects after the first migrations. Aorist stem formation in ***-i-***, ***-ē-***, ***-ā-*** are still more recent, appearing only in some proto-languages.

4. Some other common dialectal formations in ***-s-***:

a. in ***-is*** (Latin and Indo-Aryan), ***-es*** (Greek); as, **genis-** from **gen**, *beget*; **wersis-** from **wers-**, *rain*; also, cf. Lat. *amauis* (*amāuistī*, and *amāuerām*<***-uisām***), etc.

b. in ***-sā***, attested in Latin, Tocharian and Armenian.

c. in ***-sē***, ***-sie/o***, etc.

5. Stems in -***t***- function usually as Aorists opposed to Present stems, especially in Latin, Italic, Celtic and Germanic.

NOTE. While the use of -***t*** for persons in the verbal conjugation is certainly old, the use of an extension in -***t***- to form verbal Stems seems to be more recent, and mainly developed in Europe's Indo-European.

6. Stems in -***k***- are rare, but there are examples of them in all forms of the verb, including Aorists.

V. AORIST VOWEL STEM

1. Aorists in ***ā***, ***ē***, are very common, either as pure stems with Athematic inflection, or mixed with other endings, as e.g. -***u***-.

NOTE. Stems extended in -***u***- are rarely found in Present stems, but are frequent in Preterites, and the contrary has to be said of stems in -***i***-. For more on this formations, *vide supra* the Present Vowel Stem section.

When opposed to a Present, stems extended in -***ā***, -***ē***, are often Aorists.

2. A common pattern in the opposition Present Stem vs. Aorist Vowel Stem is:

A. Present in -***i***- (thematic or semithematic) vs. Aorist in -***ē***, -***ā***; as, **mńiō-mn̥ēiō**, *be mad*, **alkiō-alkāiō**, *be hungry*.

B. Present Thematic (in -**e**/**o**) vs. Aorist in -***ē***, -***ā***; as, **legō-legēiō**, *collect, speak*, **gntō-gntāuō**, *know*.

3. The use of stems in -***u***- is usually related to the Past and sometimes to the Perfect. Such endings may appear as -***u***, - ***āu***, - ***ēu***, -***ēuē***, - ***āuā***, -***ēuā***, - ***āuē***.

4. Stems in -***i***/-***ī*** are scarcely used for Aorists, cf. **awisdhíjō-awisdhíuī**, *hear*, Lat. *audĭo*, *audĭui*.

Aorist stems are often lengthened in -***e***- or -***i***-, to avoid the loss of consonants when extended in -***s***-.

7.4.4. THE PERFECT STEM

The Perfect stem (opposed to the Present) has **ŏ** or lengthened root vowel and special Perfect endings, Sg. -***a***, -***ta***, -***e***; 3rd Pl. -***r***. In Gk. and Ind.-Ira., the stem was often reduplicated, generally with vowel ***e***.

NOTE. Originally the Perfect was probably a different Stative verb, which eventually entered the verbal conjugation, meaning the state derived from the action. PIE Perfect did not have a Tense or Voice value; it was opposed to the *Pluperfect* (or Past Perfect) and became Present, and to the Middle Perfect and became Active.

I. Root vowel is usually **ŏ**/ø; as, (Pres. 1stP.Sg., Perf. 1stP.Sg., Perf.1stP.Pl), **gígnō-mi**, **gégon-a**, **gegn-mé**, *know*; **bhindh-ō**, **bhondh-a**, **bhn̥dh-mé**, *bind*; **bheudh-ō**, **bhoudh-a**, **bhudh-mé**, *bid*;

But for different formations, cf. **kan-ō**, (**ké**)**kan-a**, **kn̥-mé**, *sing*; (for subgroups of conjugations, v.s.)

NOTE 1. Compare O.Ir. *cechan, cechan, cechuin (and cechain), cechnammar, cechn(u)id, cechnatar*. For examples of root vowel **ā**, cf. Lat. *scābī*, or Gk. *τεθηλα*, and for examples with root vowel **a**, cf. Umb. procanurent

(with ablaut in Lat. *procinuerint*) – this example has lost reduplication as Italic dialects usually do after a preposed preposition (cf. Lat. *compulī*, *detinuī*), although this may not be the case (cf. Lat. *concinuī*).

NOTE 2. There are also (dialectal) Perfects with lengthened Root vowel; as, from Latin **sedē-iō**, **sēd-a**, *sit*; **ed-ō**, **ēd-a**, *eat*; **cem-iō**, **cēm-a**, *come*; **ag-ō**, **āg-a**, *act*; from Germanic, **sleb-ō**, **séslēb-a**, *sleep*; etc.

II. The Endings of the Perfect are ***-a***, ***-ta***, ***-e***, for the singular, and ***-mé***, ***-(t)é***, ***-(ē)r***, for the plural.

III. Reduplication is made in ***e***, and also sometimes in ***-i*** and ***-u***.

NOTE. Apparently, Indo-Iranian and Greek dialects made reduplication obligatory, whereas European dialects didn't. Thus, as a general rule, verbs are regularly reduplicated in Modern Indo-European if the Present Stem is a reduplicate; as, Present **bhi-bher-**, Perfect **bhe-bhor-**, etc. Such a general rule is indeed subjected to natural exceptions; cf. Gk. *εγνοκα*, Lat. *sēuī* (which seems old, even with Goth. *saiso*), etc. Also, cf. Lat. *sedī*, from *sedeō* and *sīdo*, which don't let us reconstruct when is from PIE ***sesdai***, and when from ***sēdai***.

7.4.5. THE FUTURE STEM

1. Future stems were frequently built with a Thematic ***-s-*** ending, although not all Indo-European dialects show the same formations.

NOTE. The Future comes probably from Late PIE Desiderative-Causative Present stems, usually formed with extensions in ***-s-*** (and its variants), which probably became with time a regular part of the verbal conjugation in some dialects, whilst disappearing in others. In fact, whether using this formation or not, all Indo-European languages tended to differentiate the Present from the Future Tense. Usual resources found in Indo-European languages to refer to the future are 1) the *Present as Immediate Future*, 2) the *Present Subjunctive or Aorist with prospective value*, 3) *different Desiderative formations in Present*, and 4) *Verbal Periphrasis*.

Future stems were usually made in Proto-Indo-European dialects:

a. With a simple Athematic **-s**, or with extended Thematic ***-so***, ***-sio***, or ***-seio***.

b. With root vowel ***e***, i.e. in full-grade.

c. With or without reduplication.

NOTE. Compare, for a common origin of the future in ***-s-***, Sanskrit (and Baltic) futures in ***-sia*** (cf. Skr. *da-syā-mi*, Lith. *dou-siu*, "*I will give*"), Doric Greek in ***-seo***, ***-sio***, Classical Greek and Archaic Latin in ***-so*** (cf. O.Lat. *faxō*, ***dhak-sō***, "*I will make*", O.Lat. *peccas-sō*, from *peccāre*, Lat. *erō*, "*I will be*", from ***esō***, from IE **es-**, *be*, etc.), and Old Irish common Desideratives in ***-s***. Also, some more dialectal additions are found appearing before the ***-s-*** edings; as, ***-i-s-*** in Indo-Iranian and Latin, ***-e-s-*** in Greek and Osco-Umbrian.

2. In Modern Indo-European, the Future is regularly made by adding a Thematic ***-so***, ***-sio*** (or even ***-seio***), following if possible the attested common vocabulary.

NOTE. The Future stem in ***-s*** is found neither in Germanic and Slavic dialects, nor in Classic Latin, which developed diverse compound futures. However, Indo-Iranian, Greek and Baltic show almost the same Future stems (along with similar formations in Archaic Latin, Oso-Umbrian and Old Celtic dialects), what means that the

Future stem had probably a common (but unstable) pattern already developed before the first migrations; apparently, Germanic and Slavic dialects, as well as the systematized Classic Latin, didn't follow it or later substituted it with their own innovative formations. We use it in Modern Indo-European, though, because a regular Future formation is needed.

For Germanic future compounds, compare general Germanic from **wertō**, PGmc. *werþō*, "*become, turn into*" (cf. Goth. *wairþan*, O.S., O.Du. *werthan*, O.N. *verða*, O.E. *weorðan*, O.Fris. *wertha*, O.H.G. *werdan*, Eng. *worth*, Ger. *werden*), from PIE **wer-**, *turn*. Also, **sk(e)lō**, Gmc. *skulō*, "*owe, must*" (cf. Goth. *skulan*, O.S. *sculan*, O.N., Swed. *skola*, O.H.G. *solan*, M.Du. *sullen*, Eng. *shall*, Ger. *sollen*), with a dialectal meaning shift from 'obligation' to 'probable future', related to O.E. *scyld* "*guilt*", Ger. *Schuld*, also in O.N. *Skuld*; cf. O.Prus. *skallisnan*, Lith. *skeleti* "*be guilty*", *skilti*, "*get into debt*". Also, for Eng. "*will*", from Gmc. *welljan*, "*wish, desire*", compare derivatives from PIE **wel-**.

In Osco-Umbrian and Classic Latin, similar forms are found that reveal the use of compounds with the verb **bheu-**[130], *be, exist*, used as an auxiliary verb with Potential-Prospective value (maybe a common Proto-Italic resource), later entering the verbal conjugation as a desinence; compare Osc.,Umb. *-fo-*, (cf. Osc.,Umb. *carefo*, *pipafo*), or Lat. *-bo-*, *-be-* (cf. Lat. *ama-bo*, from earlier ****amā́i bhéwō***, or *lauda-bo*, from ****laudā́i bhewō***).

The common Slavic formation comes also from PIE **bheu-**, *be, exist, grow*, with extended **bhūtiō**, *come to be, become*, found in BSl. *byt-* (cf. O.C.S. *бꙑти*, Russ. *быть*, Cz. *býti*, Pol. *być*, Sr.-Cr. *bíti*, etc.), and also in Lith. *bū́ti*, O.Ind. *bhūtíṣ*, and Cel. but- (O.Ir *buith*). Also, with similar meanings and forms, compare Gmc. *biju*, "*be*", (cf. Eng. *be*, Ger. *bin*), or Lat. *fui*, "*was*", also in zero-grade **bhutús**, "*that is to be*", and **bhutū́sos**, *future*, as Lat. *futūrus*, or Gk. *φύομαι*; from the same root cf. Goth. *bauan*, O.H.G. *buan*, "*live*".

3. Conditional sentences might be built in some Proto-Indo-European dialects using common Indicative and Subjunctive formations. In Modern Indo-European, either such archaic syntax is imitated, or an innovative formation is used, *viz.* the Future Stem with Secondary Endings.

NOTE. Modern IE languages show a newer possibility for conditional inflection: using *a past form of the Future stem*", using the Future Stem with secondary endings, thus applying this modern (future) formation to the common Late PIE verbal system of Secondary Endings. However, conditional sentences might also be made with the available Late PIE verbal conjugation, using periphrasis with Indicative and Subjunctive (as Classic Latin), or with the Subjunctive and Optative (as Classical Greek), etc. Whether MIE speakers prefer to use the modern European Conditional Inflection or different periphrasis of PIE indicatives, subjunctives and optatives, is a practical matter outside the scope of this grammar.

In Sanskrit, the Conditional was built using the Future Stem with Secondary Endings; as, Skr. *daa-sya-ti*, "*he will give*", vs. *daa-sya-t*, "*he would give*", from IE **dō-**, or Skr. *abhavi-sya-mi*, "*I will be*", *abhavi-sya-m*, "*I would be*", from IE **bheu-**.

In Ancient Greek, the Optative is found as modal marker in the antecedent, which defines the conditional sense of the sentence; cf. εἰ πράσσοι τοῦτο καλῶς ἄν ἔχοι, "if he were to do that, it would turn out well".

In Germanic dialects, the conditional is usually made with a verbal periphrasis, consisting of the modal (future) auxiliary verb in the past, i.e. *would* (or *should*, also *could*, *might*), and the infinitive form of the main verb, as in *I will come*, but *I would come*; compare also Ger. (fut.) *Ich werde kommen*, (cond.) *Ich würde kommen*.

While Latin used the indicative and subjunctive in conditional sentences, Romance languages developed a conditional inflection, made by the imperfect of Lat. *habēre*, cf. V.Lat. (fut.) *uenire habeo*, "*I have to come*", V.Lat. (cond.) *uenire habēbam*, "*I had to come*", as in Fr. (fut.) *je viendr-ai*, (cond.) *je viendr-ais*, Spa. (fut.) *yo vendr-é*, (cond.) *yo vendr-ía*, etc., cf. also the Portuguese still separable forms, as e.g. Pt. *fazê-lo-ia* instead of "*o fazería*". Modern Italian has substituted it by another similar ending, from the perfect of Lat. *habēre*.

Full conditional sentences contain two clauses: the Protasis or condition, and the Apodosis or result, although this is a matter studied in detail by Indo-European Syntax.

7.4.6.OTHER FORMATIONS

MIDDLE PERFECT AND PAST PERFECT

a. It was a common resource already in Proto-Indo-European to oppose a new Perfect formation to the old one, so that the old became only Active and the newer Middle. Such formations were generalized in the southern dialects, but didn't succeed in the northern ones.

The new Perfect Middle stem was generally obtained with the Perfect stem in zero-grade and middle endings.

b. The Past Perfect or Pluperfect was also a common development of some dialects, opposing the new Perfect with secondary endings to the old Perfect, which became then a Present Perfect.

THE COMPOUND PAST

A special Past or Preterite is found in IE dialects of Europe (i.e., the northwestern dialects and Greek), sometimes called *Future Past*, which is formed by two elements: a verbal stem followed by a vowel (**-ā**, **-ē**, **-ī**, **-ō**), and an auxiliary verb, with the meanings *be* (**es**-), *become* (**bheu**-), *do* (**dhē**-), or *give* (**dō**-).

NOTE. Although each language shows different formations, they all share a common pattern and therefore have a common origin traceable to Late PIE, unstable at first and later systematized in the individual proto-languages.

The Compound Past may be studied dividing the formation in three main parts: the forms of the first and second elements and the sense of the compound.

1. The First Element may be

   a. A Pure Root.

   b. Past Stem with the same lengthening as the rest of the verb.

c. Past Stem lengthened, but alternating with the Present stem, i.e. normally Present zero-grade vs. Past in full-grade.

d. Past Stem lengthened vs. Thematic Present (and Aorist).

NOTE. Originally, then, Compound Pasts are derived from a root or a stem with vowel ending, either the Present or the Aorist Stem. They are, then, Pasts similar to the others (i.e. Imperfects and Aorists), but instead of receiving secondary endings, they receive a secondary stem (like the Perfect).

2. The second element is an auxiliary verb; as, **dhē**- in Greek and Germanic, **bheu**- in Latin and Celtic, and **dō**- in Balto-Slavic.

3. Their specifical Past meaning could vary according to the needs of the individual dialects.

7.5. MOOD STEMS

7.5.1. INDICATIVE

The Indicative expresses the Real Action, in contrast to the other moods, which were specialized in opposition to the basic Indicative mood. It appears in the Four verbal Stems.

7.5.2. IMPERATIVE

The Imperative had probably in IE II the same basic stem of the Indicative, and was used without ending, in a simple Expressive-Impressive function, of Exclamation or Order. They were the equivalent in verbal inflection to the vocative in nominal declension.

Some Late PIE dialects derived from this older scheme another, more complex Imperative system, with person, tense and even voice.

NOTE. In Late PIE, only the person distinctions appear to have been generalized, and we have included only these known common forms in this MIE grammar.

It is also old, beside the use of the pure stem, the use of the Injunctive for the Imperative in the second person plural; as, **bhere!**, *carry! (thou)*, **bhérete!**, *carry! (you)*.

The Injunctive is defined as the Basic Verb, with Secondary Endings, without Augment. It indicated therefore neither the present nor the past, thus easily indicating Intention. It is this form which was generally used as the Imperative.

1. The Basic Stem for the Imperative 2nd P. Sg. is thus general;
2. The Injunctive forms the 2nd P. Pl.; and
3. the 3rd P. Sg. and the 3rd P. Pl. show a special ending ***-tōd***.

NOTE. An ending ***-u***, usually *-***tu***, is also reconstructed (Beekes); the inclusion of that ending within the verbal system is, however, difficult. A common IE ending ***-tōd***, on the other hand, may obviously be explained as the

introduction into the verbal conjugation of a secondary Ablative form of the neuter pronoun **to**, *this*, a logical addition to an Imperative formation, with the sense of '*here*', hence '*now*', just as the addition of **-i**, '*here and now*' to oppose new endings to the older desinences. They were specialized in some dialects as Future Imperatives.

The Imperative in Modern Indo-European is made with the Present Stem and Secondary Endings, and is thus generally divided into two main formations:

a. The old, athematic Imperatives; as in **i!**, *go!*, from **eí**; or **es!**, *be!*; etc.

NOTE 1. In Root Athematic verbs, plural forms show -Ø vowel and accent on the ending; as, **s-éntōd**!, *be they!*

NOTE 2. Some scholars reconstruct for the 2nd P. Sg. Athematic, along with the general zero-ending, a common ***-dhí*** ending, which seems to be very old too.

b. Thematic Imperatives; as **bhere!**, *carry!*, or **age!**, *do!, act!*, etc.

Imperat.		*Athem.*	*Them.*
sg.	2.	*-Ø*, (***-dhí***)	***-e***
	3.	***-tōd***	***-etōd***
pl.	2.	***-te***	***-ete***
	3.	***-n̥tōd***	***-ontōd***

7.5.3. SUBJUNCTIVE

1. The Subjunctive is normally Athematic, usually in ***-ā***, ***-ē*** and sometimes ***-ō***, and always opposed to the Indicative. There are also Subjunctives in ***-s***, probably newer than those in ***-ē***, ***-ā***.

NOTE. No subjunctive is found in BSl., which could mean that it was an innovation of Late PIE.

2. The Subjunctive Stem is made opposing it to the Indicative Stem, usually following these rules:

a. Indicative Athematic vs. Subjunctive Thematic; as, Ind. **esmi**, *I am*, Sub. **esō**, *(if) I be*.

b. Indicative Thematic vs. Subjunctive with Lengthened Thematic Vowel (not root vowel!); as, Ind. **bhéresi**, *you carry*, Sub. **bherēs**, *you may carry*, *(if) you carried*.

3. In Thematic Verbs the Subjunctive is made from the Present Stem, but in Athematic Verbs it is usually made from the Basic Stem; as, from **jeug-**, *join*, 1st P.Pres. **jungō**, Subj. **jungōm**; from **kleu-**, *hear*, 1st P.Pres. **kluneumi**, Subj. **klewōm**, not ~~***kluneúōm***~~.

7.5.4. OPTATIVE

1. The Optative mood is a volitive mood that signals wishing or hoping, as in English *I wish I might*, or *I wish you could*, etc.

1) The Athematic Optative has an alternating suffix ***-iē*** (***-ije*** after long syllable), usually in the singular, and zero-grade ***-ī***, usually in the plural.

2) The Thematic Optative has a regular ***-oi***. (probably the thematic ***-o-*** plus the reduced Opt. ***-i***)

NOTE. Only Albanian, Avestan, Ancient Greek, Sanskrit, and to some extent Old Church Slavonic kept the subjunctive and optative fully separate and parallel. In Sanskrit it is only found in the earliest Vedic language, and the optative and imperative are in comparison less commonly used.

2. The Optative is built with Secondary Endings, and usually with zero-grade root vowel.

3. The Present Optative formations have usually root accent, while the rest show accent on the Optative suffix.

7.6. THE VOICE

7.6.1. ACTIVE VOICE

1. The characteristic Primary Endings are ***-mi***, ***-si***, ***-ti***, 3rd Pl. ***-nti***, while the Secondary don't have the final ***-i***, i.e. ***-m***, ***-s***, ***-t***, 3rd Pl. ***-nt***.

NOTE. The secondary endings are believed to be older, being originally the only verbal endings available. With the addition of a deictic ***-i***, which possibly indicated originally "*here and now*", the older endings became secondary, and the newer formations became the primary endings.

Compare a similar evolution in Romance languages from Lat. *habere*, giving common Fr. *il y a*, "*there (it) is*", or Cat. *i ha*, "*there is*", while the Spanish language has lost the relationship with such older Lat. *i*, "*there*", viz. Spa. *hay*, "*there is*" (from O.Spa. *ha+i*), already integrated within the regular verbal conjugation of the verb *haber*.

2. These Desinences are used for all verbs, whether Athematic or Thematic; as, **esti**, *he is*, or **bhéreti**, *he carries*. However, in the 1st P. Sg., most Late PIE Thematics end in ***-ō***; as, **bherō**.

NOTE. These endings in ***-ō*** are probably remains of the older situation, in which no ending was necessary to mark the 1st P.Sg. (that of the speaker), and therefore, even though a desinence ***-m*** became general with time, the older formations prevailed, in some cases even along with the newer Thematic ***-o-mi***.

Active		*Athematic*		*Thematic*	
		Primary	*Secondary*	*Primary*	*Secondary*
sg.	1.	***-mi***	***-m***	***-ō, -omi***	***-om***
	2.	***-si***	***-s***	***-esi***	***-es***
	3.	***-ti***	***-t***	***-eti***	***-et***
pl.	1.	***-mes, -mos***	***-me, -mo***	***-omes, -omos***	***-ome, -omo***
	2.	***-te***		***-ete***	
	3.	***-ṇti***	***-ṇt***	***-onti***	***-ont***

NOTE. The forms of the first person plural are not easily reconstructed (as every Indo-European dialect has developed its own endings) but they were usually formed with ***-me-/-mo-*** + ø/Consonant (***-s***, ***-n*** or ***-r***).

7.6.2. MIDDLE VOICE

1. The Middle Endings are generally those of the Active voice with a characteristic Middle voice ***-o*** (sometimes ***-e***), in which the Primary Endings have an additional ***-i***.

Middle		*Primary*	*Secondary*
sg.	1.	***-(m)ai***	***-(m)a***
	2.	***-soi***	***-so***
	3.	***-toi***	***-to***
pl.	1.	***-mesdha***	***-medha***
	2.	***-dhe***	***-dhue***
	3.	***-ntoi***	***-nto***

2. In the Moods, the endings attested in PIE are usually the same, but there were some exceptions; as,

- Indicative Middle ***-a-*** vs. Subjunctive Middle ***-ā***,

- Subjunctive 1st P.Sg. ***-ai*** (and not ***-ma***).

7.6.3. PASSIVE VOICE

1. The Passive voice didn't exist in the attested Proto-Indo-European language; it seems nevertheless useful to develop a common modern Indo-European grammatical formation, based on old PIE endings.

2. The ***-r*** ending was usual in the Middle formations of some early Indo-European dialects, and it had also a specific impersonal value. The ***-r*** has therefore two uses in Indo-European:

a. The ***-r*** *After the Stem* had usually in PIE an impersonal value, and it was also found lengthened as ***-ro***, ***-roi***, ***-renti***, ***-ronti***, ***-rontoi***, etc.

NOTE. The ***-r*** was used in the 3rd P. Sg. & Pl., and it was extended in ***-nt-*** when necessary to distinguish the plural, giving initially the impersonal forms e.g. 3rd P.Sg. **déiketor**, "*it is shown*", and 3rd P.Pl. **déikontor**, "*they are shown*", with the impersonal ending ***-r*** which was later generalized in some dialects, spreading as Mediopassives in Hittite, Italic, Celtic, Latin and Tocharian. also, when a Middle form was needed, a Middle ending ***-o*** was added. The primary marker ***-i*** was used apparently with the same aim.

b. The ***-r*** *After the Ending* was usual in forms related to the so-called PIE Mediopassive Voice, attested in Latin, Osco-Umbrian, Celtic and Tocharian, as well as in Germanic, Indo-Iranian and

Anatolian dialects. In Celtic, Osco-Umbrian and Latin, they replaced the Middle Primary Endings, and acquired a Passive value.

NOTE 1. The oldest traceable meaning of the endings in ***-r*** in Proto-Indo-European, taking the Anatolian examples, show apparently the same common origin: either an impersonal subject or, at least, a subject separated from the action, which is a meaning very closely related to the later dialectally specialized use of a Passive Voice.

NOTE 2. There are no distinctions of Primary-Secondary Passive Endings, as the Secondary formations are the same oldest Medioppasive ***-o*** Endings. The newer ***-i*** (Middle) and ***-r*** (Impersonal) endings were added later and spread on a dialect-to-dialect basis, some of them using and/or mixing both of them, all specializing its use.

Passive		*Athematic*	*Thematic*
sg.	1.	***-mar***	***-ar, -omar***
	2.	***-sor***	***-esor***
	3.	***-tor***	***-etor***
pl.	1.	***-mosṛ/-mor***	***-omosṛ/-omor***
	2.	***-dhuer***	***-edhuer***
	3.	***-ṇtor***	***-ontor***

7.7. NOUN AND ADJECTIVE FORMS

7.7.1. INFINITIVES

1. The Infinitives are indeclinable nouns with non-personal verbal functions, which can be in some dialects as many as inflection, voice, aspect and even time.

NOTE. Infinitives are, thus, old nouns reinterpreted as forming part of the verbal conjugation.

2. The older Infinitives are the Verbal Nouns, casual forms inflected as nouns, sometimes included in the verbal inflection. A Verbal Noun is a declinable substantive, derived from the root of a verb.

NOTE. The difference in the syntax is important; the verbal noun is constructed as a substantive, thus - for example - with the object in the genitive; as, **wīrī chenom**, *the killing of a man*, opposed to an infinitive with an accusative; as, **chentus wīrom**, *to kill (Nom.) a man*, v.i.

3. Verbal Nouns were, thus, the normal way to express the idea of a modern Infinitive in the oldest PIE. They were usually formed with the verbal stem and a nominal suffix if Athematic, and is usually formed in MIE with the verbal stem plus neuter ***-om*** if Thematic; as, ***bher-om***, *carrying*.

NOTE. Some IE dialects chose later between limited noun-cases of those verbal nouns for the Infinitive formation, generally Acc., Loc., Abl.; compare Lat. ***-os*** (sibilant neuter), Gmc. ***-on-om*** (thematic neuter), etc.

4. In Late PIE, two general infinitive suffixes were used, ***-tu-*** and ***-ti-***. Such formations convey the same meaning as the English infinitive; as, **bhertus**, *carrying*.

NOTE. For generalized IE infinitive ***-tu-***, cf. Lat. (active & passive supine) *-tum* (acc.) *-tū* (dat.-loc.) *-tui* (dat.), Gk. *-tós* (<*-*tewos*), Skr. *-tus*, *-tum* (acc.), Av. *-tos* (gen.), *-tave*, *-tavai* (dat.), *-tum*, Prus. *-twei* (dat.) *-tun*, *-ton* (acc.), O.Sla. *-tŭ* (supine), Lith. *-tų*, etc.; for ***-ti-***, cf. Ved. *-taye* (dat), BSl., Cel. *-ti* (loc.), Lith. *-tie* (dat.), etc.; also, in ***-m-en-***, cf. Skr. *-mane*, O.Gk. *-men*(*ai*), etc. Also, a common ending ***-dhuāi***/***-dhiāi*** (Haudry) added to the Basic Verbal Stem (possibly originally related to the forms ***-tu-***, ***-ti-***) is the basic form behind Ved. *-dhyai*, Gk. Middle *-σθαι*, Umb. *-fi*, Toch. *-tsi*, as well as Latin gerunds and the for Germanic reconstructed *-***dhiōi***. Other forms include ***-u-***, ***-er***/***n-***, -(***e***)***s-***, extended ***-s-***, ***-u-***, ***-m-***, also Gmc. ***-no-*** (as Goth. *ita-n*<**edo-no-*), Arm. ***-lo-***, etc.

7.7.2. PARTICIPLES

1. The Participles are adjectives which have been assimilated to the verbal system, having thus verbal inflection.

NOTE. The reconstructed Proto-Indo-European shows an intense reliance on participles, and thus a certain number of participles played a very important role in the language.

2. Those in ***-nt*** are the older ones, and are limited to the Active voice and to the Present, Imperfect and Future; as, ***bherónts***/***bherénts***, *who carries*.

3. The Perfect active has a suffix ***-ués***, ***-ués*** (ø-grade ***-us***), or ***-uét***, ***-uót***; as, ***widuóts***, ***widuós***, ***eduós***, etc.

NOTE. Both the Present and Perfect participles are indeed inflected following the second declension; as, Nom. ***-nts***, ***-uos***, Acc. ***-ntṃ***, ***-uosṃ***, Gen. ***-ntos***, ***-usos***, Nom. pl. ***-ntes***, ***-uoses***, etc.

4. The Middle Participles have a common suffix ***-meno-***/***-mēno-***/***-mṇo-*** (originally probably adjectival) as; **alomṇós**[79], "*who feeds himself*", *student*, (as Lat. *alumnus*, from **al-**[79]), **dhēmṇā́**, "*who suckles*", *woman*, (as Lat. *femina*, from **dhēi-**[120]).

5. The Participles have been also developed as Passives in some languages, and are also used in static passive formations in Modern Indo-European. They are usually formed with the Basic or Preterite Stem with the following suffixes:

a. ***-tó-***; as, **altós**, *grown*; **dhetós**, *placed*; **kaptós**, *taken*; etc.

NOTE. The adjectives in ***-to*** imply reference to a Noun. They had usually zero-grade root vowel; as **liqtós**, *left*, **pigtós**, *painted*, and so on.

b. ***-nó-*** and its variants; as, **bheidhnós**, *parted*, *bitten*; **wṛgnós**, *worked*; **delānós**, *made*.

NOTE. Compare with adjectives in ***-n***, as in **pl**(**e**)**nós** (cf. Goth. *fulls*, Eng. *full*, Lat. *plenus*), from **pel**.

c. ***-mó-***; as, **pṛwimós**, *foremost*, *first* (cf. Toch. *parwät*/*parwe*, Lith. *pirmas*, O.C.S. *pĭrvŭ*, etc.).

NOTE. Latin *prīmus* is usually reconstructed as from **preismós** (cf. Paelignian *prīsmū*) or maybe ***pristmós***, in any case (as the rest of IE words for '*first*') from PIE **per-**; for its derivation from **pṛwimós**, see Adrados.

d. ***-ló-***; see next section.

NOTE. All these Passive participles follow the first-type adjective declension, i.e. ***-os***, ***-ā***, ***-om***.

7.7.3. GERUNDIVES AND ABSOLUTIVES

1. Verbal Adjectives are not assimilated to the verbal system of Tense and Voice. Those which indicate need or possibility are called Gerundives.

NOTE. Verbal Adjectives and Adjectives (as Verbal Nouns and Nouns) cannot be easily differentiated.

2. Whereas the same Passive Participle suffixes are found, i.e. ***-tó-***, ***-nó-***, ***-mó-***, there are two forms especially identified with the Gerundives in Late PIE dialects:

a. ***-ló-*** and ***-lí-*** are found in Latin, Balto-Slavic, Tocharian and Armenian; as, **ṇbherelós**, *unbearable*, **ghabhilís**, *able* (as Lat. *habilis*), etc.

NOTE. For suffix ***-lo-*** as originally a participle suffix, cf. Russ. *videlŭ*, Lat. *credulus*, *bibulus*, *tremulus*, etc.

b. ***-ió-*** (a common lengthening to differentiate adjectives) is sometimes a gerundive of obligation, as well as ***-tu-***, ***-ti-***, ***-ndho-***, etc.; as, **dhṛsiós**, *visible*; **gnotinós**, *that has to be known*; **seqondhós**, *second*, *that has to follow*; **gnaskendhós**, *that has to be born*; and so on.

c. ***-món***, with a general meaning of '*able*'; as, **mnāmṓn**, *mindful*.

NOTE. For the "Internal Derivation" (after the German and Austrian schools) of this PIE suffix ***-mn*** > ***-mon***, cf. Gk. *mnẽma* >***mń-mn̥***, "*reminder*", PIE **mnāmn̥**, into Gk. *mnḗmon* > ***mnā-món***, "*who remembers*"; compare also Skr. *bráhman*, "*prayer*", Skr. *brahmán*, "*brahman*", etc.

3. The adverbial, not inflected Verbal Adjectives are called Absolutives or Gerunds. They were usually derived from the older Gerundives.

NOTE. Speakers of Modern Indo-European have to use verbal periphrasis or other resources to express the idea of a modern Gerund, as there is no common reconstructible PIE gerund. As the Verbal Nouns for the Infinitives, the Verbal Adjectives or Gerundives might be a good starting point to translate a modern IE Gerund.

A common Future (or Obligation) Passive Absolutive ending, ***-téu(ij)os***, (cf. Gk. *-τεος*, O.Ind. *-tavya*, O.Ir. *-the*, etc.), may also be used in MIE; as, **legtéu(ij)os**, *which has to be said, read or gathered*.

Because of its Passive use, it may be used only with transitive verbs.

7.8. CONJUGATED EXAMPLES

7.8.1. THEMATIC VERBS

I. PRESENT STEM

loutus[176], *to wash*

PRESENT STEM ***low-o-***

ACTIVE

	Indicative	*Subjunctive*	*Optative*	*Imperative*
sg.	**lowō**	**lowōm**	**lowoim**	**-**
	lówesi	**lowēs**	**lowois**	**lowe**
	lóweti	**lowēt**	**lowoit**	**lówetōd**
pl.	**lówomes**	**lówōme**	**lówoime**	**-**
	lówete	**lówēte**	**lówoite**	**lówete**
	lówonti	**lowōnt**	**lowoint**	**lówontōd**

MIDDLE-PASSIVE

	Indicative	*Subjunctive*	*Optative*	*PASSIVE**
sg.	**lowai**	**lowā́**	**lowoia**	***lowar***
	lówesoi	**lowḗso**	**lówoiso**	***lówesor***
	lówetoi	**lowḗto**	**lówoito**	***lówetor***
pl.	**lówomesdha**	**lowṓmedhā**	**lówoimedha**	***lówomor***
	lówedhe	**lowḗdhue**	**lówoidhue**	***lówedhuer***
	lówontoi	**lowṓnto**	**lówojn̥to**	***lówontor***

IMPERFECT

	ACTIVE	*MIDDLE*	*PASSIVE**
sg.	**lowóm**	**lowá**	***lowár***
	lowés	**loweso**	***lowesor***
	lowét	**loweto**	***lowetor***
pl.	**lowome**	**lowómedha**	***lowomor***
	lowete	**lowedhue**	***lowedhuer***
	lowónt	**lowonto**	***lowontor***

deiktus, *to show*

PRESENT STEM ***deik-o-***

ACTIVE

	Indicative	*Subjunctive*	*Optative*	*Imperative*
sg.	**deikō**	**deikōm**	**deikoim**	**-**
	déikesi	**deikēs**	**deikois**	**deike**
	déiketi	**deikēt**	**deikoit**	**déiketōd**
pl.	**déikomes**	**déikōme**	**déikoime**	**-**
	déikete	**déikēte**	**déikoite**	**déikete**
	déikonti	**deikōnt**	**déikoint**	**déikontōd**

MIDDLE-PASSIVE

	Indicative	*Subjunctive*	*Optative*	*PASSIVE**
sg.	**deikai**	**deikā**	**deikoia**	***deikar***
	déikesoi	**déikēso**	**déikoiso**	***déikesor***
	déiketoi	**déikēto**	**déikoito**	***déiketor***
pl.	**déikomesdha**	**déikōmedhā**	**déikoimedha**	***déikomor***
	déikedhe	**déikēdhue**	**déikoidhue**	***déikedhuer***
	déikontoi	**déikōnto**	**déikojnto**	***déikontor***

IMPERFECT

	ACTIVE	*MIDDLE*	*PASSIVE**
sg.	**deikóm**	**deiká**	***deikár***
	deikés	**deikeso**	***deikesor***
	deikét	**deiketo**	***deiketor***
pl.	**deikome**	**deikómedha**	***deikomor***
	deikete	**deikedhue**	***deikedhuer***
	deikónt	**deikonto**	***deikontor***

weistus, *to know, see*

*PRESENT STEM **w(e)id-ḗ-io-** (Verba Vocalia)*

ACTIVE

	Indicative	*Subjunctive*	*Optative*	*Imperative*
sg.	**weidēiō**	**weidēiōm**	**weidēioim**	**-**
	weidḗiesi	**weidēiēs**	**weidēiois**	**weidēie**
	weidḗieti	**weidēiēt**	**weidēioit**	**weidḗietōd**
pl.	**weidḗiomes**	**weidḗiōme**	**weidḗioime**	**-**
	weidḗiete	**weidḗiēte**	**weidḗioite**	**weidḗiete**
	weidḗionti	**weidēiōnt**	**weidēioint**	**weidḗiontōd**

MIDDLE

	Indicative	*Subjunctive*	*Optative*	*PASSIVE**
sg.	**weidēiai**	**weidēiā**	**weidḗioia**	***weidēiar***
	weidḗiesoi	**weidḗiēso**	**weidḗioiso**	***weidḗiesor***
	weidḗietoi	**weidḗiēto**	**weidḗioito**	***weidḗietor***
pl.	**weidḗiomesdha**	**weidḗiōmedhā**	**weidḗioimedha**	***weidḗiomor***
	weidḗiedhe	**weidḗiēdhue**	**weidḗioidhue**	***weidḗiedhuer***
	weidḗiontoi	**weidḗiōnto**	**weidḗiojnto**	***weidḗiontor***

IMPERFECT

	ACTIVE	*MIDDLE*	*PASSIVE**
sg.	**weidēióm**	**weidēiá**	***weidēiár***
	weidēiés	**weidēieso**	***weidēiesor***
	weidēiét	**weidēieto**	***weidēietor***
pl.	**weidēiome**	**weidēiómedha**	***weidēiomor***
	weidēiete	**weidēiedhue**	***weidēiedhuer***
	weidēiónt	**weidēionto**	***weidēiontor***

NOTE. *Verba Vocalia* in ***-ḗiō***, if they are not Causatives, have usually zero-grade, as in this example ***widḗiō***; cf.Lat. *vĭdĕō*, *stŭpĕō*, *stŭdĕō*, etc., as in derivatives in-***n***- or -***io***. However, without this sense they have usually full-grade, cf. Gk. *ειδω*, Rus. *vižu*, and so on.

II. AORIST STEM

loutus, *to wash*

AORIST STEM ***lou-s-*** (*Sigmatic Aorist*)

ACTIVE

	Indicative	*Subjunctive*	*Optative*
sg.	**lousṃ**	**lousóm**	**lousijēm**
	lous(s)	**lousés**	**lousijēs**
	loust	**lousét**	**lousijēt**
pl.	**lousme**	**lousome**	**lousīme**
	louste	**lousete**	**lousīte**
	lousṇt	**lousónt**	**lousijṇt**

MIDDLE

	Indicative	*Subjunctive*	*Optative*
sg.	**lousma**	**lousa**	**lousijā**
	lous(s)o	**lóuseso**	**lousīso**
	lousto	**lóuseto**	**lousīto**
pl.	**lóusmedha**	**lóusomedhā**	**lousḯmedha**
	lousdhue	**lóusedhue**	**lousīdhue**
	lousṇto	**lóusonto**	**lousíjṇto**

deiktus, *to show*

AORIST STEM ***dik-ó-*** (zero-grade)

ACTIVE

	Indicative	*Subjunctive*	*Optative*
sg.	**dikóm**	**dikṓ**	**dikóim**
	dikés	**dikḗs**	**dikóis**
	dikét	**dikḗt**	**dikóit**
pl.	**dikome**	**dikōme**	**dikoime**
	dikete	**dikēte**	**dikoite**
	dikónt	**dikṓnt**	**dikóint**

MIDDLE

	Indicative	*Subjunctive*	*Optative*
sg.	**diká**	**dikā́**	**dikoia**
	dikeso	**dikēso**	**dikóiso**
	diketo	**dikēto**	**dikoito**
pl.	**dikómedha**	**dikṓmedhā**	**dikóimedha**
	dikedhue	**dikēdhue**	**dikoidhue**
	dikonto	**dikōnto**	**dikójn̥to**

weistus, *to see, know*

AORIST STEM ***wid-ó-*** (zero-grade)

ACTIVE

	Indicative	*Subjunctive*	*Optative*
sg.	**widóm**	**widṓ**	**widóim**
	widés	**widḗs**	**widóis**
	widét	**widḗt**	**widóit**
pl.	**widome**	**widōme**	**widoime**
	widete	**widēte**	**widoite**
	widónt	**widṓnt**	**widóint**

MIDDLE

	Indicative	*Subjunctive*	*Optative*
sg.	**widá**	**widā́**	**widoia**
	wideso	**widḗso**	**widoiso**
	wideto	**widēto**	**widoito**
pl.	**widómedha**	**widṓmedhā**	**widóimedha**
	widedhue	**widēdhue**	**widoidhue**
	widonto	**widōnto**	**widójn̥to**

III. PERFECT STEM

loutus, *to wash*

PERFECT STEM ***lōw-/lou-***

	Indicative	*Subjunctive*	*Optative*	*PAST**	*MIDDLE**
sg	**lōwa**	**lōwō**	**lōwóim**	***lōwóm***	***lōwā***
	lōuta	**lōwes**	**lōwóis**	***lōwés***	***lṓweso***
	lōwe	**lōwet**	**lōwóit**	***lōwét***	***lṓweto***
pl	**loumé**	**lṓwome**	**lōwoime**	***lōwome***	***lṓwomedha***
	louté	**lṓwete**	**lōwoite**	***lōwete***	***lṓwedhue***
	lowŕ	**lṓwont**	**lōwóint**	***lōwónt***	***lṓwonto***

deiktus, *to show*

PERFECT STEM ***doik-/dik-***

	Indicative	*Subjunctive*	*Optative*	*PAST**	*MIDDLE**
sg	**doika**	**doikō**	**doikóim**	***doikóm***	***doikā***
	doikta	**doikes**	**doikóis**	***doikés***	***dóikeso***
	doike	**doiket**	**doikóit**	***doikét***	***dóiketo***
pl	**dikmé**	**dóikome**	**doikoime**	***doikome***	***dóikomedha***
	dikté	**dóikete**	**doikoite**	***doikete***	***dóikedhue***
	dikḗr	**doikont**	**doikóint**	***doikónt***	***dóikonto***

weistus, *to see, know*

PERFECT STEM ***woid-/wid-***

	Indicative	*Subjunctive*	*Optative*	*PAST**	*MIDDLE**
sg	**woida**	**woidō**	**woidóim**	***woidóm***	***woidā***
	woista[i]	**woides**	**woidóis**	***woidés***	***wóideso***
	woide	**woidet**	**woidóit**	***woidét***	***wóideto***
pl	**widmé**	**wóidome**	**woidoime**	***woidome***	***wóidomedha***
	wisté[ii]	**wóidete**	**woidoite**	***woidete***	***wóidedhue***
	widḗr	**woidont**	**woidóint**	***woidónt***	***wóidonto***

[i] From ****woidta***. [ii] From ****widté***.

IV. FUTURE STEM

loutus, *to wash*

FUTURE STEM ***lou-s-io-***

	Future	*Conditional**
sg	**lousiō**	***lousiom***
	lóusiesi	***lousies***
	lóusieti	***lousiet***
pl	**lóusiomes**	***lóusiome***
	lóusiete	***lóusiete***
	lóusionti	***lousiont***

deiktus, *to show*

FUTURE STEM ***deik-s-o-***

	Future	*Conditional**
sg	**deiksō**	***deiksom***
	déiksesi	***deikses***
	déikseti	***deikset***
pl	**déiksomes**	***déiksome***
	déiksete	***déiksete***
	déiksonti	***deiksont***

weistus, *to see, know*

FUTURE STEM ***weid-s-o-***

	Indicative	*Conditional**
sg	**weidsō**	***weidsom***
	wéidsesi	***weidses***
	wéidseti	***weidset***
pl	**wéidsomes**	***wéidsome***
	wéidsete	***wéidsete***
	wéidsonti	***weidsont***

7.8.2. ATHEMATIC INFLECTION

I. PRESENT STEM

estus, *to be*

PRESENT STEM ***es-/s-***

	Indicative	*Subjunctive*	*Optative*	*Imperative*	*IMPERFECT*
sg.	**esmi**	**esō**	**síēm**	**-**	**esm̥**
	essi	**eses**	**síēs**	**es *(sdhi)***	**es(s)**
	esti	**eset**	**síēt**	**estōd**	**est**
pl.	**smés**	**ésome**	**sīme**	**-**	**esme**
	sté	**ésete**	**sīte**	**(e)ste**	**este**
	senti	**esont**	**sijent**	**sentōd**	**esent**
Participle: **sonts**, **sontia**, **sont**					

NOTE. Proto-Indo-European verb **es**, *be*, is a copula and verb substantive; it originally built only a durative aspect of present, and was therefore supported in some dialects (as Gmc., Sla., Lat.) by the root **bheu**-, *be*, *exist*, which helped to build some future and past formations.

For cognates of the singular forms and the 3rd person plural, compare Gmc. *ezmi*, *ezzi*, *esti, senti* (cf. Goth. *im*, *is*, *is*, *sind*, O.N. *em*, *est*, *es*, O.E. *eom*, *eart*, *ist*, *sind/sint*, O.H.G. -,-, *ist*, *sind*, Eng. *am, art, is,* -), Lat. *sum* (<***ésomi***), *es(s)*, *est*, *sunt* (<***sonti***), Gk. *εἰμί*, *εἶ, εστί*, *εἰσί* (Dor. *ἐντί*), O.Ind. *ásmi*, *ási*, *ásti*, *sánti*, Av. *ahmi* (O.Pers. *amiy*), -, *asti*, *hanti*, Arm. *em*, *es*, *ē*, -, O.Pruss. *asmai*, *assai*, *est*, Lith. *esmì*, *esì*, *ẽsti*, O.C.S. *jesmь*, *jesi*, *jestъ*, *sǫtъ* (<***sonti***), Russ. *есмь*, *ecu*, *естьь*, суть (<***sonti***), O.Ir. *am*, *a-t*, *is*, *it* (cf. O.Welsh *hint*) Alb. *jam*,-,-, etc.

kleutus¡Error! Marcador no definido., *to hear*

PRESENT STEM ***kluneu-/klunu-*** (with Nasal Infix)

ACTIVE

	Indicative	*Subjunctive*	*Optative*	*Imperative*
sg.	**kluneumi**	**klewō**	**klunuíjēm**	**-**
	kluneusi	**klewes**	**klunuíjēs**	**klunéu(dhi)**
	kluneuti	**klewet**	**klunuíjēt**	**kluneutōd**
pl.	**klunumes**	**kléwome**	**klunuīme**	**-**
	klunute	**kléwete**	**klunuīte**	**kluneute**
	klununti	**klewont**	**klunuíjn̥t**	**klunéwn̥tōd**

NOTE. Indicative forms may usually be read ***klunumés***, ***klunuté***, ***klununti***, as in Vedic.

MIDDLE-PASSIVE

	Indicative	*Subjunctive*	*Optative*	*PASSIVE**
sg.	**kluneumai**	**klewā**	**klunuīma**	***kluneuar***
	kluneusoi	**kléweso**	**klunuīso**	***klunéuesor***
	kluneutoi	**kléweto**	**klunuīto**	***klunéuetor***
pl.	**klunéumesdha**	**kléwomedhā**	**klunuī́medha**	***klunéuomor***
	kluneudhe	**kléwedhue**	**klunuīdhue**	***klunéuedhuer***
	klunewn̥toi	**kléwonto**	**klunuíjn̥to**	***klunéuontor***

NOTE. Athematic Optatives form the Present with zero-grade; cf. Lat. *siēm*, *duim*, Gk. *ισταιην*, *διδοιην*, *τιθειην*, O.Ind. *syaam* (*asmi*), *dvisyām* (*dvesmi*), *iyām* (*emi*), *juhuyām* (juhkomi), sunuykām (*sunomi*), *rundhyām* (*runadhmi*), *kuryām* (*karomi*), *krīnīyām* (*krīnāmi*), etc. Exceptions are Lat. *uelim* (not *uulim*), Goth. (concave) *wiljau*, *wileis*, etc.

IMPERFECT

	ACTIVE	*MIDDLE*	*PASSIVE**
sg.	**klunewm̥**	**klewā́**	***klunewár***
	klunéus	**kleweso**	***klunewesor***
	klunéut	**kleweto**	***klunewetor***
pl.	**kluneume**	**klewómedhā**	***klunewomor***
	kluneute	**klewedhue**	***klunewedhuer***
	klunewn̥t	**klewonto**	***klunewontor***

stātus[62], *to stand*

PRESENT STEM ***(si)stā-/(si)sta-***

ACTIVE

	Indicative	*Subjunctive*	*Optative*	*Imperative*
sg.	**(sí)stāmi**	**stāiō**	**(si)staíjēm**	**-**
	(sí)stāsi	**stāies**	**(si)staíjēs**	**(sí)stā(dhi)**
	(sí)stāti	**stāiet**	**(si)staíjēt**	**(sí)stātōd**
pl.	**(sí)stames**	**stā́iome**	**(si)staī́me**	**-**
	(sí)state	**stā́iete**	**(si)staī́te**	**(sí)state**
	(sí)stanti	**stāiont**	**(si)staíjn̥t**	**(sí)stanti**

NOTE. Indicative forms may usually be read ***sistamés***, ***sistaté***, ***sistánti***, as in Vedic.

MIDDLE-PASSIVE

	Indicative	*Subjunctive*	*Optative*	*PASSIVE**
sg.	**(sí)stāmai**	**stāiā**	**(si)staḯma**	***(sí)stāmar***
	(sí)stāsoi	**stā́ieso**	**(si)staḯso**	***(sí)stāsor***
	(sí)stātoi	**stā́ieto**	**(si)staḯto**	***(sí)stātor***
pl.	**(sí)stāmesdha**	**stā́iomedha**	**(si)staḯmedha**	***(sí)stāmor***
	(sí)stādhe	**stā́iedhue**	**(si)staḯdhue**	***(sí)stāsdhuer***
	(sí)stāntoi	**stā́ionto**	**(si)staíjn̥to**	***(sí)stāntor***

IMPERFECT

	ACTIVE	*MIDDLE*	*PASSIVE**
sg.	**(si)stām**	**(si)stāma**	***(si)stāmar***
	(si)stās	**(si)stāso**	***(si)stāsor***
	(si)stāt	**(si)stāto**	***(si)stātor***
pl.	**(si)stāme**	**(si)stā́medha**	***(si)stāmor***
	(si)stāte	**(si)stādhue**	***(si)stādhuer***
	(si)stānt	**(si)stānto**	***(si)stāntor***

II. AORIST STEM

estus, *to be* (only Active)

*AORIST STEM **es-/s-***

sg.	*Indicative*	*Subjunctive*	*Optative*
	esm̥	**esóm**	**síēm**
	es(s)	**esés**	**síēs**
	est	**esét**	**síēt**
pl.	**esme**	**esome**	**sīme**
	este	**esete**	**sīte**
	esn̥t	**esónt**	**sijent**

NOTE. The Aorist was built with the regular Aorist Stem and dialectal Augment, viz. ***ēs-****(>é+es-)*, adding Secondary Endings. Compare Old Indian Sg. *ā́sam*, *ās*, *ās*, Pl. *ā́sma*, *ā́sta*, *ā́san*, Gk. Hom. 1. Sg. ἦα, 2. Sg hom. att. ἦσθα, 3. Sg. dor. etc. ἦς, Pl. hom. ἦμεν, ἦτε, ἦσαν,cf. also Lat. *erat*, Hitt. *e-eš-ta* (*ēsta*), Alb. *isha*.

bheutus, *to become, be*

*AORIST STEM **bhū-** or **bhuw-***

	Indicative	*Subjunctive*	*Optative*
sg.	**bhūm**	**bhuwóm**	**bhuwijēm**
	bhūs	**bhuwés**	**bhuwijēs**
	bhūt	**bhuwét**	**bhuwijēt**
pl.	**bhūme**	**bhuwome**	**bhuwīme**
	bhūte	**bhuwete**	**bhuwīte**
	bhūnt/bhuwn̥t	**bhuwónt**	**bhuwijent**
Pres. Part. **bhuwonts**, **bhuwn̥tia**, **bhuwont**			

NOTE. The Verb **es**-, *be*, has been sometimes substituted or mixed in its conjugation (specially in past and future forms) by IE **bheu**-, *be*, *exist*, *grow*, compare Gmc. *bu*-, "*dwell*" (cf. Goth. *bauan*, "*live*", O.E., O.H.G. *būan*, O.E. *bēon*, in *bēo*, *bist*, *biþ*, pl. *bēoþ*, or Ger. *bin*, *bist*, Eng. *be*), Lat. *fui*, "*I was*", and *futurus*, "*future*", Gk. *φύομαι*, O.Ind. *bhávati*, *bhū́tíṣ*, *bhūtíṣ*, Lith. *bū́ti*, O.C.S. *бъіти*, Russ. *быть*, *был*, Pol. *być*, O.Ir. *buith*.[177]

kleutus, *to hear*

*AORIST STEM **klū-/kluw-***

	Indicative	*Subjunctive*	*Optative*
sg.	**klwom**	**klwōm**	**klwijēm**
	klwes	**klwēs**	**klwijēs**
	klwet	**klwēt**	**klwijēt**
pl.	**klwome**	**klwōme**	**klwīme**
	klwete	**klwēte**	**klwīte**
	klwont	**klwōnt**	**klwíjent**

MIDDLE

	Indicative	*Subjunctive*	*Optative*
sg.	**klwomā**	**klwōma**	**klwijā**
	klweso	**klwēso**	**klwīso**
	klweto	**klwēto**	**klwīto**
pl.	**klwómesdha**	**klwṓmedha**	**klwímedha**
	klwedhue	**klwēdhuer**	**klwīdhue**
	klwonto	**klwōnto**	**klwíjn̥to**

stātus, *to stand*

*AORIST STEM (**é-**)**stā-***

	Indicative	*Subjunctive*	*Optative*
sg.	**stām**	**stāiṓ**	**stāíjēm**
	stās	**stāiés**	**stāíjēs**
	stāt	**stāiét**	**stāíjēt**
pl.	**stamé**	**stāiome**	**stāīme**
	staté	**stāiete**	**stāīte**
	stant	**stāiónt**	**stāíjn̥t**

MIDDLE

	Indicative	*Subjunctive*	*Optative*
sg.	**stāma**	**stāiā́**	**stāíjā**
	stāso	**stāieso**	**stāīso**
	stāto	**stāieto**	**stāīto**
pl.	**stā́medha**	**stāiómedha**	**stāī́medha**
	stādhue	**stāiedhue**	**stāīdhue**
	stānto	**stāionto**	**stāíjn̥to**

III. PERFECT STEM

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bheutus, *to become, be*

*PERFECT STEM **bhū-i-*** (*Pres.* – see Jasanoff 2003)

	Indicative	*Subjunctive*	*Optative*	*PAST**	*MIDDLE**
sg	**bhūia**	**bhūiō**	**bhūjijēm**	***bhūióm***	***bhūiā***
	bhū́ita	**bhū́iowes**	**bhūjijēs**	***bhūiés***	***bhū́ieso***
	bhūie	**bhū́iowet**	**bhūjijēt**	***bhūiét***	***bhū́ieto***
pl	**bhūimé**	**bhū́iowom**	**bhūjīme**	***bhūiome***	***bhū́iomedha***
	bhūité	**bhū́iowete**	**bhūjīte**	***bhūiete***	***bhū́iedhue***
	bhūié́r	**bhū́iowont**	**bhūjijn̥t**	***bhūiónt***	***bhū́ionto***

kleutus, *to hear*

PERFECT STEM ***ké-klou-***

	Indicative	*Subjunctive*	*Optative*	*PAST**	*MIDDLE**
sg	**kéklowa**	**kéklowō**	**keklowijēm**	***keklowóm***	***kéklowā***
	kéklouta	**kéklowes**	**keklowijēs**	***keklowés***	***kéklowesо***
	kéklowe	**kéklowet**	**keklowijēt**	***keklowét***	***kéklowetо***
pl	**keklumé**	**kéklowome**	**keklowīme**	***keklowome***	***kéklowomedha***
	kekluté	**kéklowete**	**keklowīte**	***keklowete***	***kéklowedhue***
	keklwḗr	**kéklowont**	**keklowijn̥t**	***keklowónt***	***kéklowontо***

IV. FUTURE STEM

bheutus, *to become, be*

FUTURE STEM ***bheu-s-o-***

	Future	*Conditional**
sg	**bheusō**	***bheusom***
	bhéusesi	***bheuses***
	bhéuseti	***bheuset***
pl	**bhéusomes**	***bhéusome***
	bhéusete	***bhéusete***
	bhéusonti	***bheusont***

kleutus, *to hear*

FUTURE STEM ***kleu-s-o-***

	Future	*Conditional**
sg	**kleusō**	***kleusom***
	kléusesi	***kleuses***
	kléuseti	***kleuset***
pl	**kléusomes**	***kléusome***
	kléusete	***kléusete***
	kléusonti	***kleusont***

7.8.3. OTHER COMMON PIE STEMS

I. THEMATIC VERBS

ROOT

- Present **lowō**, *I wash*, Imperfect **lowóm**, Aorist (**é**)**lousṃ**.
- Present **serpō**, *I crawl*, Imperfect **serpóm**, Aorist (**é**)**sṛpom**.
- Present **bherō**, *I carry,* Imperfect **berórm**., Aorist (**é**)**bherom**.
- Present **bheugō**, *I flee*, Imperfect **bheugóm**, Aorist (**é**)**bhugom**.
- Present **bheidhō**, *I believe*, *persuade*, Imperfect **bheidhóm**, Aorist (**é**)**bhidhom**.
- Present **weqō**, *I speak*, Imperfect **weqóm**, Aorist (Them. Redupl.) (**é**)**weuqom**
- Present **tremō**, *I tremble*, Imperfect **tremóm**, Aorist (**é**)**tṛmom**.

NOTE. A particular sub-class of Thematic Presents without suffix is of the tipe Skr. *tudati*, which have Present Stems with zero-grade root-vowel, as **glubhō/gleubhō**, *skin*.

REDUPLICATED

There are many reduplicatd thematic stems, analogous to the athematic ones:

- Present **gignō**, *I generate*, (from **gen**-), Imperfect **gignóm**, Aorist (**é**)**gṇom**/(**é**)**genom**, Perfect **gégona**, P.Part. **gn̄tós** (cf. O.Ind. *jatá*, Lat. *nātus*).

NOTE. For **gn̄tós**, cf. O.Ind. *jātás*, Av. *zāta*-; Lat. *nātus*, Pael. *cnatois*, Gaul. f. *gnātha* "*daughter*"; O.N. *kundr* "*son*", also in compound, cf. Goth. *-kunds*, " *be a descendant of* ", O.E. *-kund*, O.N. *-kunnr*.

- Present **pibō**, *I drink* (from ****pípō***, from **pōi**-) Imperfect **pibóm**.
- Present **mimnō**, *I remember*, (from **men**-[178]), Imperfect **mimnóm**.

IN *-IO*

Some of them are causatives.

- Present **spekiō**, *I watch*, Imperfect **spekióm**, Aorist (**é**)**speksṃ**, P.Part. **spektós**.
- Present **teniō**, *I stretch*, Imperfect **tenjóm**, Aorist (**é**)**tṇom**/(**é**)**tenóm**, Perfect **tétona**, P.Part. **tṇtós**.

VERBA VOCALIA

- Present **bhorēiō**, *I make carry*, from **bher**-, *carry*.
- Present **w(e)idēiō**, *I see*, *I know*, Imperfect **w(e)idēióm**, Aorist (**é**)**widóm**, Perfect **woida** P.Part. **wistós** (<****widtós***).
- Present **monēiō**, *I make think*, *remember*, as Lat. *moneo*, from **men**, *think*.

- Present **tromēiō**, *I make tremble*, from **trem**, *tremble*.

IN *-SKO*

Verbs built with this suffix have usually two main functions in the attested Proto-Indo-European verbs:

- Durative action, Intensive or Repetitive (i.e., *Intensive-Iterative*), as attested in Greek;
- Incompleted action, with an Inchoative value, indicating that the action is beginning.

Common examples include:

- Present **pŗkskṓ**, *I ask, demand*, *inquire* (cf. Lat. *posco*, Ger. *forschen*, v.i.) from **prek**, *ask*.
- Present **gṇńskai**, *I am born* (cf. Lat. *gnascor*) from zero-grade ***gṇ́-sko-***, lit. "*I begin to generate myself*", in turn from reduplicated verb **gignō**, *generate*.
- Present **gnoskō**, **gígnōskō**, *I begin to know, I learn*, from **gnō-**, *know*.

WITH NASAL INFIX

- Present **jungo**, *join* (from **jeug-**), Imperfect **jungóm**, Aorist **jēugsṃ**.

NOTE. Compare O.H.G. [*untar-*]*jauhta* (as Lat. *sub-jugaui*), Lat. *jungō, -ere, -nxi, -nctus*, Gk. ζεύγνῡμι, ζεῦξαι ζυγηναι; O.Ind. *yunákti* (3. Pl. *yuñjánti* = Lat. *jungunt*), *yuñjati*, full-grade *yōjayati* (<***jeugēieti***); Av. *yaoj-*, *yuj-*; Lit. *jùngiu, jùngti*, etc. For Past Participles (with and without Present infix ***-n-***), compare O.E. *geoht*, *iukt*, Lat. *junctus*, Gk. δεπθηόο, O.Ind. *yuktá-*, Av. *yuxta-*, Lit. *jùngtas*, etc.

II. ATHEMATIC VERBS

ROOT

They are the most archaic PIE verbs, and their Present conjugation is of the old type Singular root vowel in full-grade, Plural root vowel in zero-grade.

- Present **esmi**, *I am*, vs. Imperfect **esṃ**, *I was/have been*.
- Present **eími**, *I walk*, vs. Imperfect **eím**, *I walked/have walked*.
- Present **bhāmi**, *I speak*, vs. Imperfect **bhām**, *I spoke/have spoken*.

NOTE. The verb *talk* is sometimes reconstructed as PIE ****āmi**, I talk, and* Imperfect ****ām***, *I talked/have talked*; for evidence of an original ***ag*(*h*)*-iō***, compare Lat. *aiō*, Gk. *ηv*, Umb. *aiu*, Arm. *asem*. Thus, this paradigm would rather be Thematic, i.e. Present **ag(h)iō**, *I talk*, vs. Imperfect **ag(h)ióm**, *I talked/have talked*.

- Present **edmi**, *I eat*, vs. Imperfect **edṃ**, *I ate/have eaten*.

NOTE. Note that its Present Participle **dōnts/dents**, "*eating*", might be used as substantive, meaning "*tooth*".

- Present **welmi**, *I want*, vs. Imperfect **welm̥**, *I wanted/have wanted*.

REDUPLICATED

- Present **sístāmi** (from **stā-**, *stand*), Imperfect (**si**)**stām**, Aorist (**é**)**stām**, P.Part. **statós**.
- Present **déidikmi** (from **deik-**, *show*), Imperfect **deidikm̥**, Aorist (**é**)**dēiksm̥**, Perfect **dédoika**, P.Part. **diktós**.
- Present **dhídhēmi** (from **dhē-**, *do*, *make*), Imperfect **dhidhḗm**, Aorist (**é**)**dhēm**, P.Part. **dhatós**.
- Present **dídōmi** (from **dō-**, *give*), Imperfect **didṓm**, Aorist (**é**)**dōm**, P.Part. **datós**.
- Present **jíjēmi**, *throw*, Imperfect **jijḗm**, Aorist (**é**)**jem**.

NOTE. For evidence on an original PIE **jíjēmi**, and not ****jíjāmi*** as usually reconstructed, cf. Lat. pret. *iēcī*, a form due to its two consecutive laryngeals, while Lat. *iaciō* is a present remade (Julián González Fernández, 1981).

WITH NASAL INFIX

- **klunéumi**, *hear* (from **kleu-**), Imperfect **klunéwm̥**, Aorist (**é**)**klwom**, Perfect **kéklowa**, P.Part. **klutós**, meaning "*heard*" and also "*famous*".

NOTE. For zero-grade ***klu-***, and not ****kl̥-***, as usually reconstructed (since Pokorny's *Wörterbuch*), and for a suffix ***-neu***, and not a nasal infix **-n-**, ****kl-n-eu-***, cf. Buddh. Skr. *śruṇ*; Av. *surunaoiti*; Shughni *çin*; O.Ir. *cluinethar*; Toch. A and B *käln*. Therefore, Skr. *śRṇo-*/*śRṇu-* < ***kluneu-***/***klunu-*** shows a loss of *u* analogous to the loss of *i* in *tRt́ya-* '*third*' < IE ***tritĭjo-***.

- **punémi**, rot (from **pew**), Imperfect **puném**, Aorist (**é**)**pēwsm̥**.

8. PARTICLES

8.1. PARTICLES

8.1.1. Adverbs, Prepositions, Conjunctions and Interjections are called Particles. They cannot always be distinctly classified, for many adverbs are used also as prepositions and many as conjunctions.

8.1.2. Strictly speaking, Particles are usually defined as autonomous elements, usually clitics, which make modifications in the verb or sentence, but which don't have a precise meaning, and which are neither adverbs nor preverbs nor conjunctions.

8.1.3. Indo-European has some particles (in the strictest sense) which mark certain syntax categories:

a. Emphatics or Generalizers: they may affect the whole sentence or a single word, usually a pronoun, but also a noun or verb. The particle ***ge*/*gi***, ***ghe*/*ghi***, usually strengthens the negation, and emphasizes different pronouns.

NOTE 1. The origin of this particle is probably to be found in PIE ***-qe***, acquiring its coordinate value from an older use as word-connector, from which this Intensive/Emphatic use was derived. Compare O.Ind. *gha*, *ha*, *hí*, Av. *zi*, Gk. *ge*, *-gí*, *-χí*, Lith. *gu*, *gi*, O.Sla. *-go*, *že*, *ži*, Also, compare, e.g. for intensive negative **neghi**, O.E. *nek*, O.Ind. *nahí*, Balt. *negi*.

NOTE 2. Also, if compared with Gk. *dé*, O.Ind. *ha*, O.Sla. *že*, a common PIE particle **che** might be reconstructed.

b. Verb Modifiers:

I. The old ***-ti*** had a Middle value, i.e. Reflexive.

NOTE. This is a very old value, attested in Anatolian, cf. Hitt. *za*, Pal. *-ti*, Luw. *-ti*, Lyd. *-(i)t*, Lyc. *-t/di*.

II. The modal ***-man***, associated with the Indicative, expresses Potentiality (when used in Present) and Irreality (in the Past).

NOTE. It is probably the same as the conjunction **man**, *if*, and closely related to **-ma**, *but*.

III. The negative particle **mē**, associated with the Indicative or forms indifferent to the Moods.

c. Sentence categorizers: they indicate the Class of Sentence, whether negative or interrogative.

I. Absolute Interrogatives were introduced in European dialects by special particles, generally ***an***.

NOTE. The origin could be the "Non-Declarative Sense" of the sentence, so that it could have been derived originally from the negative **ne**/**ṇ**.

II. Negation has usually two particles, etymologically related:

- Simple negation is made by the particle **ne**, lengthened in some dialects with ***-i***, ***-n***, ***-d***, etc.

- Mood negation or prohibitive is the particle **mē** (also **nē**).

NOTE. For PIE **mē**, compare Gk. μή, O.Ind.,Av.,O.Pers. *mā*, Toch. *mar*/*mā*, Arm. *mi*, Alb. *mos*. In some Proto-Indo-European dialects, **nē** (from **ne**) fully replace the function of **mē**, cf. Goth. *ne*, Lat. *nē*, Ira. *ni*. It is not clear whether Hitt. *lē* is ultimately derived from **mē** or **nē**.

d. Sentence Connectives: they introduce independent sentences or connect different sentences, or even mark the principal sentence among subordinates.

I. **so** and **to**, which are in the origin of the anaphoric pronoun we studied in § 6.5.

II. **nu**, which has an adverbial, temporal-consecutive meaning.

III. An introductory or connective **ṛ**, which is possibly the origin of some coordinate conjunctions.

8.2. ADVERBS

8.2.1. There is a class of invariable words, able to modify nouns and verbs, adding a specific meaning, whether semantical or deictic. They can be independent words (Adverbs), prefixes of verbal stems (Preverbs) – originally independent but usually united with it – and also a nexus between a noun and a verb (Appositions), expressing a non-grammatical relationship, normally put behind, but sometimes coming before the word.

NOTE. In the oldest PIE the three categories were probably only different uses of the same word class, being eventually classified and assigned to only one function and meaning. In fact, Adverbs are generally distinguished from the other two categories in the history of Indo-European languages, so that they change due to innovation, while Preverbs and Appositions remain the same and normally freeze in their oldest positions.

8.2.2. Adverbs come usually from old particles which have obtained a specific deictic meaning. Traditionally, Adverbs are deemed to be the result of oblique cases of old nouns or verbal roots which have frozen in IE dialects, thus loosing inflection.

8.3. DERIVATION OF ADVERBS

8.3.1. Adverbs were regularly formed in PIE from Nouns, Pronouns and Adjectives as follows:

A. From Pronouns:

I. With a nasal lengthening, added systematically to zero-grade forms, which gives adverbs in **-am**; as, **tam**, **qam** (from Latin), or **peram** (as Gk. *peran*)

NOTE. They are usually interpreted as bein originally Acc. Sg. fem. of independent forms.

II. An **-s** lengthening, added to the adverb and not to the basic form, giving sometimes alternating adverbs; as, **ap**/**aps**, **ek**/**eks**, **ambhi**/**ambhis**, etc.

III. An **-r** lengthening; as, **qor**, **tor**, **kir**, etc. which is added also to other derived adverbs. It is less usual than the other two.

NOTE. Compare for such lengthenings Goth. *hwar*, *her*, (O.E. *where*, *hier*), Lat. *cur*, O.Ind. *kár-hi*, *tár-hi*, Lith. *kur*, Hitt. *kuwari*. Also, IE ***qor-i***, ***tor-i***, ***cir-i***, etc. may show a final circumstancial ***-i***, probably the same which appears in the Oblique cases and in the Primary Verbal Endings, and which originally meant '*here and now*'.

Some older adverbs, derived as the above, were in turn specialized as suffixes for adverb derivation, helping to create compound adverbs from two pronoun stems:

i. From the pronoun **de**, the nasalized ***de-m*** gives adverbs in ***-dem***, ***-dam***; as, **ídem**, **qídam**, etc.

ii. From root **dhē**, *put, place*, there are two adverbs which give suffixes with local meaning, from stems of Pronouns, Nouns, Adverbs and Prepositions:

a. an Adverb in ***-m***, **dhem/dhṃ**; as, **endhem**, **prosdhṃ**, etc.

b. an Adverb in ***-i***, **dhi**, as in **podhi**, **autodhi**, etc.

NOTE. Compare from IE **de**, Lat. *idem*, *quidam*, O.Ind. *idān-im*; from **dh(e)m**, **dhi**, Gk. *-then*, *-tha*, *-thi*.

iii. From PIE root **te,** there are some adverbial suffixes with mood sense – some with temporal sense, derived from the older modal. So **ta**; as, ***ita*** or ***itadem***, ***ut(a)***, ***prota***, ***auta***, etc; and ***t(e)m***, ***utṃ***, ***item***, ***eitṃ***, etc.

NOTE. Compare from PIE **-ta** (PIH *-th₂*), Lat. *iti-dem, ut(i), ita*, Gk. *protí*, *au-ti*, O.Ind. *iti, práti*; from **t(e)m**, Lat. *i-tem*, Gk. *ei-ta*, *epei-ta*, O.Ind. *u-tá*.

B. From Nouns and Adjectives (usually Neuter Accusatives), frozen as adverbs already in Late PIE. The older endings to form Adverbs are the same as those above, i.e. generally ***-i***, ***-u*** and ***-(e)m***, which are in turn originally Adverbs. Such Adverbs have normally precise, Local meanings, not merely Abstract or Deictic, and evolve then usually as Temporals. Endings ***-r***, nasal ***-n*** and also ***-s***, as in the formation of Pronouns, are also found.

NOTE 1. It is not uncommon to find adverbs derived from nominal stems which never had inflection, thus (probably) early frozen as adverbs in its pure stem.

NOTE 2. From those adverbs were derived Conjunctions, either with Temporal-Consecutive meaning (cf. Eng. *then*, *so*) or Contrastive (cf. Eng. *on the contrary*, *instead*).

Adverbs may also end:

In **-d**: cf. Lat. *probē*, Osc. *prufēd*; O.Ind. *pascāt*, *adharāt*, *purastāt*.

In **-nim**: cf. Osc. *enim*, "*and*", O.Ind. *tūsnim*, "*silently*", maybe also *idānim* is **idā-nim*, not **idān-im*.

In **-tos**: cf. Lat. *funditus*, *diuinitus*, *publicitus*, *penitus*; O.Ind. *vistarataḥ*, "*in detail*", *samkṣepataḥ*, *prasangataḥ*, "*occasionally*", *nāmattaḥ*, "*namely*", *vastutaḥ*, "*actually*", *mata*, "*by/for me*".

In **-ks**: cf. Lat. *uix*, Gk. *περιξ*, O.Ind. *samyak*, "*well*", *prthak*, "*separately*", Hitt. *hudak*, "*directly*".

8.4. PREPOSITIONS

8.4.1. Prepositions were not originally distinguished from Adverbs in form or meaning, but have become specialized in use.

They developed comparatively late in the history of language. In the early stages of the Proto-Indo-European language the cases alone were probably sufficient to indicate the sense, but, as the force of the case-endings weakened, adverbs were used for greater precision. These adverbs, from their common association with particular cases, became Prepositions; but many retained also their independent function as adverbs.

8.4.2. Most prepositions are true case-forms: as the comparatives ***ekstṛ́s*** (cf. *external*), ***n̥dhŕ̥s*** (cf. *inferior*), ***supŕ̥s***, and the accusatives ***kikrom***, ***koram***, etc.

8.4.3. Prepositions are regularly used either with the Accusative or with the Obliques.

8.4.4. Some examples of common PIE adverbs/prepositions are:

ambhi, **m̥bhi**, *on both sides*, *around*; cf. O.H.G. *umbi* (as Eng. *by*, Ger. *bei*), Lat. *am*, *amb-*, Gk. *amphi*, *amphis*, O.Ind. *abhí*.

ana, *on, over, above*; cf. Goth. *ana*, Gk. *ánō*, *aná*, O.Ind. *ána*, O.C.S. *na*.

anti, *opposite, in front*; cf. Goth. *and*, Lat. *ante*, Gk. *antí*, O.Ind. *ánti*, *átha*, Lith. *añt*; Hitt. *ḫanti*.

apo, **po**, *out*, *from*; cf. Goth. *af*, lat. *ab*, *abs*, Gk. *apo*, *aps*, *apothen*, O.Ind. *ápa*.

au/**we**, *out, far*; cf. Lat. *au-*, *uē-*, Gk. *au*, *authi*, *autár*, O.Ind. *áva*, *vi-*, Toc. *-/ot-*, O.C.S. *u*.

ebhi, **obhi**, **bhi**, *around*, *from*, *to*, etc.; cf. Lat. *ob*, "*towards*, *to*", O.Ind. *abhi*, Av. *aiwi*, Goth. *bi*,

en(i)/**n**, *in*; cf. Goth. *in*, Lat. *in*, Gk. *en*, *ení*, O.Ind. *ni*, *nis*, Lith. *in*, O.C.S. *on*, *vŭ*.

epi, **opi**, **pi**, *towards here*, *around*, *circa*; cf. Gmc. *ap-*, *ep-*, Lat. *ob*, *op-*, *-pe*, Osc. *úp-*, Gk. ἐπί, ἔπι, ὄπι, πι, O.Ind. *ápi*, Av. *áipi*, Arm. *ev*, Lith. *ap-*, O.Ir. *iar*, *ía-*, *ei-*, Alb. *épërë*, etc.

et(i), **oti**, *also*, *even*; **ati**, *beyond, past; over, on the other side*; cf. Goth. *iþ*, Lat. *et*, Gk. *eti*, O.Ind. *áti*, *átaḥ*, *at*, O.C.S. *otu*.

n̥dhí, *more, over*, **n̥dher(í)**, *down*; cf. Gmc. *under-*, Lat. *infra*, Gk. *éntha*, O.Ind. *ádhi*, *ádhaḥ*.

per, **pr̥**, *in front*, *opposite*, *around*; cf. Goth. *fra*, *faúr*, *faúra*, Lat. *pro*, *prae*, *per*, Gk. *perí*, *pará*, *pros*, O.Ind. *pári*, *práti*, *pra*, Lith. *per*, Ltv. *prett'*, O.C.S. *prě*.

qu, from interrogative-indefinites **qi**/**qo**;

ter, **tr̥**, *through*, cf. Gmc. *thurkh* (cf. Goth. *þairh*, O.S. *thuru*, O.E. *þurh*, O.Fris. *thruch*, O.H.G. *thuruh*, M.Du. *dore*, Ger. *durch*), Lat. *trans*, O.Ind. *tiraḥ*, Av. *taro*, O.Ir. *tre*, Welsh *tra*.

upo, *under, down*; **uper(í)**, *up*; cf. Goth. *uf*, *ufar* (as Eng. *up*, *over*, Ger. *auf*, *über*), Lat. *sub*, *super*, Gk. *upó*, *upér*, O.Ind. *úpa*, *upári*.

ad *to, near,*
aneu *without*
apóteri *behind*
dē/dō *to*
ek/eksí *out*
ektós *except*
entós *even, also*
kamta *downward*
kom *near*
nī *down*
obhi *on, over*
ólteri *beyond*
para *next to*
paros *ahead*
perti *through, otherwise*
pos/posti/pósteri *behind*
poti *toward*
pósteri/postrōd *behind*
prāi *in front, ahead*
prắiteri *along(side)*
prŏ̆(d) *ahead*
próteri *in front of*
prota *against*
rōdhí *because (of)*
ani/santeri *separately*
úperi/upsí *on, over*
ut/utsí *up, out*
wī *separately*

8.5. CONJUNCTIONS

8.5.1. Conjunctions, like prepositions, are closely related to adverbs, and are either petrified cases of nouns, pronouns and adjectives, or obscured phrases: as, **qod**, an old accusative. Most conjunctions are connected with pronominal adverbs, which cannot always be referred to their original case-forms.

8.5.2. Conjunctions connect words, phrases or sentences. They are divided in two main classes, Coordinate and Subordinate:

a. Coordinates are the oldest ones, which connect coordinated or similar constructions. Most of them were usually put behind and were normally used as independent words. They are:

I. Copulative or disjunctive, implying a connection or separation of thought as well as of words: as, **qe**, *and*; **we**, *or*; **neqe**, *nor*.

NOTE. For PIE **neqe**, compare Lat. *ne-que*, Gk. οὔτε, Arm. *oc*, O.Ir. *nó*, *nú*, Welsh *ne-u*, O.Bret. *no-u*, Alb. *a-s*, Lyc. *ne-u*, Luw. *napa-wa*, and for PIE **mēqe**, in Greek and Indo-Iranian, but also in Toch. *ma-k* and Alb. *mo-s*. The parallel **newe** is foun in Anatolian, Indo-Iranian, Italic and Celtic dialects.

II. Adversative, implying a connection of words, but a contrast in thought: as, **ma**, *but*.

NOTE. Adversative conjunctions of certain antiquity are **at(i)** (cf. Goth. *adh-*, Lat. *at*, Gk. *atár*), (**s**)**ma**/(**s**)**me** (cf. Hitt.,Pal. *ma*, Lyd. *-m*, Lyc. *me*, Gk. *má*, *mé*, Messap. *min*), **auti** (cf. Lat. *autem*, *aut*, Gk. *aute*, *authis*, *autis*, *autár*), **ōd**, "*and*, *but*" (cf. O.Ind. *ād*, Av. (*ā*)*at*, Lith. *o*, Sla. *a*), etc. In general, the oldest IE languages attested use the same Copulative pospositive conjunctions as Adversatives, their semantic value ascertained by the context.

III. Causal, introducing a cause or reason: as, **nam**, *for*.

IV. Illative, denoting an inference: as, **igitur**, *therefore*.

NOTE. Newer particles usually are usually put before, and some of them are general, as the Copulative **eti**, *and* (as Lat. *et*, Gk. *eti*, nasalized **ṇti** in Germanic, as Goth., Eng. *and*), and Illative **ōd**, *certainly* (cf. O.Ind. *ā́d*, Lith. *o*, O.Sla. *a*), or **ōdqe** in Latin. Others were not generalized before the first PIE split, but could nevertheless be used in Modern Indo-European.

b. Subordinates connect a subordinate or independent clause with that on which it depends. They are:

I. **jo**, which has general subordinate value, usually Relative, Final or Conditional.

NOTE. For common derivatives of PIE **jo**, probably related to the relative pronoun, compare Hitt. *-a/-ya*, Toch. *-/yo*, and possibly Goth. *-ei*, Gk. *eí*, Gaul. *-io*. It was probably replaced by **-qe**.

II. Conditional, denoting a condition or hypothesis; as, **man**, *if*; **neman**, *unless*.

III. Comparative, implying comparison as well as condition; as, **man**, *as if*.

IV. Concessive, denoting a concession or admission; as, **qāmqām**, *although* (Lit. *however much it may be true that*, etc.).

V. Temporal: as, **postqām**, *after*.

VI. Consecutive, expressing result; as, **ut**(**ei**), *so that*.

VII. Final, expressing purpose; as, **ut**(**ei**), *in order that*; **ne**, *that not*.

VIII. Causal, expressing cause; as, **qiā**, *because*.

Conjunctions are more numerous and more accurately distinguished in MIE than in English.

9. PROTO-INDO-EUROPEAN SYNTAX

9.1. THE SENTENCE

A Sentence is a form of words which contains a Statement, a Question, an Exclamation, or a Command.

a. A sentence in the form of a Statement is called a Declarative Sentence: as, *the dog runs*.

b. A sentence in the form of a Question is called an Interrogative Sentence: as, *does the dog run?*

c. A sentence in the form of an Exclamation is called an Exclamatory Sentence: as, *how fast the dog runs !*

d. A sentence in the form of a Command, an Exhortation, or an Entreaty is called an Imperative Sentence : as, *go, run across the Alps*; or *let the dog run*.

NOTE. After Lehman (1974), "*The fundamental order of sentences in PIE appears to be OV. Support for this assumption is evident in the oldest texts of the materials attested earliest in the IE dialects. The fundamental order of sentences in these early dialects cannot be determined solely by frequency of sentence patterns. For, like other linguistic constructions, sentence patterns manifest marked as well as unmarked order. Marked order is expected in literary materials. The documents surviving from the earliest dialects are virtually all in verse or in literary forms of prose. Accordingly many of the individual sentences do not have the unmarked order, with verb final. For this reason conclusions about the characteristic word order of PIE and the early dialects will be based in part on those syntactic patterns that are rarely modified for literary and rhetorical effect: comparative constructions, the presence of postpositions and prepositions, and the absence of prefixes*, (...)".

Lehman is criticized by Friedrich (1975) who, like Watkins (1976) and Miller (1975), support a VO prehistoric situation, probably SVO (like those found in 'central' IE areas), with non-consistent dialectal SOV findings. In any case (viz. Lehman and Miller), an older IE I or IE II OV (VSO for Miller) would have been substituted by a newer VO (SOV for Miller, later SVO through a process of verb transposition) – thus, all Indo-European dialects attested have evolved (thus probably from a common Late PIE trend) into a modern SVO.

Modern Indo-European, as a modern IE language, may follow the stricter formal patterns attested in the oldest inscriptions, i.e. (S)OV, as in Vedic Sanskrit, Ancient Greek, Old Latin and Avestan. A newer, general (S)VO order (found in Greek, Latin, Avestan, Germanic, etc.), which reveals the change from OV in Early PIE towards a VO in Late PIE for the spoken language of Europe – and even some forms of litterary uses, as e.g. journalism – could be used in non-formal contexts.

9.1.1. KINDS OF SENTENCES

PIE sentences were either Nominal, i.e. formed by nouns, or Verbal, if they included a verb.

I. A Subject and a Predicate. The Subject of a sentence is the *person or thing spoken of*. The Predicate is *that which is said* of the Subject.

a. The Subject is usually a Noun or Pronoun, or some word or group of words used as a Noun.

b. The Predicate of a sentence may be a Verb (as *the dog runs),* or it may consist of some form of **es** and a Noun or Adjective which *describes* or *defines* the subject (as *It is good)*. Such a noun or adjective is called a Predicate Noun or Adjective.

II. In Proto-Indo-European, simple sentences may be composed of only one word, a noun or a verb; as, *God!*, or *(it) rains*.

NOTE 1. Nominal sentences of this type are usually Interjections and Vocatives. Verbal sentences of this type include Imperatives (at least of 2nd P.Sg.) and impersonal verbs, which had never a subject in the oldest dialects attested; as, for Eng. *(it) rains*, cf. Goth. *rigneiþ*, Lat. *pluit*, Gk. ὗει, Skt. *várṣati*. It is believed that when IE dialects became SVO in structure, so that a subject was required, the third singular anaphoric pronoun, corresponding to *it*, German *es*, French *il*, etc., was introduced as subject in such sentences. Such pronouns were introduced because SVO languages must have subjects in sentences, as do intransitive verbs in any OV language. Such verbs could be supplemented by substantives in various cases, among them the accusative. These constructions are especially prominent for verbs referring to the emotions; as, Lat. *miseret, pudet, taedet*, Skr. *kitaváṃ tatāpa*. Compare also Cicero's Lat. *eōrum nōs miseret*, or O.H.G. *thes gánges thih nirthrúzzi*. In PIE sentences various case forms could be used with verbs. The simplest sentences may consist of verbs accompanied by nouns in seven of the eight cases; only the vocative is not so used. The nouns fill the role of objects or, possibly better stated, of complements.

NOTE 2. Besides the simple sentence which consists only of a verb, a simple sentence in the early dialects and in PIE could consist of a verb accompanied by a noun or pronoun as complement. A subject however wasn't mandatory. Nor were other constructions which may seem to be natural, such as indirect objects with verbs like '*give*'. The root **dō-* or in its earlier form **deH-* had in its simplest sense the meaning '*present*' and was often unaccompanied by any nominal expression (Lehman).

9.1.2. NOMINAL SENTENCE

Nominal sentences, in which a substantive is equated with another substantive, an adjective, or a particle, make up one of the simplest type of sentence in PIE.

NOTE 1. Such a type of sentence is found in almost every IE dialect; cf. Hitt. *attaš aššuš*, "*the father (is) good*", Skr. *tváṃ váruṇa*, "*you (are) Varuna*", O.Pers. *adam Dārayavauš*, "*I (am) Darius*", Lat. *omnia praeclara rara*, "*all the best things (are) rare*", etc. In all dialects, however, such sentences were restricted in its use to a especially formal use or, on the contrary, they are found more often than originally in PIE. Thus, in Latin and Germanic

dialects they are found in proverbs and sayings, as in Old Irish; in Greek it is also found in epic and poetry. However, in Balto-Slavic dialects the pure nominal sentence has become the usual type of nominal sentence, even when the predicate is an adverb or an adverbial case. However, such a use, which is more extended in modern dialects (like Russian) than in the older ones (as Old Slavic), is considered the result of Finno-Ugrian influence.

NOTE 2. In the course of time a nominal sentence required a verb; this development is in accordance with the subjective characteristic of PIE and the endings which came to replace the individual qualifier markers of early PIE. The various dialects no longer had a distinct equational sentence type. Verbs might of course be omitted by ellipsis. And, remarkably, in Slavic, nominal sentences were reintroduced, as Meillet has demonstrated (1906-1908). The reintroduction is probably a result of influence from OV languages, such as the Finno-Ugric. This phenomenon illustrates that syntactic constructions and syntactic characteristics must be carefully studied before they can be ascribed to inheritance. In North Germanic too an OV characteristic was reintroduced, with the loss of prefixes towards the end of the first millennium A.D. (Lehmann 1970). Yet in spite of these subsequent OV influences, nominal sentences must be assumed for PIE.

A. There are traces of Pure Nominal Sentences with a predicate made by an oblique case of a noun or a prepositional compound, although they are not common to all Indo-European dialects.

NOTE. Apart from Balto-Slavic examples (due to Finno-Ugric influence), only some isolated examples are found; cf. Skr. *havyaír Agnír mánuṣa* īrayádhyai, "*Agni must be prayed with the sacrifices of men*", Gk. *pàr hépoige kaì hálloi oi ké mé timḗsousi*, "*near me (there are) others who [particle] will praise me*" (Mendoza).

B. In addition to such expansions by means of additional nouns in nonrequired cases, sentences could be expanded by means of particles.

NOTE. For Lehman, three subsets of particles came to be particularly important. One of these is the set of preverbs, such as *ā*. Another is the set of sentence connectives, such as Hitt. *nu*. The third is the set of qualifier expressions, e.g., PIE **mē** '*(must) not'*. An additional subset, conjunctions introducing clauses, will be discussed below in the section on compound clauses.

Preverbs are distinctively characterized by being closely associated with verbs and modifying their meaning. In their normal position they stand directly before verbs (Watkins 1964).

Generally, thus, Concordance governed both members of the Pure Nominal Sentence.

NOTE. Unlike the personal verb and its complements (governed by inflection), the Nominal Sentence showed a strong reliance on Concordance between Subject and Predicate as a definitory feature: both needed the same case, and tended to have the same number and gender.

THE COPULATIVE VERB

The copulative verb **es** is only necessary when introducing late categories in the verbal morphology, like Time and Mood. Therefore, when the Mood is the Indicative, and the Time is neuter (proverbs without timing, or Present with semantic neuter) there is no need to use es.

NOTE 1. The basic form of nominal sentences has, however, been a matter of dispute. Some Indo-Europeanists propose that the absence of a verb in nominal sentences is a result of ellipsis and assume an underlying verb ***es***- '*be*' (Benveniste 1950). They support this assumption by pointing to the requirement of such a verb if the nominal sentence is in the past tense; cf. Hitt. *ABU.ḪIA genzuu̯alaš ešta*, "*My father was merciful*". On the contrary, Meillet (1906-1908), followed by Lehman and Mendoza, thought that nominal sentences did not require a verb but that a verb might be included for emphasis. This conclusion may be supported by noting that the qualifiers which were found in PIE could be used in nominal sentences without a verb. As an example we may cite a Hittite sentence which is negative and imperative, *1-aš 1-edani menahhanda lē idāluš*, "*One should not be evil toward another one*". Yet, if a passage was to be explicit, a form of ***es*** could be used, as in Skr. *nákir indra tvád úttaro ná jyā́yāṅ asti*, "*No one is higher than you, Indra, nor greater*".

NOTE 2. On the original meaning of **es**, since Brugmann (1925) meant originally "*exist*" hence its use as a copulative verb through constructions in which the predicate express the existence of the subject, as in Hom. Gk. *eím Oduseús Laertiádes*, "*I am Odisseus, son of Laertes*" (Mendoza). In PIE times there were seemingly other verbs (with similar meanings of '*exist*') which could be used as copulatives; compare IE **bhū**, "*exist, become, grow*" (cf. O.Ind. *bhávati*, or as supletives in Lat. past *fui*, O.Ir. *ba*, O.Lith. *búvo*, fut. *bùs*, O.C.S. impf. *bea*se, etc.), Germanic **wes**, '*live, dwell*'.

9.1.3. VERBAL SENTENCE

The most simple structure of the common Indo-European sentence consists of a verb, i.e. the carrying out of an action. In it, none of the verbal actors (Subject and Object) must be expressed – the subject is usually not obligatory, and the object appears only when it is linked to the lexical nature of the verb.

NOTE. The oldest morphological categories, even time, were expressed in the PIE through lexical means, and many remains are found of such a system; cf. Hitt. *-za* (reflexive), modal particles in Gk. and O.Ind., modal negation in some IE dialects, or the simple change in intonation, which made interrogative or imperative a declarative sentence – in fact, the imperative lacks a mark of its own.

The relationship between the Subject and the Object is expressed through the case.

There is no clear morphological distinction between transitive and intransitive verbs in Proto-Indo-European.

NOTE. Some Indo-European dialects have specialized some verbal suffixes as transitives (causatives) or intransitives, as Gk. *-en*, Gmc. *-io*, Lat. *-a*, etc., while in some others a preverb combined with a verbal root makes the basic verb transitive or intransitive.

When subjects are explicitly expressed, the nominative is the case employed.

NOTE. Expression of the subject is the most prominent extension of simple sentences to include more than one substantival expression. Besides such explicit mention of the subject, predicates may consist of verbs accompanied by two or more nouns, in cases which supplement the meanings of the verbs (v.i.). Such constructions must be distinguished from the inclusion of additional nouns whose case forms indicate adverbial use.

Few verbs are mandatorily accompanied by two nouns.

1. the use of the dative in addition to the accusative, as in Skr. *tā́bhiām enaṃ pári dehi*, '*Give him over to those two*'.

2. the instrumental and ablative, as Skr. *áhan vṛtrám … índro vájreṇa*, '*Indra killed … Vṛtra with his bolt*'. Skr. *tváṃ dásyūm̆r ókaso agna ājaḥ*, '*You drove the enemies from the house, O Agni.*'

NOTE. While the addition to these sentences which is indicated by the nouns in the instrumental and the ablative is essential for the meaning of the lines in their context, it does not need to be included in the sentence for syntactic reasons.

3. The causative accompanied by two accusatives, as Skr. *devā́n̆ uśataḥ pāyayā havíḥ,* '*Make the desiring gods drink the libation*'.

In such sentences the agent-accusative represents the object of the causative element: as Arthur A. Macdonell indicated (1916), in a corresponding simple sentence this noun would have been given in the nominative, as Skr. *devā́ havíḥ pibanti*, '*The gods drink the libation*'.

Accordingly a simple verb in PIE was at the most accompanied by one substantive, unless the additional substantive was complementary or adverbial.

LOCAL CASES: PREDICATES WITH TWO OR MORE SUBSTANTIVES

Nonmandatory case forms are found in great variety, as may be determined from the studies of substantival inflections and their uses. Five groups of adverbial elements are identified: (1) circumstance, purpose, or result; (2) time; (3) place; (4) manner; (5) means.

1) Additional case forms may be used to indicate the Purpose, Result, or Circumstance of an action.

So e.g. the Instrumental in Skr. *mṛḷáyā naḥ suastí*, '*Be gracious to us for our well-being*'.

The Dative was commonly used in this sense, as in the infinitival form Skr. *prá ṇa ā́yur jīváse soma tārīḥ* '*Extend our years, soma, for our living* [*so that we may live long*].',

NOTE. Cf. Hitt. *nu-kan ^{m}Nana-Luin kuin DUMU.LUGAL ANA ^{m}Nuwanza haluki para nehhun*, '*and the prince NanaLUiš whom I sent to Nuwanza to convey the message*' where Hittite dative noun *haluki*. (Raman 1973).

When an animate noun is involved, this use of the dative has been labeled the indirect object; as, Skr. *riṇákti kṛṣṇī́ raṛuṣā́ya pánthām*, '*Black night gives up the path to the red sun*'.

NOTE. As these examples may indicate, the dative, like the other cases, must be interpreted with reference to the lexical properties of the verbal element.

2) A further adverbial segment in sentences indicates the Time of Occurrence. The cases in question are various, as in Skr. *dívā náktaṃ śárum asmád yuyotam*, '*By day and during the night protect us from the arrow*'.

NOTE. The nominal form *dívā*, which with change of accent is no longer an instrumental but an adverbial form outside the paradigm, and the accusative *náktaṃ* differ in meaning. The instrumental, like the locative, refers to a point in time, though the "*point*" may be extended; the accusative, to an extent of time. Differing cases accordingly provide different meanings for nouns marked for the lexical category *time*.

3) Nouns indicating Place also differ in meaning according to case form:

A. The Accusative indicates the goal of an action, as in Lat. *Rōmam īre* '*go to Rome*', Hitt. *tuš alkištan tarnahhe* '*and those (birds) I release to the branch*' (Otten and Souček 1969:38 § 37).

B. The Instrumental indicates the place "over which an action extends" (Macdonell 1916: 306): *sárasvatyā yānti* '*they go along the Sarasvatī*'.

C. The Ablative indicates the starting point of the action: *sá ráthāt papāta* '*he fell from his chariot*'; and the following example from Hittite (Otten and Souček 1969): *iššaz (š)mit lālan AN.BARaš [d]āi*, '*He takes the iron tongue out of their mouths*.'

D. The Locative indicates a point in space, e.g., Skt. *diví* '*in heaven*' or the locative *kardi* in the following Hittite example (Otten and Souček): *kardi-šmi-i̯a-at-kán dahhun*, '*And I took away that [illness which was] in your heart*'.

Nouns with lexical features for place and for time may be used in the same sentence, as in Skr. *ástam úpa náktam eti*, '*He goes during the night to the house*'. Although both nouns are in the Accusative, the differing lexical features lead to different interpretations of the case. In this way, inflectional markers combine with lexical features to yield a wide variety of adverbial elements.

4) Among the adverbial elements which are most diverse in surface forms are those referring to Manner. Various cases are used, as follows.

A. The Accusative is especially frequent with adjectives, such as Skt. *kṣiprám* '*quickly*', *bahú* '*greatly*', *nyák* '*downward*'.

B. The Instrumental is also used, in the plural, as in Skt. *máhobhiḥ* '*mightily*', as well as in the singular, *sáhasā* '*suddenly*'.

Similar to the expression of manner is the instrumental used to express the sense of accompaniment: Skr. *devó devébhir ā́gamat*, '*May the god come [in such a way that he is] accompanied by the other gods*'.

C. The Ablative is also used to express manner in connection with a restricted number of verbs such as those expressing '*fear*': *réjante víśvā kṛtrímāṇi bhīṣā́*, '*All creatures tremble fearfully*'.

5) Adverbial expressions of Means are expressed especially by the instrumental; as, Skr. *áhan vṛtrám … índro vájreṇa*, '*Indra killed … Vṛtra with his bolt*.' The noun involved frequently refers to an instrument; cf. Hitt. *kalulupuš šmuš gapinit hulaliemi*, '*I wind the thread around their fingers*'.

Animate nouns may also be so used. When they are, they indicate the agent: *agnínā turváṣaṃ yáduṃ parāváta ugrā́ devaṃ havāmahe*, '*Through Agni we call from far Turvasa, Yadu, and Ugradeva*'. This use led to the use of the instrumental as the agent in passive constructions.

9.2. SENTENCE MODIFIERS

9.2.1. INTONATION PATTERNS

The sentence was characterized in PIE by patterns of Order and by Selection.

A. Selection classes were determined in part by inflection, in part by lexical categories, most of which were covert.

NOTE. Some lexical categories were characterized at least in part by formal features, such as abstract nouns marked by ***-ti-***, nouns in the religious sphere marked by ***-u-*** and collectives marked by **-h*.

B. In addition to characterization by means of order and categories of selection, the sentence was also delimited by Intonation based on variations in pitch.

To the extent that the pitch phonemes of PIE have been determined, a high pitch may be posited, which could stand on one syllable per word, and a low pitch, which was not so restricted.

NOTE. The location of the high pitch is determined by Lehman primarily from the evidence in Vedic; the theory that this was inherited from PIE received important corroboration from Karl Verner's demonstration of its maintenance into Germanic (1875). Thus the often cited correlation between the position of the accent in the Vedic perfect and the differing consonants in Germanic provided decisive evidence for reconstruction of the PIE pitch accent as well as for Verner's law, as in the perfect (preterite) forms of the root ***deik-***, *show*.

	PIE	*Vedic*	*O.E.*	*O.H.G.*
1 sg.	**dedóika**	*didéśa*	*tāh*	*zēh*
1 pl.	**dedikmé**	*didiśimá*	*tigon*	*zigum*

Words were characterized on one syllable by a high pitch accent, unless they were enclitic, that is, unmarked for accent.

Accented words could lose their high pitch accent if they were placed at specific positions in sentences.

A. Vocatives lost their accent if they were medial in a sentence or clause; and finite verbs lost their accent unless they stood initially in an independent clause or in any position in a dependent clause in

Vedic. These same rules may be assumed for PIE. On the basis of the two characteristic patterns of loss of accent for verbs, characteristic patterns of intonation may also be posited for the IE sentence.

Judging on the basis of loss of high pitch accent of verbs in them, independent clauses were characterized by final dropping in pitch. For in unmarked order the verb stands finally in the clause.

Clauses, however, which are marked either to convey emphasis or to indicate subordination, do not undergo such lowering. They may be distinguished with final

NOTE. The intonation pattern indicated by apparently conveyed the notion of an emotional or emphatic utterance or one requiring supplementation, as by another clause. These conclusions are supported by the patterns found in Germanic alliterative verse. For, as is well known, verbs were frequently placed by poets in the fourth, nonalliterating, metrically prominent position in the line: *þeodcyninga þrym gefrūnon*, *of-people's-kings glory we-heard-of*, '*We heard of the glory of the kings of the people*'. This placing of verbs, retained by metrical convention in Germanic verse, presumably maintains evidence for the IE intonation pattern. For, by contrast, verbs could alliterate when they stood initially in clauses or in subordinate clauses; *egsode eorlas, syððan ǣrest wearð*, *he-terrified men since first he-was*, '*He terrified men from the time he first was [found]*'. *þenden wordum wēold wine Scyldinga*, *as-long-as with-words he-ruled the-friend of-the-Scyldings*. The patterns of alliteration in the oldest Germanic verse accordingly support the conclusions that have been derived from Vedic accentuation regarding the intonation of the Indo-European sentence, as do patterns in other dialects.

Among such patterns is the preference for enclitics in second position in the sentence (Wackernagel 1892). Words found in this position are particles, pronouns, and verbs, which have no accent in Vedic texts. This observation of Wackernagel supports the conclusion that the intonation of the sentence was characterized by initial high pitch, with the voice trailing off at the end. For the enclitic elements were not placed initially, but rather they occupied positions in which unaccented portions of words were expected, as in Skr. *prāvepā́ mā bṛható mādayanti*, '*The dangling ones of the lofty tree gladden me*'. The pronoun *mā* '*me*', like other such enclitics, makes up a phrase with the initial word; in this way it is comparable to unaccented syllables of individual words, as in Skr. *pravātejā́ íriṇe várvṛtānāḥ, '[born] in a windy place, rolling on the dice-board*'

A simple sentence then consisted not only of a unit accompanied by an intonation pattern, but also of subunits or phrases. These were identified by their accent and also by patterns of permitted finals.

9.2.2. SENTENCE DELIMITING PARTICLES

The particles concerned are PIE **nu**, **so**, **to**, all of them introductory particles.

NOTE. Their homonymity with the adverb **nu**, **nun** and the anaphoric pronoun was one of the reasons earlier Indo-Europeanists failed to recognize them and their function. Yet Delbrück had already noted the clause-introducing function of Skr. *sa* (1888), as in Skr. *tásya tā́ni śīrṣā́ṇi prá cicheda. sá yát somapā́nam ā́sa tátaḥ kapíñjalaḥ sám abhavat*, '*He struck off his heads. From the one that drank soma, the hazel-hen was created*'. Delbrück identified *sa* in this and other sentences as a particle and not a pronoun, for it did not agree in gender with a noun in the sentence. But it remained for Hittite to clarify the situation.

In Hittite texts the introductory use of the particles is unmistakable (J.Friedrich 1960); *ta* and *šu* occur primarily in the early texts, *nu* in the later, as illustrated in the following Old Hittite example (Otten and Souček 1969): *GAD-an pešiemi šu- uš LÚ-aš natta aušzi* '*I throw a cloth over it and no one will see them*'.

Besides such an introductory function (here as often elsewhere translated 'and'), these particles were used as first element in a chain of enclitics, as in *n-at-ši* '*and it to-him*', *nu-mu-za-kan* '*and to-me self within*' and so on.

NOTE 1. In Homeric Greek such strings of particles follow different orders, but reflect the IE construction, as in: *oudé nu soí per entrépetai phílon êtor, Olúmpie*, '*But your heart doesn't notice, Zeus*'. As the translation of *per* here indicates, some particles were used to indicate the relationships between clauses marking the simple sentence.

NOTE 2. Many simple sentences in PIE would then be similar to those in Hittite and Vedic Sanskrit, such as those in the charming story taken by Delbrück from the Śatapathabrāhmaṇa. Among the simplest is Skr. *tám índro didveṣa*, '*Indra hated him*'. Presumably *tam* is a conflated form of the particle *ta* and the enclitic accusative singular pronoun; the combination is attested in Hittite as *ta-an* (J. Friedrich 1960). Besides the use of sentence-delimiting particles, these examples illustrate the simplicity of PIE sentences. Of the fifteen sentences in the story, only two have more than one nominal form per verb, and these are adverbial as observed above. Similar examples from the other early dialects could be cited, such as the Italic inscription of Praeneste, or the Germanic Gallehus inscription: *Ek HlewagastiR HoltijaR horna tawido*, '*I, Hlewagastir of Holt, made the horn*'. In these late texts, the subject was mandatory, and accordingly two nominal forms had come to be standard for the sentence. If however the subject is not taken into consideration, many sentences contained only one nominal element with verbs, in the early dialects as well as in PIE.

9.3. VERBAL MODIFIERS

9.3.1. DECLARATIVE SENTENCES

The Injunctive has long been identified as a form unmarked for mood and marked only for stem and person. It may thus be compared with the simplest form of OV languages.

By contrast the Present indicative indicates "mood". We associate this additional feature with the suffix ***-i***, and assume for it declarative meaning.

NOTE 1. Yet it is also clear that, by the time of Vedic Sanskrit and, we assume, Late PIE, the injunctive no longer contrasted directly with the present indicative. We must therefore conclude that the declarative qualifier was expressed by other means in the sentence. We assume that the means of expression was an intonation pattern. For, in normal unmarked simple sentences, finite unaccented verbs stood finally in their clause, as did the predicative elements of nominal sentences; Delbrück's repeatedly used example may be cited once again to illustrate the typical pattern: *víśaḥ kṣatríyāya balíṃ haranti*, '*The villagers pay tribute to the prince*'. Since the verb *haranti* was unaccented, i.e., had no high pitch, we may posit for the normal sentence an intonation pattern in which the final elements in the sentence were accompanied by low pitch.

NOTE 2. Lehman supports this assumption by noting that a distinctive suprasegmental was used in Vedic to distinguish a contrasting feature, *interrogation* or *request* (Wackernagel 1896). This marker, called *pluti* by native grammarians, consisted of extra length, as in *ágnā3i* 'O fire' (3 indicates extra length). But a more direct contrast with the intonation of simple sentences may be exemplified by the accentuation of subordinate clauses. These have accented verbs, as in the following line from the Rigveda: *antáś ca prā́gā áditir bhavāsi*, '*If you have entered inside, you will be Aditi*'. As the pitch accent on *ágā* indicates, verbs in subordinate clauses maintained high pitch, in contrast with verbs of independent clauses like *bhavāsi*. We may conclude that this high pitch was an element in an intonation pattern which indicated incompleteness, somewhat like the pattern of contemporary English.

Evidence from other dialects supports the conclusion that, in late PIE, Declarative sentences were indicated by means of an intonation pattern with a drop in accentuation at the end of the clause.

NOTE. In Germanic verse, verbs of unmarked declarative sentences tend to occupy unaccented positions in the line, notably the final position (Lehmann 1956). Although the surface expression of accentuation patterns in Germanic is stress, rather than the pitch of Vedic and PIE, the coincidence of accentuation pattern supports our conclusions concerning PIE intonation.

9.3.2. INTERROGATIVE SENTENCES

The Interrogation was apparently also indicated by means of Intonation, for some questions in our early texts have no surface segmental indication distinguishing them from statements, for example, Plautus *Aulularia* 213, *aetatem meam scis*, '*Do you know my age*?'

NOTE. Only the context indicates to us that this utterance was a question; we may assume that the spoken form included means of expressing Int., and in view of expressions in the later dialects we can only conclude that these means were an intonation pattern.

Questions are generally classified into two groups:

A. Those framed to obtain clarification *(Verdeutlichungsfragen)*, and

B. Those framed to obtain confirmation (*Bestätigungsfragen*). This feature accompanies statements in which a speaker sets out to elicit information from the hearer.

NOTE. It may be indicated by an intonation pattern, as noted above, or by an affix or a particle, or by characteristic patterns of order, as in German *Ist er da?* '*Is he here?*' When the Interrogative sentence is so expressed, the surface marker commonly occupies second position among the question elements, if the entire clause is questioned. Such means of expression for Int. are found in IE languages, as Lat. *-ne*, which, according to Minton Warren "occurs about 1100 times in Plautus and over 40 times in Terence" (1881). Besides expressions like Lat. *egone* '*Me?*', sentences like the following occur (Plautus *Asinaria* 884): *Aúdin quid ait? Artemona*: *Aúdio*. '*Did you hear what he is saying? Artemona: yes*'

Other evidence for a postponed particle for expressing Int. is found in Avestan, in which *-na* is suffixed to some interrogatives, as in Av. *kas-nā* '*who (then)?*'; and in Germanic, where *na* is found finally in some questions in Old High German. Old Church Slavic is more consistent in the use of such a particle than are these dialects, as in *chošteši li* '*Do you wish to?*' This particle is also used in contemporary Russian.

The particle used to express Interrogation in Latin, Avestan, and Germanic is homophonous with the particle for expressing negation, PIE **ne**.

NOTE. It is not unlikely that PIE *ne* of questions is the same particle as that used for the negative. As the interrogative particle, however, it has been lost in most dialects. After Lehman (1974), its loss is one of the indications that late PIE was not a consistent OV language. After Mendoza, the fact that such Interrogatives of a yes/no-answer are introduced by different particles in the oldest attested dialects means that no single particle was generalized by Late PIE; cf. Goth. *u*, Lat. *-ne*, *nonne*, *num* Gk. ἦ, νὺ , Skr. *nu*, Sla. *li*. However, the common findings of Hittite, Indo-Iranian, Germanic and Latin are similar if not the same. In any case, for most linguists, rather than a postposed particle, 1) Intonation was used to express the Interrogatives, as well as 2) Particles that were placed early in clauses, often Initially.

The partial Interrogative sentences are those which expect an aclaratory answer; they are introduced in PIE by pronominal or adverbial forms derived from interrogative **qi/qo**, always placed initially but for marked sentences, where a change in position is admited to emphasize it.

NOTE. In some languages, Interrogatives may be strengthened by the addition of posposed particles with interrogative sense, as in Av. *kaš-na*. Such forms introduce indirect interrogatives when they ask about a part of the sentence. Indirect interrogatives in the form of Total interrogatives (i.e., not of yes/no-answer) are introduces by particles derived from direct interrogative particles (when there are) or by conditional conjunctions; as Hitt. *man*.

9.3.3. NEGATIVE SENTENCES

Indications of Negation, by which the speaker negates the verbal means of expression, commonly occupies third position in the hierarchy of sentence elements.

We can only posit the particles **ne** and **mē**, neither of which is normally postposed after verbs.

NOTE 1. For prohibitive particle **mē**, compare Gk. μή, O.Ind.,Av.,O.Pers. *mā*, Toch. *mar/mā*, Arm. *mi*, Alb. *mos*. In other IE dialects it was substituted by **nē**, cf. Goth. *ne*, Lat. *nē* (also as modal negation), Ira. *ni*. It is not clear whether Hitt. *lē* is ultimately derived from **mē** or **nē**. PIE **ne** is found as Goth.,O.H.G. *ni*, Lat. *nĕ-* (e.g. in *nequis*) O.Ind. *ná*, O.Sla. *ne*, etc. Sometimes it is found in lengthened or strengthened forms as Hitt. *natta*, Lat. *non*, Skr. *ned*, etc. A common PIE lengthened form is **nei**, which appears in Lat. *ni*, Lith. *neî*, Sla. *ni*, etc., and which may also ultimately be related to Proto-Uralic negative **ei-* (Kortlandt, v.s.).

NOTE 2. In the oldest languages, negation seems to have been preverbal; Vedic *nákis*, Gk. *oú tis, mḗ tis*, Lat. *nēmo*, OHG *nioman* 'no one', and so on. The negative element **ne** was not used in compounding in PIE

(Brugmann 1904); **ṇ-** had this function. Moreover, there is evidence for proposing that other particles were placed postverbally in PIE (Delbrück 1897). Delbrück has classified these in a special group, which he labels *particles*. They have been maintained postpositively primarily in frozen expressions: *ē* in Gk. *egṓnē, ge* in *égōge* '*I*' (Schwyzer 1939). But they are also frequent in Vedic and early Greek; Delbrück (1897) discusses at length the use of Skt. *gha*, Gk. *ge*, and Skt. *sma*, Gk. *mén*, after pronouns, nouns, particles, and verbs, cf. Lat. *nōlo* < *ne volo*, Goth. *nist*< *ni ist*, and also, negative forms of the indefinite pronoun as O.Ind. *mā́-kis*, *ná-kis*, Lat. *ne-quis*, etc. which may indicate an old initial absolute position, which could be also supported by the development of corrleative forms like Lat. *neque*, etc., which combine negation and coordination. Lehman, on the contrary, believes in an older posposed order, characteristic of OV languages (i.e. a situation in IE II), because of the usually attributed value of emphasis to the initial position of negation, postverbal negation examples (even absolute final position in Hittite and Greek), the old existence of the form ***nei***, as well as innovative forms like Lat. *ne-quis* or Gk. *oú-tis*.

NOTE 3. In Modern Indo-European, thus, negation should usually be preverbal, as in modern Romance languages (cf. Fr. *n'est*, Spa. *no es*, etc.), but it can be postponed in emphatic contexts, as it is usual in modern Germanic languages (cf. Eng. *is not*, Ger. *ist nicht*, etc.), as well as in very formal texts, thus imitating some of the most archaic findings of early PIE dialects.

9.4. NOMINAL MODIFIERS

9.4.1. ADJECTIVE AND GENITIVE CONSTRUCTIONS

1. Proto-Indo-European Attributive Adjectives were normally preposed.

NOTE. Delbrück summarizes the findings for Vedic, Greek, Latin, Lithuanian, and Germanic, giving examples like the following from Vedic: *śvetā́ḥ párvatāḥ*, '*white mountains*' (1900). Lehman (1974) adds an example of Hitt. *šuppi watar*, '*pure water*'.

In marked constructions Adjectives might be postposed, as in *áśvaḥ śvetáḥ*, '*a white horse, a gray*'.

2. The position of the Attributive Genitive is the same as that of the Attributive Adjective.

NOTE. A striking example is given from the Old English legal language (Delbrück 1900): *ōðres mannes hūses dura*, '*the door of the house of the other man*'.

Like the adjective construction, the attributive-genitive construction may have the modifier postposed for marked effect, as is *sómasya* in SB 3.9.4.15 (Delbrück 1878): *kíṃ nas tátaḥ syād íti? prathamabhakṣsá evá sómasyarā́ jña íti*, '*What might then happen for us?*' 'The *first enjoyment of [Prince] Soma*'.

NOTE 1. The relatively frequent marked use of the genitive may be the cause for the apparently free position of the genitive in Greek and Latin. The ambivalent order may also have resulted from the change of these languages toward a VO order. But, as Delbrück indicates, the preposed order is well attested in the majority of dialects. This order is also characteristic of Hittite (J. Friedrich 1960). We may therefore assume it for PIE.

NOTE 2. In accordance with Lehman's views on syntactic structure, the attributive genitive, like the attributive adjective, must be derived from an embedded sentence. The sentence would have a noun phrase equivalent with that in the matrix sentence and would be a predicate nominal sentence. Such independent sentences are attested in the older dialects. Delbrück gives a number of examples, among them: *aṣṭaú ha vaí putrā́ ádites*, '*Aditi had eight sons*'. *áhar devā́nām ā́sīt*, '*Day belonged to the gods*'. These sentences accordingly illustrate that the genitive was used in predicate nominative sentences to convey what Calvert Watkins has labeled its primary syntactic function: the sense "*of belonging*". When such a sentence was embedded in another with an equivalent NP, the NP was deleted, and the typical genitive construction resulted. Hittite also uses ***s*** as a genitive as well as a nominative marker. For "genitives" like *haššannaššaš '(one) of his race'* can be further inflected, as in the accusative *haššannaš-šan '(to one) of his race'* (J. Friedrich).

9.4.2. COMPOUNDS.

1. In the derivation of compounds special compounding rules apply.

The verbal compounds in a language observe the basic order patterns, For PIE we would expect an older OV order in compounds, as e.g. Skt. *agnídh-* 'priest' < *agni* '*fire*' + *idh* '*kindle*.'

NOTE. A direct relationship between compounds and basic syntactic patterns is found only when the compounds are primary and productive. After a specific type of compound becomes established in a language, further compounds may be constructed on the basis of analogy, for example Gk. *híppagros* '*wild horse*', in contrast with the standard productive Greek compounds in which the adjectival element precedes the modified, as in *agriókhoiros* 'wild swine' (Risch 1944-1949). Here we will consider the primary and productive kinds of compounds in PIE.

2. Two large classes and other minor types are found:

A. the Synthetics (noun+noun), which make up the majority of the PIE compounds,

a. Pure Synthetics, i.e. noun+noun.

b. Sinthetics in which the first element is adverbial, i.e. adverb+noun.

B. The Bahuvrihis.

C. Adjective + Nouns, apparently not so productive in PIE as in its dialects.

D. A small number of additive compounds.

SYNTHETICS

Synthetics consist of a nominal element preceding a verbal, in their unmarked forms, as in Skt. *agnídh-*, '*priest*'. As in this compound, the relation of the nominal element to the verbal is that of *target*.

The particular relationship of nominal and verbal elements was determined by the lexical properties of the verb; accordingly, the primary relationship for most PIE verbs was that of *target*. But other nominal categories could also be used with verbs.

3. Kinds of Relationships:

1) The *Receptor* relationship, as Skr. *devahéḍana*, '*angering the gods*'.

2) The *Instrument* or *Means* relationship; as Skr. *ádrijūta*, '*speeded by the stones*',

The compound *ṛtajā* of this passage may illustrate the *Time* relationship.

3) The *Source* relationship, as Skr. *aṅhomúc*, '*freeing from trouble*'.

4) The *Place* relationship, as Skr. *druṣád*, '*sitting in a tree*'.

5) The *Manner* relationship; as, Skr. *īśānakŕt*, '*acting like a ruler'.*

These compounds exhibit the various relationships of nominal constituents with verbal elements, as in Skr. *tvā́-datta*, '*given by you*'.

NOTE. Synthetics attested in the Rigveda accordingly illustrate all the nominal relationships determinable from sentences. Synthetics are frequently comparable to relative constructions, as in the following sentence: *ā́gnír agāmi bhā́rato vṛtrahā́ purucétaṇaḥ*, '*Agni, the god of the Bharatas, was approached, he who killed Vṛtra, who is seen by many*'.

Besides the large number of synthetics of the NV pattern, others are attested with the pattern VN. These are largely names and epithets, such as *púṣṭi-gu*, a name meaning '*one who raises cattle*' (RV 8.51.1.), and *sanád-rayi* '*dispensing riches*'.

BAHUVRIHIS

The second large group of PIE compounds, *Bahuvrihis*, are derived in accordance with the sentence pattern expressing Possession. This pattern is well known from the Latin *mihi est* construction (Bennett 1914; Brugmann 1911): *nulli est homini perpetuom bonum*, "*No man has perpetual blessings*".

Lehman accounts for the derivation of bahuvrihis, like Lat. *magnanimus* '*great-hearted*', by assuming that an equational sentence with a noun phrase as subject and a noun in the receptor category indicating possession is embedded with an equivalent noun, as in the following example ('*great spirit is to man*' = '*the man has great spirit*'):

On deletion of the equivalent NP (*homini*) in the embedded sentence, a bahuvrihi compound *magnanimus* '*greathearted*' is generated. This pattern of compounding ceased to be primary and productive when the dialects developed verbal patterns for expressing possession, such as Lat. *habeo* '*I have*'.

Bahuvrihis may be adjectival in use, or nominal, as in the vocative use of *sūnari* '*having good strength*' (made up of *su* '*good*' and **xner-* '(*magical*) *strength*') in Slr. *víśvasya hí prā́ṇanaṃ jī́vanaṁ tvé, ví yid uchási sūnari*, '*For the breath and life of everything is in you, when you light up the skies, you who have good strength*'. The Greek cognate may illustrate the adjectival use: *phéron d' euēnora khalkón* '*They carried on board the bronze of good strength*'. The bahuvrihis are accordingly similar to synthetics in being comparable to relative clauses.

NOTE. Although the bahuvrihis were no longer primary and productive in the later dialects, their pattern remained remarkably persistent, as we may note from the various *philo-* compounds in Greek, such as *philósophos,* '*one who holds wisdom dear*', *phíloinos,* '*one who likes wine'*, and many more. Apart from the loss of the underlying syntactic pattern, the introduction of different accentual patterns removed the basis for bahuvrihis. As Risch pointed out, Greek *eupátōr* could either be a bahuvrihi '*having a good father*' or a *tatpurusha* '*a noble father*'. In the period before the position of the accent was determined by the quantity of final syllables, the bahuvrihi would have had the accent on the prior syllable, like *rā́ja-putra* '*having kings as sons*', RV 2.27.7, in contrast with the tatpurusha *rā́ja-putrá* '*king's son*', RV 10.40.3. The bahuvrihis in time, then, were far less frequent than tatpurushas, of which only a few are to be posited for late PIE. An example is Gk. *propátōr* '*forefather'*. If the disputed etymology of Latin *proprius* '*own'* is accepted, ***pro-p(a)triós*** '*from the forefathers*', there is evidence for assuming a PIE etymon; Wackernagel (1905) derives Sanskrit compounds like *prá-pada* '*tip of foot*' from PIE. Yet the small number of such compounds in the early dialects indicates that they were formed in the late stage of PIE (Risch).

NOTE 2. Dvandvas, such as *índrāviṣ´ṇu* and a few other patterns, like the teens, were not highly productive in PIE, if they are to be assumed at all. Their lack of productiveness may reflect poorly developed coordination constructions in PIE (Lehmann 1969). Besides the expansion of tatpurushas and dvandvas in the dialects, we must note also the use of expanded root forms. Thematic forms of noun stems and derived forms of verbal roots are used, as in Skt. *deva-kṛta,* '*made by the gods'*. Such extended constituents become more and more prominent and eventually are characteristic elements of compounds, as the connecting vowel ***-o-*** in Greek and in early Germanic; Gk. *Apolló-dōros* '*gift of Apollo*' (an *n-* stem) and Goth. *guma-kunds* '*of male sex*' (also an *n-* stem). Yet the relationships between the constituents remain unchanged by such morphological innovations. The large number of tatpurushas in the dialects reflects the prominence of embedded-modifier constructions, as the earlier synthetics and bahuvrihis reflected the embedding of sentences, often to empty noun nodes. As noted above, they accordingly have given us valuable information about PIE sentence types and their internal relationships.

9.4.3. DETERMINERS IN NOMINAL PHRASES.

Nouns are generally unaccompanied by modifiers, as characteristic passages from an Archaic hymn of the Rigveda and from an Old Hittite text may indicate.

Demonstratives are infrequent; nouns which might be considered definite have no accompanying determinative marker unless they are to be stressed. The Demonstrative then precedes.

The relationship between such Demonstratives and accompanying Nouns has been assumed to be Appositional; it may be preferable to label the relationship a loose one, as of pronoun or noun plus noun, rather than adjective or article plus noun.

NOTE. In Homer too the "article" is generally an anaphoric pronoun, differing from demonstratives by its lack of deictic meaning referring to location (Munro). Nominal phrases as found in Classical Greek or in later dialects are subsequent developments; the relationship between syntactic elements related by congruence, such as adjectives, or even by case, such as genitives, can often be taken as similar to an appositional relationship (Meillet 1937).

To illustrate nominal phrases, cf. Vedic *eṣām marútām*, "*of-them of-Maruts*". The nominal phrase which may seem to consist of a demonstrative preceding a noun, *eṣām marútām*, is divided by the end of the line; accordingly *eṣām* must be interpreted as pronominal rather than adjectival.

The following Hittite passage from a ritual illustrates a similar asyndetic relationship between the elements of nominal phrases (Otten and Souček 1969): *harkanzi- ma –an* ^{d}*Hantašepeš anduhšaš harša[(r)] –a* ^{giš}*ŠUKUR*$^{hi.a}$, But the Hantašepa-gods hold heads of men as well as lances. In this sentence the nouns for '*heads*' and '*lances*' supplement '*it*'. Moreover, while the meaning of the last word is uncertain, its relationship to the preceding elements is imprecise, for it is a nominative plural, not an accusative. Virtually any line of Homer might be cited to illustrate the absence of close relationships between the members of nominal phrases; cf. *Odyssey nēûs dé moi hḗd' héstēken ep' agrouˆ nósphi pólēos, en liméni Rheíthrōi hupò Nēíōi hulḗenti*, '*My ship is berthed yonder in the country away from the city, in a harbor called Rheithron below Neion, which is wooded*'. The nouns have no determiners even when, like *nēus*, they are definite; and the modifiers with *liméni* and *Neíoi* seem to be loosely related epithets rather than closely linked descriptive adjectives.

The conclusions about the lack of closely related nominal phrases may be supported by the status of compounds in PIE. The compounds consisting of Descriptive Adjectives + Noun are later; the most productive are reduced verbal rather than nominal constructions. And the bahuvrihis, which indicate a descriptive relationship between the first element and the second, support the conclusion that the relationship is relatively general; *rājá-putra*, for example, means '*having sons who are kings*' rather than '*having royal sons*'; *gó-vapus* means '*having a shape like a cow*', said of rainclouds, for which the epithet denotes the fructifying quality rather than the physical shape.

Accordingly, closely related nominal expressions are to be assumed only for the dialects, not for PIE. Definiteness was not indicated for nouns. The primary relationship between nominal elements, whether nouns or adjectives, was appositional.

The syntactic patterns assumed for late PIE may be illustrated by narrative passages from the early dialects. The following passage tells of King Hariśchandra, who has been childless but has a son after promising Varuna that he will sacrifice any son to him. After the birth of the son, however, the king asks Varuna to put off the time of the sacrifice, until finally the son escapes to the forest; a few lines suffice to illustrate the simple syntactic patterns.

AB 7.14.

athainam	**uvāca**	**varuṇaṁ**	**rājānam**	**upadhāva**	**putro**
then-him	he-told	Varuna	king	you-go-to	son
Acc. sg.	Perf. 3 sg.	Acc. sg.	Acc. sg.	Imper. 2 sg.	Nom. sg.

me	**jāyatāṁ**	**tena**	**tvā**	**yajā**
to-me	let-him-be-born	with-	you	I-worship
	Imper. 3 sg.	Inst. sg.	Acc. sg.	Mid. Pres.

iti.	**tatheti.**	**sa**	**varuṇaṁ**
end-quotation	indeed-end	'he'	Varuna
	(<tathā iti)	3 sg. Nom.	

rājānam	**upasasāra**	**putro**	**me**	**jāyatāṁ**	**tena**
king	went-to	son	to-me	let-him-be-born	with-him
	Perf. 3 sg.				

tvā	**yajā**	**iti.**	**tatheti.**
you	I-worship	end-quotation	indeed-end-quotation

tasya	**ha**	**putro**	**jajñe**	**rohito**	**nāma.**
his, of-him	now	son	he-was-born	Rohita	name
Gen. sg. m.	Ptc.		Mid. Perf. 3 sg.		

taṁ	**hovācājani**	**te**	**vai**	**putro**
him	Ptc.-he-told-he-was born	to-you	indeed	son
Acc. sg.	Aor. Pass. 3 sg. Ptc.		Ptc.	

yajasva	**māneneti.**	**sa**
you-worship	me-with-him-end-quotation	'he'
Mid. Imper. 2 sg.	Acc. sg.-Inst. sg.	

hovāca	**yadā**	**vai**	**paśur**	**nirdaśo**
Ptc.-he-told	when	indeed	animal	above-ten
	Conj.	Ptc.	Nom. sg. m.	Nom. sg. m.

bhavatyatha	**sa**	**medhyo**	**bhavati.**	**nirdaśo**
he-becomes-then	he	strong	he-becomes	above-ten
Pres. 3 sg.-Ptc.		Nom. sg. m.		

'nvastvatha	**tvā**	**yajā**	**iti.**
Ptc.-let-him-be-then	you	I-worship	end-quotation
Imper. 2 sg.	Acc. sg.		

tatheti.	**sa**	**ha**	**nirdaśa**	**āsa**
indeed-end-quotation	he	now	above-ten	he-was
				Perf. 3 sg.

Then he [the Rishi Narada] told him [Hariśchandra]: "Go to King Varuna. [Tell him]: 'Let a son be born to me.

With him I will worship you [= I will sacrifice him to you] .'"

"Fine," [he said].

He went to King Varuna [saying]: "Let a son be born to me. I will sacrifice him to you."

"Fine," [he said]

Now his son was born. Rohita [was his] name.

[Varuna] spoke to him. "A son has indeed been born to you. Sacrifice him to me."

He said thereupon: "When an animal gets to be ten [days old], then he becomes strong [= fit for sacrifice]. Let him be ten days old; then I will worship you."

"Fine," he said.

He now became ten.

As this passage illustrates, nouns have few modifiers. Even the sequence: *tasya ha putro*, which might be interpreted as a nominal phrase corresponding to 'his son', consists of distinct components, and these should be taken as meaning: "*Of him a son [was born]*". As in the poetic passage cited above, nouns and pronouns are individual items in the sentence and when accompanied by modifiers have only a loose relationship with them, as to epithets.

9.4.4. APPOSITION

Apposition is traditionally "when paratactically joined forms are grammatically, but not in meaning, equivalent".

NOTE. Because of the relationship between nouns and modifiers, and also because subjects of verbs were only explicit expressions for the subjective elements in verb forms, Meillet (1937) considered apposition a basic characteristic of Indo-European syntax. As in the previous passage, subjects were included only when a specific meaning was to be expressed, such as *putra 'son'*. The element *sa* may still be taken as an introductory particle, a sentence connective, much as *iti* of *tathā iti*, etc., is a sentence-final particle. And the only contiguous nouns in the same case, *varunam rājānam*, are clearly appositional.

A distinction is made between *Appositional* and *Attributive* (Delbrück); an appositional relationship between two or more words is not indicated by any formal expression, whereas an attributive relationship generally is.

NOTE. Thus the relationships in the following line of the Odyssey are attributive: *arnúmenos hḗn te psukhḗn kaì nóston hetaírōn*, lit. "*striving-for his Ptc. life and return of-companions*". The relationship between *hḗn* and

psukhḗn is indicated by the concordance in endings; that between *nóston* and *hetaírōn* by the genitive. On the other hand the relationship between the two vocatives in the following line is appositional, because there is no mark indicating the relationship: *tôn hamóthen ge, theá, thúgater Diós, eipè kaì hēmîn*, '*Tell us of these things, beginning at any point you like, goddess, daughter of Zeus*'. Both vocatives can be taken independently, as can any appositional elements.

Asyndetic constructions which are not appositive are frequently attested, as Skr. *té vo hṛdé mánase santu yajñā́*, '*These sacrifices should be in accordance with your heart, your mind*'. Coordinate as well as appositive constructions could thus be without a specific coordinating marker.

Comparable to appositional constructions are titles, for, like appositions, the two or more nouns involved refer to one person.

NOTE. In OV languages titles are postposed in contrast with the preposing in VO languages; compare Japanese *Tanaka-san* with *Mr. Middlefield*. The title '*king*' with *Varuna* and similarly in the Odyssey, *Poseidáōni ánakti*, when *ánaks* is used as a title. But, as Lehman himself admits, even in the early texts, titles often precede names, in keeping with the change toward a VO structure.

Appositions normally follow, when nouns and noun groups are contiguous, as in the frequent descriptive epithets of Homer: *Tòn d' ēmeíbet' épeita theá, glaukṑpis Athḗnē*, '*Him then answered the goddess, owl-eyed Athene*'.

To indicate a marked relationship, however, they may precede (Schwyzer 1950). But the early PIE position is clear from the cognates: Skt. *dyaus pitā*, Gk. *Zeû páter*, Lat. *Jūpiter*.

9. 5. MODIFIED FORMS OF PIE SIMPLE SENTENCES

9.5.1. COORDINATION.

While coordination is prominent in the earliest texts, it is generally implicit.

The oldest surviving texts consist largely of paratactic sentences, often with no connecting particles.

New sentences may be introduced with particles, or relationships may be indicated with pronominal elements; but these are fewer than in subsequent texts.

Similar patterns of paratactic sentences are found in Hittite, with no overt marker of coordination or of subordination. J. Friedrich states that "purpose and result" clauses are not found in Hittite (1960), but that coordinate sentences are simply arranged side by side with the particle *nu*, as in the Hittite Laws. Conditional relationships too are found in Hittite with no indication of subordination (J. Friedrich 1960).

NOTE. The subordinate relationships that are indicated, however, have elements that are related to relative particles. Accordingly the subordination found in the early dialects is a type of relative construction. As such

examples and these references indicate, no characteristic patterns of order, or of verb forms, distinguish subordinate from coordinate clauses in PIE and the early dialects. Hermann therefore concluded in his celebrated article that there were no subordinate clauses in PIE (1895). For Lehman (1974), the paratactic arrangement which he assumed for PIE, however, is characteristic of OV languages. Hypotaxis in OV languages is often expressed by nonfinite verb forms and by postposed particles.

The arrangement of sentences in sequence is a typical pattern of PIE syntax, whether for hypotactic or for paratactic relationships.

Expressions for coordination were used largely for elements within clauses and sentences. When used to link sentences, conjunctions were often accompanied by initial particles indicating the beginning of a new clause and also indicating a variety of possible relationships with neighboring clauses.

NOTE. Sentence-connecting particles are, however, infrequent in Vedic and relatively infrequent in the earliest Hittite texts; Lehman concludes that formal markers of sentence coordination were not mandatory in PIE.

The normal coordinating particle in most of the dialects is a reflex of PIE **-qe**.

This is postposed to the second of two conjoined elements, or to both.

NOTE. Hittite *-a, -i̯a* is used similarly, as in *attaš annaš a* 'father and mother' (J. Friedrich 1960).

The disjunctive particle PIE **-wĕ** is also postposed

NOTE 1. In Hittite, however, besides the postposed disjunctive particles *-ku … -ku* '*or*', there was the disjunctive particle *našma*, which stood between nouns rather than after the last. This pattern of conjunction placement came to be increasingly frequent in the dialects; it indicates that the conjunction patterns of VO structure have come to be typical already by IE II.

NOTE 2. With the change in coordinating constructions, new particles were introduced; some of these, for example, Lat. *et*, Goth. *jah*, OE *and*, have a generally accepted etymology; others, like Gk. *kaí*, are obscure in etymology. Syntactically the shift in the construction rather than the source of the particles is of primary interest, though, as noted above, the introduction of new markers for the new VO patterns provides welcome lexical evidence of a shift. The syntactic shift also brought with it patterns of coordination reduction *(Ersparung)* which have been well described for some dialects (Behaghel). Such constructions are notable especially in SVO languages, in which sequences with equivalent verbs (S, V, O, Conj., S_2, V_1, O_2) delete the second occurrence of the verb , as M.H.G. *daz einer einez will und ein ander ein anderz*, '*that one one-thing wants and another an other*'.

Reduction of equivalent nouns in either S or O position is also standard, as in *Beowulf*.

NOTE. But in the paratactic structures characteristic of Hittite, such reduction is often avoided. In an SVO language the second *memi̯as* would probably not have been explicitly stated, as in: '*now my speech came to be halting and was uttered slowly*'. The lack of such reduction, often a characteristic of OV languages, gives an impression of paratactic syntax. Another pattern seeming to be paratactic is the preposing of "subordinate clauses," either with no mark of subordination or with a kind of relative particle, as in the concluding passage of

Muršilis Sprachlähmung (Götze and Pedersen 1934). The second from last clause has no mark to indicate subordination; the earlier clauses contain a form of relative particle.

IŠTU	GIŠBANŠUR-ma-za-kán	kuizza	azikinun
from	table-but-Refl.-Ptc.	from-which	I-was-accustomed-to-eat

IŠTU	GAL-i̯a-kán	kuizza	akkuškinun
from	beaker-and-Ptc.	from-which	I-was-accustomed-to-drink

šašti-i̯a-za-kán	kue̯dani	šeškeškinun	*IŠTU*
in-bed-and-Refl.-Ptc.	in-which	I-was-accustomed-to-sit	from

URUDDU$_{10}$xA-ia-za-kán	kuizza	arreškinun
basin-and-Refl.-Ptc.	from-which	I-was-accustomed-to-wash

kuit-i̯a	imma	*ÚNUTU*	anda	ue̯rii̯an	ešta	nu	*UL*
what-and	else	utensil	Adv.-Ptc.	mentioned	it-was	now	not

kuitki	dattat	*IŠTU*	DINGIRLI	QATAMMA	SIxDI-at
any	it-was-taken	from	god	likewise	it-was-determined

'*The god also determined that nothing more should be used of the table from which I was accustomed to eat, of the beaker from which I was accustomed to drink, of the bed in which I was accustomed to sleep, of the basin in which I was accustomed to wash, and of whatever other article was mentioned*'

In an SVO language like English, the principal clause, which stands last in Hittite, would be placed first. The interpretation of the preceding clause as a result clause is taken from Götze and Pedersen. The initial clauses contain relative particles which indicate the relationship to *kuitki* of the second-from-last clause; they also contain coordinating particles: *a, i̯a*. In this passage the clauses, whether coordinate or subordinate from our point of view, are simply arrayed in sequence. Each concludes with a finite verb which provides no evidence of hypotaxis. The sentence connectives which occur—repeated instances of *a/ia*—heighten the impression of coordination.

The absence in Hittite of verb forms – which are cognates of the Vedic and Greek optative and subjunctive – which came to be used largely to indicate subordination is highly consistent in its OV patterning, as such verb forms were not required.

Hittite however did not forego another device, which is used to indicate subordinate relationship in OV as well as VO languages, the so-called nonfinite verb forms. These are used for less explicit kinds of complementation, much the way relative constructions are used for more explicit kinds.

9.5.2. COMPLEMENTATION.

Compound sentences may result from the embedding of nominal modifiers.

NOTE. In VO languages embedded nominal modifiers follow nouns, whereas in OV languages they precede nouns. This observation has led to an understanding of the Hittite and the reconstructed PIE relative constructions. if we follow the standard assumption that in relative constructions a second sentence containing an NP equivalent to an NP in the matrix sentence is embedded in that matrix sentence, we may expect that either sentence may be modified. A sentence may also be embedded with a dummy noun; the verb forms of such embedded sentences are commonly expressed with nominal forms of the verb, variously called infinitives, supines, or participles. In OV languages these, as well as relative constructions, precede the verb of the matrix sentence.

An example with participles in the IE languages is Skr. *vásānaḥ* in the last lines of the following Strophic hymn: *rúśad vásānaḥ sudṛ́śīkarūpaḥ*, "*brightly dressing-himself beautifully-hued*".

It may also have "*a final or consequential sense*", as in the following Strophic hymn: *tvám indra srávitavā́ apás kaḥ*, '*You, O Indra, make the waters to flow*.' Also in the poetic texts such infinitives may follow the main verb, as in *ábodhi hótā yajáthāya devā́n*, lit. "*he-woke-up priest for-sacrificing gods*", '*The priest has awakened to sacrifice to the gods'*.

NOTE. The postposed order may result from stylistic or poetic rearrangement; yet it is also a reflection of the shift to VO order, a shift which is reflected in the normal position for infinitives in the other IE dialects. In the Brahmanas still, infinitives normally stand directly before the verb, except in interrogative and negative sentences (Delbrück). On the basis of the Brahmanic order we may assume that in PIE nonfinite verbs used as complements to principal verbs preceded them in the sentence. Hittite provides examples of preposed complementary participles and infinitives to support this assumption (J. Friedrich). Participles were used particularly with *har(k)-* '*have'* and *eš-* '*be'*, as in *ueriia̯n ešta* '*was mentioned'*; the pattern is used to indicate state.

INFINITIVES

1. Infinitives could indicate result, with or without an object (J. Friedrich 1960): *1-aš 1-an kunanna lē šanhanzi*, lit. "*one one to-kill not he-tries*", i.e. '*One should not try to kill another*'.

2. Infinitives could be used to express purpose, as in the following example, which pairs an infinitive with a noun (J. Friedrich): *tuk-ma kī uttar ŠÀ-ta šiia̯nna išhiull-a ešdu*, lit. "*to-you-however this word in-heart for-laying instruction-and it-should-be*", i.e. '*But for you this word should be for taking to heart and for instruction*'.

3. The Infinitive could be loosely related to its object, as in examples cited by Friedrich, such as *apāš-ma-mu harkanna šan(a)hta*, lit. "*he-however-me for-deteriorating he-sought*", i.e. '*But he sought to destroy me*'.

4. The complementary infinitive indicates the purpose of the action; as Friedrich points out, it is attached to the verb *šanhta* plus its object *mu* in a construction quite different from that in subsequent dialects.

NOTE. These uses are paralleled by uses in Vedic, as may be noted in the work of Macdonell (1916), from which some examples are taken in Lehman (1974). On the basis of such examples in Vedic and in Hittite, he assumes that infinitive constructions were used to indicate a variety of complements in PIE.

Hittite and Sanskrit also provide examples of Participles functioning appositionally or as adjectives indicating state (J. Friedrich 1960): *ammuk-u̯ar-an akkantan IQ.BI, lit. to-me-Pte.-indicating-quotation-him dying he-described*, i.e. '*He told me that one had died.*'

NOTE. This pattern had been noted by Delbrück for the Rigveda, with various examples (1900:327), as *śiśīhí mā śiśayáṃ tvā śṛṇomi,* '*Strengthen me; I hear that you are strong*.' The adjective *śiśayá* '*strengthening'* is an adjective derived from the same root as *śiśīhí*. Delbrück also noted that such "appositives" are indicated in Greek by means of clauses. Greek represents for Lehman accordingly a further stage in the development of the IE languages to a VO order. Yet Greek still maintained preposed participles having the same subject as does the principal verb, as in: *tẽn mèn idõn gẽthēse*, lit. "*it Ptc. seeing he-rejoiced*"

This pattern permits the use of two verbs with only one indicating mood and person; the nonfinite verb takes these categories from the finite.

Participles were thus used in the older period for a great variety of relationships. though also without indicating some of the verbal categories.

Dependent clauses are more flexible in indicating such relationships, and more precise, especially when complementary participles and infinitives follow the principal verb.

9.5.3. SUBORDINATE CLAUSES.

Indo-Europeanists have long recognized the relationship between the Subordinating Particles and the stem from which Relative Pronouns were derived in Indo-Iranian and Greek.

NOTE. Thus Delbrück has pointed out in detail how the neuter accusative form of PIE **jo**- was the basis of the conjunction **jod** in its various meanings: (1) Temporal, (2) Temporal-Causal, (3) Temporal-Conditional, (4) Purpose. He also recognized the source of conjunctional use in sentences like Skr. *yáj jā́yathās tád áhar asya kā́me 'ṅśóḥ pīyū´ ṣam apibo giriṣṭhā́m*, '*On the day you were born you drank the mountain milk out of desire for the plant*'.

1) Relative clauses must have stood Before the Main Clause originally and

2) The earliest type of subordinate **jo**- clauses must have been the Preposed Relative constructions.

NOTE. This conclusion from Vedic receives striking support from Hittite, for in it we find the same syntactic relationship between relative clauses and other subordinate clauses as is found in Vedic, Greek, and other early

dialects. But the marker for both types of clauses differs. In Hittite it is based on IE **qid** rather than **jod**; thus, Hittite too uses the relative particle for indicating subordination. The remarkable parallelism between the syntactic constructions, though they have different surface markers, must be ascribed to typological reasons; we assume that Hittite as well as Indo-Aryan and Greek was developing a lexical marker to indicate subordination. As does *yad* in Vedic, Hitt. *kuit* signals a "*loose*" relationship between clauses which must be appropriately interpreted.

As J. Friedrich has stated (1960), *kuit* never stands initially in its clause. Sentences in which it is used are then scarcely more specifically interconnected than are conjoined sentences with no specific relating word, as in examples cited by Friedrich (ibid.): *nu taškupāi nu URU-aš dapiḭanzi išdammašzi*, lit. Ptc. you-shout Ptc. city whole it-hears, '*Now cry out [so that] the whole city hears*'. Like this example, both clauses in a *kuit* construction generally are introduced with *nu* (J. Friedrich 1960). We may assume that *kuit* became a subordinating particle when such connections were omitted, as in Friedrich's example. These examples illustrate that both *yád* and *kuit* introduce causal clauses, though they do not contain indications of the origin of this use.

It is therefore generally believed that Subordinates originated in Relative sentences, as Vedic, Old Irish, Avestan and Old Persian illustrate. Proverbs and maxims are a particularly conservative field in all languages, and even etymologically there are two series which especially often; namely, **qo**-...**to**-, and **jo**-...**to**-.

NOTE 1. For IE ***qo***-..***to***-, cf. Lat. *cum...tum*, *qualis...talis*, *quam...tam*, or Lith. *kàs...tàs*, *kòks...tàs*, *kaîp...taîp*, *kíek...tíek*, etc., and for ***jo***-...***to***-, Ved. *yás...sá tád*, *yáthā...táthā*, *yā́vat...tā́vat*, Gk. *oios...toios*, *ósos...tósos*, O.Pers. *haya* (a compound from ***so***+***jo***, with the same inverse compound as Lat. *tamquam*, from two correlatives), etc.

NOTE 2. For Haudry this correlative structure is the base for subordination in all Indo-European languages. Proto-Indo-European would therefore show an intermediate syntax between parataxis and hypotaxis, as the correlative structure is between a '*loose*' syntax and a '*locked*' one.

Lehman assumes that the use of Skr. *yád,* Hitt. *kuit*, and other relative particles to express a causal relationship arose from subordination of clauses introduced by them to an Ablative; cf. Skr. *ácittī yát táva dhármā yuyopimá* (lit. *unknowing that, because your law, order we-have-disturbed*), *mā́ nas tásmād énaso deva rīriṣaḥ* (lit. *not us because-of-that because-of-sin O-god you-harm*), '*Do not harm us, god, because of that sin [that] because unknowingly we have disturbed your law*'.

As such relationships with ablatives expressing Cause were not specific, more precise particles or conjunctions came to be used. In Sanskrit the ablatival *yasmāt* specifies the meaning '*because*'.

Further, *yadā́* and *yátra* specify the meaning '*when*'. In Hittite, *mān* came to be used for temporal relationships, possibly after combined use with *kuit; kuitman* expressed a temporal relationship even in Late Hittite, corresponding to '*while*, *until*', though *mahhan* has replaced *mān* (J. Friedrich 1960 gives further details). The conjunction *mān* itself specifies the meanings '*if*' and '*although*' in standard

Hittite. In both Hittite and Vedic then, the "*loose*" relative-construction relationship between subordinate clauses and principal clauses is gradually replaced by special conjunctions for the various types of hypotactic relationship: Causal, Temporal, Conditional, Concessive.

Just as the Causal relationship developed from an Ablative modified by a Relative construction, so the Temporal and Conditional relationship developed from a clause modifying an underlying Time node.

The less differentiated and less precisely related subordinate clauses are often still evident, however, as in *yád* clauses of the Archaic hymn, Rigveda 1.167. For conciseness, only *yád* clauses will be cited here, with Hoffmann's interpretation of each; the entire stanzas and their translations are given by Hoffmann (1967).

RV 1.167.5.	jóṣad	yád	īm	asuryā̀	sacádhyai
	she-desires	when	them	Asuryan	to-follow

'when the Asuryan will desire to follow them'

RV	arkó	yád	vo	maruto	havíṣmān
	song-of-praise	whenever,	for-you	Maruts	accompanied-by-libations

'if the song of praise accompanied by libations is designed for you, Maruts'

RV 1.167.7.	sácā	yád	īṃ	vṛ́ṣamaṇā	ahaṁyú
	together	because	them	manly-minded	proud
	sthirā́	cij	jánīr	váhate	subhāgā́ḥ
	rigid	though	women	she-drives	well-favored

'*because the manly minded, proud, yet stubborn [Rodasi] brings along other favored women*'

In these three stanzas *yad* introduces subordinate clauses with three different relationships: Temporal, Conditional, Causal. Such multiple uses of *yad* belong particularly to the archaic style; subsequently they are less frequent, being replaced by more specific conjunctions.

In addition to the greater specificity of subordinate relationship indicated by particles, the early, relatively free hypotactic constructions come to be modified by the dominant subjective quality of the principal verb. The effect may be illustrated by passages like the following from a Strophic hymn, in which the verb of the principal clause is an optative:

RV 1.38.4.

yád	yūyám	pṛṣnimātaro
if, when	you	having-Prsni-as-mother

mártāsaḥ	syā́tana
mortals	you-would-be

stotā́	vo	amṛ́taḥ	syāt
singer	your	immortal	he-would-be

'Your singer would be immortal if [= in a situation when] you Maruts were mortals.' (That is, if our roles were reversed, and you were mortals, then you would wish me to be immortal.)

This passage illustrates how the use of the Optative in the principal clause brings about a Conditional relationship in the Subordinate clause (see also Delbrück 1900). Through its expression of uncertainty the Optative conveys a Conditional rather than a Temporal meaning in the *yad* clause.

NOTE. Lacking verb forms expressing uncertainty, Hittite indicates conditional relationships simply by means of Particles (J. Friedrich 1960). Although several particles are used in Hittite to indicate various types of conditional clauses—*man ... mān* for Contrary-to-Fact, *takku* and *man* for Simple Conditionals—Hittite did not develop the variety of patterns found in other dialects. These patterns, as well described in the handbooks, are brought about not only by differing particles but also by the uses of the various tense and mood forms. Constructions in the dialects which have developed farthest from those of PIE are those in which the tense, mood, or person is modified in accordance with rules based on the verb form of the principal clause. Such shifts are among the most far-reaching results of the subjective quality of the Indo-European verb (Delbrück 1900).

Differences between the constructions in the various dialects reflect the changes as well as the earlier situation. In Homer, statements may be reported with a shift of mood and person, as in:

Odyssey	líssesthai	dé	min	autós,	hópōs	nēmertéa	eípēi
	request	Ptc.	him	self	that	true-things	he-may-say

'You yourself ask him so that he tells the truth.'

The form *eípēi* is a third-person aorist subjunctive. If the statement were in direct discourse, the verb would be *eĩpe*, second-person imperative, and the clause would read: *eĩpe nēmertéa* '*tell the truth*'. Such shifts in person and mood would not be expected in an OV language; in Vedic, for example, statements are repeated and indicated with a postposed *iti*. The shifts in the other dialects, as they changed more and more to VO structure, led to intricate expression of subordinate relationships, through shifts in person, in mood, and in tense, as well as through specific particles indicating the kind

of subordination. The syntactic constructions of these dialects then came to differ considerably from that even in Vedic.

The earliest poems of the Vedas are transparent in syntax, as may be illustrated by Stanzas 9 and 10 of Hymn 1.167:

RV 1.167.9.

nahī́	nú	vo	maruto	ánty	asmé
never	Ptc.	your	Maruts	near	from-us

ārā́ttāc	cic	chávaso	ántam	āpúḥ
from-far	or	of-strength	end	they-reached

té	dhṛṣṇúnā	śávasā	śuśuvā́ṅsó
they	bold	power	strengthened

‘rṇo	ná	dvéṣo	dhṛṣatá	pári	ṣṭhuḥ
flood	like	enmity	bold	against	they-stand

‘Never have they reached the limit of your strength, Maruts, whether near or far from us. Strengthened by bold power they boldly oppose enmity like a flood.’

RV 1.167.10.

vayám	adyéndrasya	préṣṭhā	vayám
we	today-Indra’s	most-favored	we

śvó	vocemahi	samaryé
tomorrow	we-wish-to-be-called	in-battle

vayám	purā́	máhi	ca	no	ánu	dyū́n
we	formerly	great	and	us	through	days

tán	na	ṛbhukṣā́	narā́m	ánu	ṣyāt
that	us	chief	of-men	to	may-he-be

‘*We today, we tomorrow, want to be called Indra’s favorites in battle. We were formerly. And great things will be for us through the days; may the chief of men give that to us*’.

Although the hymn offers problems of interpretation because of religious and poetic difficulties, the syntax of these two stanzas is straightforward; the verbs in general are independent of one another, in this way indicating a succession of individual sentences. Such syntactic patterns, though more complicated than those of prose passages, lack the complexity of Classical Greek and Latin, or even Homeric Greek. These early Vedic texts, like those of Old Hittite, include many of the syntactic categories found in the dialects, but the patterns of order and relationship between clauses had already changed considerably from the OV patterns of Middle PIE.

9.6. SINTACTIC CATEGORIES

9.6.1. PARTICLES AS SYNTACTIC MEANS OF EXPRESSION

Noninflected words of various functions were used in indicating relationships between other words in the sentence or between sentences.

1. Some were used for modifying Nouns, often indicating the relationships of nouns to verbs. Although these were generally placed after nouns and accordingly were Postpositions, they have often been called Prepositions by reason of their function rather than their position with regard to nouns (Delbrück).

2. Others were used for modifying Verbs, often specifying more precisely the meanings of verbs; these then may be called Preverbs.

3. Others, commonly referred to as Sentence Connectives, were used primarily to indicate the relationships between Clauses or Sentences (Watkins 1964; Lehmann 1969).

9.6.1.1. POSTPOSITIONS.

Postpositions in the various dialects are found with specific cases, in accordance with their meanings.

Yet in the Old Hittite texts, the Genitive rather than such a specific case is prominent with Postpositions derived from Nouns, such as *piran* '(in) front' (Neu 1970):

kuiš	LUGAL-ua-aš	piran	ēšzi
who	king's	front	he-sits
'whoever sits before the king'			

Such postpositions came to be frozen in form, whether unidentifiable as to etymology; derived from nouns, like *piran*; or derived from verbs, like Skr. *tirás* (viz. Lehman). Further, as the language came to be VO, they were placed before nouns.

As case forms were less clearly marked, they not only "governed" cases but also took over the meanings of case categories. The preposition *tirás (tiró)*, derived from the root **tṛ-* '*cross*', illustrates both the etymological meaning of the form and its eventual development as preposition:

RV 8.82.9.

yáṃ	te	śyenáḥ	padā́bharat
what	for-you	eagle	with-foot-he-bore

tiró	rájāṅsy	áspṛtam
crossing, through	skies	not-relinquishing

píbéd [<píba íd]	asya	tvám	īśiṣe
you-drink-indeed	of-it	you	you-are-master (for-your-benefit)

'*What the eagle brought for you in his claws, not dropping it [as he flew] through the skies, of that drink. You control [it for your own benefit]'.*

The syntactic use of such particles with nouns is accordingly clear.

9.6.1.2. PREVERBS.

1. Rather than having the close relationships to nouns illustrated above, particles could instead be associated primarily with Verbs, often the same particles which were used as Postpositions.

2. Such combinations of particles and verbs came to be treated as units and are found repeatedly in specific uses (Delbrück 1888).

A. Preverbs might occupy various positions:

1. If unmarked, they are placed before the verb;

2. If marked, they are placed initially in clauses (Watkins 1964).

NOTE. In the course of time the Preverbs in unmarked position came to be combined with their verbs, though the identity of each element is long apparent in many of the dialects. Thus, in Modern German the primary accent is still maintained on some verbal roots, and in contrast with cognate nouns the prefix carries weak stress: *erteílen* '*distribute*', *Úrteil* '*judgment*'. The steps toward the combination of preverb and verbal root have been described for the dialects, for example, Greek, in which uncombined forms as well as combined forms are attested during the period of our texts.

B. In the attested IE dialects:

a. Preverbs which remained uncombined came to be treated as Adverbs.

b. Combinations of Preverbs plus Verbs, on the other hand, eventually came to function like unitary elements.

The two different positions of preverbs in early texts led eventually to different word classes.

9.6.1.3. SENTENCE PARTICLES.

1. Particles were also used to relate sentences and clauses (J. Friedrich 1959:18, § 11):

takku	LÚ.ULÙ^{LU}-an	*EL.LUM*	*QA.AZ.ZU*	našma	GÌR-*ŠU*	kuiški
if	man	free	his-hand	or	his-foot	someone

tuu̯arnizzi	nušše	20	GÍN	KUBABBAR	paai
he-breaks	Ptc.-to-him	20	shekels	silver	he-gives

'If anyone breaks the hand or foot of a freeman, then he must give him twenty shekels of silver.'

Particles like the initial word in this example indicate the kind of clause that will follow and have long been well described. The function of particles like *nu* is not, however, equally clear.

NOTE. Dillon and Götze related *nu* and the use of sentence connectives to similar particles in Old Irish (Dillon 1947). Such particles introduce many sentences in Old Irish and have led to compound verb forms in this VSO language. Delbrück had also noted their presence in Vedic (1888)

Since introductory *šu* and *ta* were more frequent than was *nu* in the older Hittite texts, scholars assumed that sentences in IE were regularly introduced by these sentence connectives. And Sturtevant proposed, as etymology for the anaphoric pronoun, combinations of **so**- and **to**- with enclitic pronouns, as in the well-known Hittite sequence *ta-at*, cf. IE **tod**, and so on (see Otten and Souček 1969 for the use of such particles in one text).

It is clear that sentence connectives were used in Hittite to indicate continued treatment of a given topic (Raman 1973). It is also found with Hittite relative constructions, a function which may also be ascribed to Vedic *sá* and *tád*.

NOTE. For Lehman (1974), since this use may be accounted for through post-PIE influences, sentence connectives may have had a minor role in PIE.

2. Other particles, like Hitt. *takku* '*if*', probably had their counterparts in PIE, even if the surface forms were completely unrelated. This is also true for Emphatic Particles like Skr. *íd*; they were used after nouns as well as imperatives. Such emphatic particles combined with imperatives suggest the presence of Interjections, which cannot usually be directly reconstructed for PIE but are well attested in the several dialects.

3. A coordinate sentence connective **-qe** can clearly be reconstructed on the basis of Goth. *u*(*h*), Skr. *ca*, Gk. *te*, Lat. *que*, and so on. But its primary function is the coordination of elements in the sentence rather than clauses or sentences.

NOTE. Moreover, when *ca* is used to connect verbs in the Vedic materials, they are parallel (Delbrück 1888); Delbrück finds only one possible exception. In an OV language the relating of successive verbs is carried out by means of nonfinite verbs placed before finite. We may then expect that coordinating particles had their primary use in PIE as connectors for sentence elements rather than for sentences.

Another such particle is **-wĕ** '*or*'. Like **-qe**, the particle indicating disjunctive '*or*' was postposed, in retention of the original pattern as late as Classical Latin.

4. Particles in PIE may also have corresponded to verbal qualifiers.

a. The most notable of these is **mē**, which carried a negative modal meaning.

b. There is indication of such uses of particles in other patterns, for example, of Vedic *purā́* '*earlier*' to indicate the past, as apparently Brugmann was the first to point out (Delbrück 1888), and also Vedic *sma*, to indicate repeated action in the past (Hoffmann 1967). It is curious that *sma* is also found after *mā́* in Vedic (Hoffmann 1967).

NOTE. Lehman suggested that such mood- and tense-carrying particles may have been transported from a postverbal to a preverbal position. Some particles may accordingly have been equivalent in an earlier stage of PIE to elements used after verbs to indicate verbal categories.

9.6.2. MARKED ORDER IN SENTENCES.

1. Elements in sentences can be emphasized, by Marking; the chief device for such emphasis is Initial Position.

Other sentence elements may also be placed in initial position for marking.

2. In unmarked position the preverb directly precedes the verb. Changes in normal order thus provide one of the devices for conveying emphasis.

Other devices have to do with Selection, notably particles which are postposed after a marked element.

3. Emphasis can also be indicated by lexical selection.

4. Presumably other modifications might also be made, as in Intonation.

The various syntactic devices accordingly provided means to introduce marking in sentences.

9.6.3. TOPICALIZATION WITH REFERENCE TO EMPHASIS.

Like emphasis, Topicalization is carried out by patterns of arrangement, but the arrangement is applied to coequal elements rather than elements which are moved from their normal order.

Topicalization by arrangement is well known in the study of the early languages, as in the initial lines of the Homeric poems. The Iliad begins with the noun *mḗnin* '*wrath*', the Odyssey with the noun *ándra* '*man*'. These, to be sure, are the only possible nouns in the syntactically simple sentences opening both poems: *mḗnin áeide* '*Sing of the wrath*' and *ándra moi énnepe* '*Tell me of the man*'. Yet the very arrangement of *moi* and other enclitics occupying second position in the sentence, in accordance with Wackernagel's law, indicates the use of initial placement among nominal elements for topicalization.

The use of topicalization may be illustrated by a more complex set of sentences, such as the first address of Zeus in the Odyssey. Only the first lines of this will be quoted; but these indicate a shift in topic from the '*gods*' to '*men*', then to a particular man, Aegisthus, then to Agamemnon, and subsequently to Orestes (Lehman 1974).

Ὦ pópoi, hoîon dḗnu theoùs brotoì aitióōntai; eks hēméōn gár phasi kák' émmenai, hoi dè kaì autoì, sphetîsin atasthalíēisin hupèr móron álge' ékhousin, hōs kaì nûn Aígisthos hupèr móron Atreídao, gemô̂' álokhon mnēstḗn, tòn d' éktane nostḗsanta,

'Alas, how the mortals are now blaming the gods. For they say evils come from us, but they themselves have woes beyond what's fated by their own stupidities. Thus Aegisthus beyond what was fated has now married the wedded wife of Agamemnon, and killed him on his return.'

As this passage and many others that might be cited illustrate, the basic sentence patterns could be rearranged by stylistic rules, both for emphasis and for topicalization. In this way the relatively strict arrangement of simple sentences could be modified to bring about variety and flexibility.

APPENDIX I: INDO-EUROPEAN IN USE

I.1. TEXTS TRANSLATED INTO MODERN INDO-EUROPEAN

These texts have been translated into PIE by Indo-Europeanist Fernando López-Menchero, and modified to fit the Modern Indo-European grammatical rules.

NOTE. Additions, corrections and deletions are listed and changed files published at <http://dnghu.org/en/indo-european-bible-translation/>.

I.1.1. PATÉR ṆSERÉ (LORD'S PRAYER)

English	Latine	Ελληνικά	Eurōpáiom
Our Father, who art in heaven,	Pater noster, qui es in caelis:	Πάτερ ἡμῶν ὁ ἐν τοῖς οὐρανοῖς·	Patér Ṇseré, kémeloisi jos essi,
Hallowed be thy Name.	sanctificetur Nomen Tuum;	ἁγιασθήτω τὸ ὄνομά σου·	Nōmṇ sqénetoru tewe.
Thy kingdom come.	adveniat Regnum Tuum;	ἐλθέτω ἡ βασιλεία σου·	Regnom cémietōd tewe.
Thy will be done,	fiat voluntas Tua,	γενηθήτω τὸ θέλημά σου,	dhidhḗtoru woliā Téwijā,
On earth as it is in heaven.	sicut in caelo, et in terra.	ὡς ἐν οὐρανῷ καὶ ἐπὶ γῆς·	ita kémelei jota pḷtéwijāi.
Give us this day our daily bread.	Panem nostrum cotidianum da nobis hodie;	τὸν ἄρτον ἡμῶν τὸν ἐπιούσιον δὸς ἡμῖν σήμερον·	Qāqodjūtenom bharsiom ṇseróm edjḗu dasdhi-nos
And forgive us our trespasses,	et dimitte nobis debita nostra,	καὶ ἄφες ἡμῖν τὰ ὀφειλήματα ἡμῶν,	joqe dháleglāms ṇserā́ms parke,
As we forgive those who trespass against us.	Sicut et nos dimittimus debitoribus nostris;	ὡς καὶ ἡμεῖς ἀφίεμεν τοῖς ὀφειλέταις ἡμῶν·	swāi skéletbhos pā́rkomos.
And lead us not into temptation,	et ne nos inducas in tentationem;	καὶ μὴ εἰσενέγκῃς ἡμᾶς εἰς πειρασμόν,	Enim mē noms péritloi enke prōd,
But deliver us from evil. Amen	sed libera nos a Malo. Amen	ἀλλὰ ῥῦσαι ἡμᾶς ἀπὸ τοῦ πονηροῦ. ἀμήν.	mō úpelēd nosēie nos. Estōd.

I.1.2. SLWĒIE MARIJA (HAIL MARY)

English	Latine	Ελληνικά	Eurōpáiom
Hail Mary, full of grace,	Ave María, gratia plena,	Θεοτόκε Παρθένε, χαῖρε, κεχαριτωμένη Μαρία,	Sḷwēie Marija, crātiă plēnā́ tū,
the Lord is with thee;	Dominus tecum.	ὁ Κύριος μετὰ σοῦ.	Arjos twoio esti;
blessed art thou among women,	Benedicta tu in mulieribus,	εὐλογημένη σὺ ἐν γυναιξί,	súwoqnā cénāisi essi,
and blessed is the fruit of thy womb, Jesus.	et benedictus fructus ventris tui, Iesus.	εὐλογημένος ὁ καρπὸς τῆς κοιλίας σου, ὅτι Σωτήρα ἔτεκες τῶν ψυχῶν ἡμῶν	súwoqnos-qe úderosio two bhreugs estōd, Jēsus.
Holy Mary, Mother of God,	Sancta Maria, Mater Dei,		Noibha Marija, Déiwosio Mātér,
pray for us sinners,	ora pro nobis peccatoribus,		nosbhos ōrāie ágeswn̥tbhos,
now and at the hour of our death. Amen.	nunc et in hora mortis nostrae. Amen.		nūqe mr̥tios-qe nos daitei. Estōd.

I.1.3. KRÉDDHĒMI (NICENE CREED)

English	Latine	Ελληνικά	Eurōpáiom
We believe in one God,	Credo in unum Deo,	Πιστεύομεν εἰς ἕνα Θεὸν	Oinom kréddhēmi Deiwom,
the Father Almighty,	Patrem omnipoténtem,	Πατέρα παντοκράτορα,	Paterm̥ solwomághmonm̥,
Maker of heaven and earth,	factórem cæli et terræ,	ποιητὴν οὐρανοῦ καὶ γῆς,	djḗwepl̥téwīdhōtm̥,
and of all things visible and invisible.	visibílium ómnium et invisibílium;	ὁρατῶν τε πάντων καὶ ἀοράτων.	dr̥kniH̆m sólwosom n̥dr̥kniH̆m-qe dhētṓr;
And in one Lord Jesus Christ,	Et in unum Dóminum Iesum Christum,	Καὶ εἰς ἕνα κύριον Ἰησοῦν Χριστόν,	Arjom-qe Jēsum Ghristóm oinom,

the only-begotten Son of God,	Fílium Dei unigénitum,	τὸν υἱὸν τοῦ θεοῦ τὸν μονογενῆ,	Déiwosio Sūnúm oinógnātom,
begotten of the Father before all worlds (æons),	et ex Patre natum ante ómnia sæcula:	τὸν ἐκ τοῦ πατρὸς γεννηθέντα πρὸ πάντων τῶν αἰώνων,	Patros-jos gnātós aiwēd prāi solwēd,
Light of Light, very God of very God,	Deum de Deo, lumen de lúmine, Deum verum de Deo vero,	φῶς ἐκ φωτός, θεὸν ἀληθινὸν ἐκ θεοῦ ἀληθινοῦ,	Deiwos Deiwēd, leuksmn̥ léuksmene, wērom Deiwom wērēd Deiwēd,
begotten, not made,	génitum non factum,	γεννηθέντα οὐ ποιηθέντα,	gentós, nē dhatos,
being of one substance with the Father;	consubstantiálem Patri,	ὁμοούσιον τῷ πατρί·	Patrei kómbhoutis,
by whom all things were made;	per quem ómnia facta sunt;	δι' οὗ τὰ πάντα ἐγένετο·	josōd solwa dhaktá senti;
who for us men, and for our salvation, came down from heaven,	qui propter nos hómines et propter nostram salútem descéndit de cælis;	τὸν δι' ἡμᾶς τοὺς ἀνθρώπους καὶ διὰ τὴν ἡμετέραν σωτηρίαν κατελθόντα	qos nosbhis rōdhí dhghómn̥bhis kémelobhes kidét,
and was incarnate by the Holy Ghost of the Virgin Mary, and was made man;	et incarnátus est de Spíritu Sancto ex María Vírgine et homo factus est;	ἐκ τῶν οὐρανῶν καὶ σαρκωθέντα ἐκ πνεύματος ἁγίου καὶ Μαρίας τῆς παρθένου καὶ ἐνανθρωπήσαντα,	enim memsom Noibhēd Anmēd Wéwr̥tei Marijād eksí ándhesād, enim dhghomōn geneto;
he was crucified for us under Pontius Pilate, and suffered, and was buried,	crucifíxus étiam pro nobis sub Póntio Piláto, passus et sepúltus est;	σταυρωθέντα τε ὑπὲρ ἡμῶν ἐπὶ Ποντίου Πιλάτου, καὶ παθόντα καὶ ταφέντα,	eti krukídhētos nosbhis prōd Pontiei upo Pilatei, pastos sepēlitós-qe esti,
and the third day he rose again, according to the Scriptures, and ascended into heaven, and sitteth on the right hand of the Father;	et resurréxit tértia die secúndum Scriptúras; et ascéndit in cælum, sedet ad déxteram Patris;	καὶ ἀναστάντα τῇ τρίτῃ ἡμέρα κατὰ τὰς γραφάς, καὶ ἀνελθόντα εἰς τοὺς οὐρανούς, καὶ καθεζόμενον ἐκ δεξιῶν τοῦ πατρός	joqe ati tritiei stete djwí, skréibhmona ad kémelom-qe skānduós, Patrí déksijāi sedēïeti;

from thence he shall come again, with glory, to judge the quick and the dead;	et íterum ventúrus est cum glória iudicáre vivos et mórtuos;	καὶ πάλιν ἐρχόμενον μετὰ δόξης κρῖναι ζῶντας καὶ νεκρούς·	joqe dwonim kléwosē cemiest cīwóms mr̥toms-qe kómdhēnqos;
whose kingdom shall have no end.	cuius regni non erit finis;	οὗ τῆς βασιλείας οὐκ ἔσται τέλος.	qosio regnom nē antjom bhéwseti.
And in the Holy Ghost, the Lord and Giver of life, who proceedeth from the Father,	Et in Spíritum Sanctum, Dóminum et vivificántem: qui ex Patre *Filióque* procédit;	Καὶ εἰς τὸ Πνεῦμα τὸ Ἅγιον, τὸ κύριον, (καὶ) τὸ ζωοποιόν, τὸ ἐκ τοῦ πατρὸς ἐκπορευόμενον,	joqe Noibhom Anmom, potim ētrodhōtm̥-qe, Patre *Sūnewe-qe* proilóm,
who with the Father and the Son together is worshiped and glorified, who spake by the prophets.	qui cum Patre et Fílio simul adorátur et conglorificátur; qui locútus est per Prophétas;	τὸ σὺν πατρὶ καὶ υἱῷ συμπροσκυνούμενον καὶ συνδοξαζόμενον, τὸ λαλῆσαν διὰ τῶν προφητῶν.	qei Patrē Súnuwē-qe semli áidetor enim magtā́ietor bhatos-jos próbhātm̥s terqe esti.
In one holy catholic and apostolic Church;	Et in unam sanctam cathólicam et apostólicam Ecclésiam.	εἰς μίαν, ἁγίαν, καθολικὴν καὶ ἀποστολικὴν ἐκκλησίαν·	joqe oinām, noibhām, km̥tísolwām apostóleiām ékklētijām.
we acknowledge one baptism for the remission of sins;	Confíteor unum baptísma in remissiónem peccatorum	ὁμολογοῦμεν ἓν βάπτισμα εἰς ἄφεσιν ἁμαρτιῶν·	Oinom bhatēiai agesupomoukom cadhmn̥;
we look for the resurrection of the dead, and the life of the world to come. Amen.	et exspecto resurrectionem mortuorum et vitam ventúri sæculi. Amen.	προσδοκοῦμεν ἀνάστασιν νεκρῶν, καὶ ζωὴν τοῦ μέλλοντος αἰῶνος. Ἀμήν.	saitlŏ̄m-qe cejtām cémionqŏ̄m. Estōd

I.1.4. NOUDÓS SŪNÚS (PARABLE OF THE PRODIGAL SON)

	English	Latine	Ελληνικά	Eurōpáiom
11	“A certain man had two sons.	Homo quidam habuit duos filios:	Ἄνθρωπός τις εἶχεν δύο υἱούς.	Dhghomōn enis sūnuwe eiket.
12	And the younger of them said to his father, ‘Father, give me the portion of goods that falls to me.’ So he divided to them his livelihood.	et dixit adolescentior ex illis patri: Pater, da mihi portionem substantiæ, quæ me contingit. Et divisit illis substantiam.	καὶ εἶπεν ὁ νεώτερος αὐτῶν τῷ πατρί, Πάτερ, δός μοι τὸ ἐπιβάλλον μέρος τῆς οὐσίας. ὁ δὲ διεῖλεν αὐτοῖς τὸν βίον.	Joqe jowísteros patrei weuqét : Pater, rijós dasdhi moi aitim qāi meghei áineti, joqe rēim ibhom widhét.
13	And not many days after, the younger son gathered all together, journeyed to a far country, and there wasted his possessions with prodigal living.	Et non post multos dies, congregatis omnibus, adolescentior filius peregre profectus est in regionem longinquam, et ibi dissipavit substantiam suam vivendo luxuriose.	καὶ μετ' οὐ πολλὰς ἡμέρας συναγαγὼν πάντα ὁ νεώτερος υἱὸς ἀπεδήμησεν εἰς χώραν μακράν, καὶ ἐκεῖ διεσκόρπισεν τὴν οὐσίαν αὐτοῦ ζῶν ἀσώτως.	Enim nē péluwāms dināms pos, solwa garlós, jowísteros sūnús reu porsótenom oigheto londhom, idhei-qe rēim nudét sewe ghlóidotos ceiwents.
14	But when he had spent all, there arose a severe famine in that land, and he began to be in want.	Et postquam omnia consummasset, facta est fames valida in regione illa, et ipse cœpit egere.	δαπανήσαντος δὲ αὐτοῦ πάντα ἐγένετο λιμὸς ἰσχυρὰ κατὰ τὴν χώραν ἐκείνην, καὶ αὐτὸς ἤρξατο ὑστερεῖσθαι.	Enim ítāpo solwa cósissēt kom, dhṛghtós molét ghrēdhus londhei ólnosmei, joqe egētum sepe bhwije.
15	Then he went and joined himself to a citizen of that country, and he sent him into his fields to feed swine.	Et abiit, et adhæsit uni civium regionis illius: et misit illum in villam suam ut pasceret porcos.	καὶ πορευθεὶς ἐκολλήθη ἑνὶ τῶν πολιτῶν τῆς χώρας ἐκείνης, καὶ ἔπεμψεν αὐτὸν εἰς τοὺς ἀγροὺς αὐτοῦ βόσκειν χοίρους:	Itaqe cālós, qismei jugeto kéiwijom ólnosio lóndhī, im-qe sontiet porkoms pāsksi.
16	And he would gladly have filled his stomach with the pods that the swine	Et cupiebat implere ventrem suum de siliquis, quas porci manducabant: et nemo	καὶ ἐπεθύμει χορτασθῆναι ἐκ τῶν κερατίων ὧν ἤσθιον οἱ χοῖροι, καὶ οὐδεὶς	Atqe úderom skaliqāĭ̈s plḗnātum gheríjeto porkŏ̄s edent-jams atqe neqis ismei dōt.

	ate, and no one gave him anything.	illi dabat.	ἐδίδου αὐτῷ.	
17	“But when he came to himself, he said, ‘How many of my father’s hired servants have bread enough and to spare, and I perish with hunger!	In se autem reversus, dixit: Quanti mercenarii in domo patris mei abundant panibus, ego autem hic fame pereo!	εἰς ἑαυτὸν δὲ ἐλθὼν ἔφη, Πόσοι μίσθιοι τοῦ πατρός μου περισσεύονται ἄρτων, ἐγὼ δὲ λιμῷ ὧδε ἀπόλλυμαι.	Swei poti wr̥tomnós, egt: qotioi patrós domei mísdhotes paskn̄̆s spréigonti, kei egō̆ au dhamī̆ mr̥ijai!
18	I will arise and go to my father, and will say to him, “Father, I have sinned against heaven and before you,	surgam, et ibo ad patrem meum, et dicam ei: Pater, peccavi in cælum, et coram te:	ἀναστὰς πορεύσομαι πρὸς τὸν πατέρα μου καὶ ἐρῶ αὐτῷ, Πάτερ, ἥμαρτον εἰς τὸν οὐρανὸν καὶ ἐνώπιόν σου,	arísomnos patérm̥ eisō mene ad, joqe ismei seksō : Pater, kémelom proti tewom-qe antí memlai,
19	and I am no longer worthy to be called your son. Make me like one of your hired servants.’”	jam non sum dignus vocari filius tuus: fac me sicut unum de mercenariis tuis.	οὐκέτι εἰμὶ ἄξιος κληθῆναι υἱός σου: ποίησόν με ὡς ἕνα τῶν μισθίων σου.	jāmi nē deknos egō̆, sūnús téwijos kluwētum: dhasdhi-me swāi qimqim mísdhotom tewe.
20	“And he arose and came to his father. But when he was still a great way off, his father saw him and had compassion, and ran and fell on his neck and kissed him.	Et surgens venit ad patrem suum. Cum autem adhuc longe esset, vidit illum pater ipsius, et misericordia motus est, et accurrens cecidit super collum ejus, et osculatus est eum.	καὶ ἀναστὰς ἦλθεν πρὸς τὸν πατέρα ἑαυτοῦ. ἔτι δὲ αὐτοῦ μακρὰν ἀπέχοντος εἶδεν αὐτὸν ὁ πατὴρ αὐτοῦ καὶ ἐσπλαγχνίσθη καὶ δραμὼν ἐπέπεσεν ἐπὶ τὸν τράχηλον αὐτοῦ καὶ κατεφίλησεν αὐτόν.	Ita aritós paterm̥ ludhét sewe. Eti jom qeli bhūlo, em patē̆r tósiope dr̥ket, joqe ana kr̥sents kómqēilio krūtós esti enim qolsom petlós em bhusāiét.
21	And the son said to him, ‘Father, I have sinned against heaven and in your sight, and am no longer worthy to be called your son.’	Dixitque ei filius: Pater, peccavi in cælum, et coram te: jam non sum dignus vocari filius tuus.	εἶπεν δὲ ὁ υἱὸς αὐτῷ, Πάτερ, ἥμαρτον εἰς τὸν οὐρανὸν καὶ ἐνώπιόν σου, οὐκέτι εἰμὶ ἄξιος κληθῆναι υἱός σου.	Wedét óisosmōi sūnús: Pater, kémelom proti tewom-qe anti memlai: jāmi nē deknos egō̆, sūnús téwijos nōmnādhiom

22	“But the father said to his servants, ‘Bring out the best robe and put it on him, and put a ring on his hand and sandals on his feet.	Dixit autem pater ad servos suos: Cito proferte stolam primam, et induite illum, et date annulum in manum ejus, et calceamenta in pedes ejus:	εἶπεν δὲ ὁ πατὴρ πρὸς τοὺς δούλους αὐτοῦ, Ταχὺ ἐξενέγκατε στολὴν τὴν πρώτην καὶ ἐνδύσατε αὐτόν, καὶ δότε δακτύλιον εἰς τὴν χεῖρα αὐτοῦ καὶ ὑποδήματα εἰς τοὺς πόδας,	nū mísdhatbhos bhato patḗr sewe; bhersi: prismām dhrághete togām joqe tom westíjete, anom tosio ghéseni kerpioms-qe esio daste pedsí:
23	And bring the fatted calf here and kill it, and let us eat and be merry;	et adducite vitulum saginatum, et occidite, et manducemus, et epulemur:	καὶ φέρετε τὸν μόσχον τὸν σιτευτόν, θύσατε καὶ φαγόντες εὐφρανθῶμεν,	kom piwonm̥-qe bhérete loigom joqe chénete, joqe edāmos, joqe wl̥dām terpāmos,
24	for this my son was dead and is alive again; he was lost and is found.’ And they began to be merry.	quia hic filius meus mortuus erat, et revixit: perierat, et inventus est. Et cœperunt epulari.	ὅτι οὗτος ὁ υἱός μου νεκρὸς ἦν καὶ ἀνέζησεν, ἦν ἀπολωλὼς καὶ εὑρέθη. καὶ ἤρξαντο εὐφραίνεσθαι.	jodqid kei sūnús mene dhedhuwós ēst atqe coje ati: skombnós est, atqe wr̥ētai. Enim wl̥dām bhwijónt.
25	“Now his older son was in the field. And as he came and drew near to the house, he heard music and dancing.	Erat autem filius ejus senior in agro: et cum veniret, et appropinquaret domui, audivit symphoniam et chorum:	ην δὲ ὁ υἱὸς αὐτοῦ ὁ πρεσβύτερος ἐν ἀγρῷ: καὶ ὡς ἐρχόμενος ἤγγισεν τῇ οἰκίᾳ, ἤκουσεν συμφωνίας καὶ χορῶν,	Agrei au senísteros ēst sūnús: joqe jom cēmsēt enim domom nedisēt, kómkantum leigm̥-qe kluwét.
26	So he called one of the servants and asked what these things meant.	et vocavit unum de servis, et interrogavit quid hæc essent.	καὶ προσκαλεσάμενος ἕνα τῶν παίδων ἐπυνθάνετο τί ἂν εἴη ταῦτα.	Joqe neqom móghuwom ghawlós pr̥ket qid ghai-ke bhowsēnt.
27	And he said to him, ‘Your brother has come, and because he has received him safe and sound, your father has killed the fatted calf.’	Isque dixit illi: Frater tuus venit, et occidit pater tuus vitulum saginatum, quia salvum illum recepit.	ὁ δὲ εἶπεν αὐτῷ ὅτι Ὁ ἀδελφός σου ἥκει, καὶ ἔθυσεν ὁ πατήρ σου τὸν μόσχον τὸν σιτευτόν, ὅτι ὑγιαίνοντα αὐτὸν ἀπέλαβεν.	Isqe sqet: bhrātēr tewe cēme enim piwonm̥ patḗr two chone loigom, jodqid tom cīwóm solwom ghōde.

28	“But he was angry and would not go in. Therefore his father came out and pleaded with him.	Indignatus est autem, et nolebat introire. Pater ergo illius egressus, cœpit rogare illum.	ὠργίσθη δὲ καὶ οὐκ ἤθελεν εἰσελθεῖν. ὁ δὲ πατὴρ αὐτοῦ ἐξελθὼν παρεκάλει αὐτόν.	kr̥ditós autim esti, joqe nē en eitum weluāt. Ar patḗr ejos eksodlós, bhwijét im chestum.
29	So he answered and said to his father, ‘Lo, these many years I have been serving you; I never transgressed your commandment at any time; and yet you never gave me a young goat, that I might make merry with my friends.	At ille respondens, dixit patri suo: Ecce tot annis servio tibi, et numquam mandatum tuum præterivi: et numquam dedisti mihi hædum ut cum amicis meis epularer.	ὁ δὲ ἀποκριθεὶς εἶπεν τῷ πατρὶ αὐτοῦ, Ἰδοὺ τοσαῦτα ἔτη δουλεύω σοι καὶ οὐδέποτε ἐντολήν σου παρῆλθον, καὶ ἐμοὶ οὐδέποτε ἔδωκας ἔριφον ἵνα μετὰ τῶν φίλων μου εὐφρανθῶ:	Atqe se protiweqents, patrei bhato sewe: edke totioms atnoms sístāmi twei upo, joqe neqom dikām tewe kleusō dus, atqe neqom meghei ghaidom desta wl̥dă̆i amikī̆s senutéuijă̆i.
30	But as soon as this son of yours came, who has devoured your livelihood with harlots, you killed the fatted calf for him.’	Sed postquam filius tuus hic, qui devoravit substantiam suam cum meretricibus, venit, occidisti illi vitulum saginatum.	ὅτε δὲ ὁ υἱός σου οὗτος ὁ καταφαγών σου τὸν βίον μετὰ πορνῶν ἦλθεν, ἔθυσας αὐτῷ τὸν σιτευτὸν μόσχον.	Mō ita tom sūnús tewe kei, rēim loutsāī̆s cr̥ālós cēme, ólnosmŏ̄i péiwonm̥ loigom chonta.
31	“And he said to him, ‘Son, you are always with me, and all that I have is yours.	At ipse dixit illi: Fili, tu semper mecum es, et omnia mea tua sunt:	ὁ δὲ εἶπεν αὐτῷ, Τέκνον, σὺ πάντοτε μετ' ἐμοῦ εἶ, καὶ πάντα τὰ ἐμὰ σά ἐστιν:	Atqe oise tosmŏ̄i weuqét: suneu, tū áiwesi moio essi, enim solwa menia téwija sonti.
32	It was right that we should make merry and be glad, for your brother was dead and is alive again, and was lost and is found.’”	epulari autem, et gaudere oportebat, quia frater tuus hic mortuus erat, et revixit; perierat, et inventus est.	εὐφρανθῆναι δὲ καὶ χαρῆναι ἔδει, ὅτι ὁ ἀδελφός σου οὗτος νεκρὸς ἦν καὶ ἔζησεν, καὶ ἀπολωλὼς καὶ εὑρέθη.	Wl̥dā́m autim terptum, joqe gaudhētum opos est, jodqid bhrātēr tewe kei dhedhuwós ēst atqe coje ati: skombnós ēst, atqe wr̥ētai.

I.1.5. NEWOS BHOIDĀ (NEW TESTAMENT) – JOHANES, 1, 1-14

	English	Latine	Ελληνικά	Eurōpáiom
1	In the beginning was the Word, and the Word was with God, and the Word was God.	in principio erat Verbum et Verbum erat apud Deum et Deus erat Verbum	Ἐν ἀρχῇ ἦν ὁ λόγος, καὶ ὁ λόγος ἦν πρὸς τὸν θεόν, καὶ θεὸς ἦν ὁ λόγος.	Pāriei Wṛdhom bhewet, joqe Wṛdhom Deiwei est ensí, joqe Deiwos Wṛdhom est.
2	He was in the beginning with God.	hoc erat in principio apud Deum	οὗτος ἦν ἐν ἀρχῇ πρὸς τὸν θεόν.	Ensí id pāriei Deiwei est.
3	All things were made through Him, and without Him nothing was made that was made.	omnia per ipsum facta sunt et sine ipso factum est nihil quod factum est	πάντα δι' αὐτοῦ ἐγένετο, καὶ χωρὶς αὐτοῦ ἐγένετο οὐδὲ ἕν. ὃ γέγονεν	Eisōd solwa gegner enim id aneu neqid gégnissēt josio gégone.
4	In Him was life, and the life was the light of men.	in ipso vita erat et vita erat lux hominum	ἐν αὐτῷ ζωὴ ἦν, καὶ ἡ ζωὴ ἦν τὸ φῶς τῶν ἀνθρώπων:	Ismi ceitā bhewet, joqe ceitā ēst dhghómonom leuks.
5	And the light shines in the darkness, and the darkness did not comprehend it	et lux in tenebris lucet et tenebrae eam non conprehenderunt	καὶ τὸ φῶς ἐν τῇ σκοτίᾳ φαίνει, καὶ ἡ σκοτία αὐτὸ οὐ κατέλαβεν.	Itaqe leuks skotei skéjeti, joqe oisām skotos nē twrét.
6	There was a man sent from God, whose name was John.	fuit homo missus a Deo cui nomen erat Iohannes	Ἐγένετο ἄνθρωπος ἀπεσταλμένος παρὰ θεοῦ, ὄνομα αὐτῷ Ἰωάννης:	Gnātós esti wīrós Deiwŏ sontonós Jōhanēs nŏ́mn̥tos.
7	This man came for a witness, to bear witness of the Light, that all through him might believe.	hic venit in testimonium ut testimonium perhiberet de lumine ut omnes crederent per illum	οὗτος ἦλθεν εἰς μαρτυρίαν, ἵνα μαρτυρήσῃ περὶ τοῦ φωτός, ἵνα πάντες πιστεύσωσιν δι' αὐτοῦ.	Tristimoniĭi ludhét se, leukbhi tristidhēnts, ei solwoi ijo kreddhēsēnt.
8	He was not that Light, but was sent to bear witness of that Light.	non erat ille lux sed ut testimonium perhiberet de lumine	οὐκ ἦν ἐκεῖνος τὸ φῶς, ἀλλ' ἵνα μαρτυρήσῃ περὶ τοῦ φωτός.	Nē olne leuks, immō, leukbhi tristidhēnts.

9	That was the true Light which gives light to every man coming into the world.	erat lux vera quae inluminat omnem hominem venientem in mundum	ην τὸ φῶς τὸ ἀληθινόν, ὃ φωτίζει πάντα ἄνθρωπον, ἐρχόμενον εἰς τὸν κόσμον.	Leuks wērom ēst, solwom bhā́nuti dhghomonm̥, dhoubnom kod ludhlā́.
10	He was in the world, and the world was made through Him, and the world did not know Him.	in mundo erat et mundus per ipsum factus est et mundus eum non cognovit	ἐν τῷ κόσμῳ ἦν, καὶ ὁ κόσμος δι' αὐτοῦ ἐγένετο, καὶ ὁ κόσμος αὐτὸν οὐκ ἔγνω.	Dhoubnei ēst, enim ijo dhoubnom gegner, atqe nē im dhoubnom gnōt.
11	He came to His own, and His own did not receive Him.	in propria venit et sui eum non receperunt	εἰς τὰ ἴδια ἦλθεν, καὶ οἱ ἴδιοι αὐτὸν οὐ παρέλαβον.	Somobhos ludhét, atqe im somói ghadont nei ad.
12	But as many as received Him, to them He gave the right to become children of God, to those who believe in His name:	quotquot autem receperunt eum dedit eis potestatem filios Dei fieri his qui credunt in nomine eius	ὅσοι δὲ ἔλαβον αὐτόν, ἔδωκεν αὐτοῖς ἐξουσίαν τέκνα θεοῦ γενέσθαι, τοῖς πιστεύουσιν εἰς τὸ ὄνομα αὐτοῦ,	Jotioi im ghadónt, maghtim tobhos génonī dōt Diwoputla, esio nōmn̥ kréddhēntbhos,
13	who were born, not of blood, nor of the will of the flesh, nor of the will of man, but of God.	qui non ex sanguinibus neque ex voluntate carnis neque ex voluntate viri sed ex Deo nati sunt	οἳ οὐκ ἐξ αἱμάτων οὐδὲ ἐκ θελήματος σαρκὸς οὐδὲ ἐκ θελήματος ἀνδρὸς ἀλλ' ἐκ θεοῦ ἐγεννήθησαν.	joi nē ēsenos, neqe memsī woliă̆s, neqe wīrī immō Déiwosio gnātŏ̄s sonti.
14	And the Word became flesh and dwelt among us, and we beheld His glory, the glory as of the only begotten of the Father, full of grace and truth.	et Verbum caro factum est et habitavit in nobis et vidimus gloriam eius gloriam quasi unigeniti a Patre plenum gratiae et veritatis	Καὶ ὁ λόγος σὰρξ ἐγένετο καὶ ἐσκήνωσεν ἐν ἡμῖν, καὶ ἐθεασάμεθα τὴν δόξαν αὐτοῦ, δόξαν ὡς μονογενοῦς παρὰ πατρός, πλήρης χάριτος καὶ ἀληθείας.	Joqe Wr̥dhom memsom wr̥stós esti, enim pl̥tomóm nossi dhēke ení, enim ejos qedos dr̥komes, qedos swāi oinógnāteiom Patrós wĕ̄rotiŏ̄ cratiă̆-qe plēnóm.

I.2 KOMTLOQIOM (CONVERSATION)

Common expressions in MIE include:

English	**Eurōpaiom**
hello	alā / gheuse
dear Peter:	qeime Perte:
welcome	crātós / sucm̥tós tū
good day	latom āsúm
good morning	wēsrom āsúm
good afternoon / evening	wesprom āsúm
good night	noqtim āsúm
how are you?	qotā walḗiesi?
I am fine	walēiō sū
what is your name? [*how are you heard?*]	qotā kluwḗiesi?
what is your name?	qid esti tebhei nōmn̥?
my name is Peter [*I am heard Peter*]	kluwēiō Pertos
my name is Peter	meghei Pertos nōmn̥
pleased to meet you	gaudhēiō tewe gnōtim
please [*I ask you*]	chedhō
thanks	méitimoms / moitmom
thanks (I give you)	prijēsna / prósēdiom (tebhei agō)
I thank you	prijēiō tewom
you are welcome, sir	esti sū, potei
excuse me	n̥gnōdhi
sorry/pardon me	parke
I am sorry	kesdō
don't worry	mē koisāie
good bye, darling	sl̥wēj', prijótm̥ā
good luck	kobom āsúm
yes	dā / jai / ne-(ghi)
indeed	nem-pe / ita tod
no	nē / nei
alright	tagteĭ̆
attention	probhoudhos
where is the door	qodhei dhweris?
here is what I asked	kei esti jod pr̥kskóm
what is this?	qid (esti) tod?
this is food	pitús tod (esti)
what time is it?	qid esti daitis?
it is true	wērom tod
very good / the best	bhodistom / bhodsm̥om
everything is alright	solwa sū́ (ágontor)
how old are you?	qótobhos átnobhos tū?
I am ten years old [ten born I am]	dekm̥ gnātós esmi
do you speak European?	bhāsoi (bhasoi) an Eurōpaiom?
I speak a little	páukolom bhāmoi
I don't understand you	nē tewom peumi
tell me what you think	seqe-moi qid kn̥sēiāsi
I don't know	nē woida
shut up	takēj' (takēie)
sit down	sisde (sg.) / sísdete

	(pl.)
come here	cemj' (cemie) kom-ke
I'm going right now	nū ghenghō kom
what do you do or study?	qóterom ghléndhesi an dŕ̥iesi?
are they married?	esti lachḗionti?
I love women	lubhēiō pelū dhḗmonāms / cenāms
write here your address	deikom skreibhe kei tewe
I live in the Main Street	Stoighei Magnéi ceiwō / trebhō
Lucrecia and I are friends	Lukretiā egṓ -qe ámeikes smes / ámeike swes
the cat mews in the garden	kattā ghortei mijaluti
the dog bites the cat	kattām mordḗieti kwōn
the woman walks with the cat	kattă̆ dhḗmonā alā́ietoi
I see the head of the cat	kattă̆s dr̥kō ghebhlām
Where is the train?	qodhei esti douknom?
the train is here	douknom (esti) kei
I want to eat fish	welmi piskim ghostum
do you want to sleep with me?	welsi mojo sweptum?
yes, I wish for it	jai, moksi gherijai
no, you stink / smell bad	nē, smérdesi / bhragrā́iesi dus
it is hot! [*how hot is it!*]	qām kalḗieti!
it is cold! [*how cold is it!*]	qām srīgēieti!
I go swimming to the lake everyday	laqom eimi dhochei snātum qāqei
can I smoke?	maghō (an) smeughtum?
may I smoke? [*is it possible (for me) to smoke?*]	maghniom meghei an smeughtum (esti)? esti moi smeughtum?
smoking prohibited	smeughtum wétānom
happy new year	ghoilom newom atnom

NOTE. About the sentence "*is it possible to smoke?*", constructed with the verb **esti**, compare Lat. *est* in Ovid (*Metamorphoses* Book III, 479) *quod tangere non est*, "*as it is not possible to touch*"; also Virgil *est cernere*, "*it can be seen*"; also, for Gk.*estì(n)*, "*it is possible*", compare Lucian (*The Parliament of the Gods*, 12) Ἔστιν, ὦ Ἑρμῆ, "*is it possible, Hermes*".

MIE language lessons with common vocabulary and sentences are freely available at <http://dnghu.org/indo-european-language/>.

I.3 LATE PIE LEXICON

This lexicon, from <http://dnghu.org/en/proto-indo-european-language/> (available online with detailed etymological information), uses a **phonetic** writing; therefore, syllables from roots in [ew] are written *ew*, but otherwise appear as *eu*.

Some MIE writing rules do not apply. A **schwa** (**ə**) has been left in syllables with zero-vocalism, when articulation needs make it better to have a vowel, so that people are able to articulate them; as, w*ə*ldhējō, not **woldhējō*, *ker*ə*srom* not **keresrom*. The same **articulatory schwa** is used in some syllables, as nouns in *-m*ə*n*, or negation in *ə*n- so that non-expert readers see there is a syllable. This way, it is nearer to voices with negation like Lat. *iniustus* or Gk. *aekon*, which add a syllable in metrics.

Apart from the articulatory schwa, another **etymological schwa** appears, representing an older PIH laryngeal, which in Late PIE is pronounced differently in each dialect. Laryngeal schwa is omitted if it is word-initial and appears alone, as in PIH *H_3bhruH*, or if the preceding syllable has full vocalism, as in *klamrós*, but it is written elsewhere, as in *p*ə*tēr*.

Another schwa case is **resonans cum laryngale occlusa**, i.e. a sequence XSHX, where S = sonant, X = consonant or sonant, H = laryngeal, and the group has zero vocalism. To distinguish the laryngeal tone and be able to separate pairs like full and leveled, the writing is the same as if it had full vocalism

The output is then the same as in Italic and Celtic, where long quantity is preserved (as in Old Indian), metrically equivalent to the two syllables that would be in Greek. So, for example, we have *mlākós* and *prāwos*. This rule hasn't been applied if the first sonant is preceded by *w* or *j*, as in *w*ə*lnā*.

The **Latin** meaning and **Syntax** further define the **English** meaning and proper use of the **PIE** word.

English	*Latin*	PIE	Syn
abandoned	*solus*	**ermos**	adI
abound	*abundō*	**spreigō**	den
about	*per*	**per(i), per(ti)**	ind
above	*supra*	**upsi**	ind
absent	*absens*	**apowésentis**	adII
abundant	*abundans*	**chonós**	adI
abuse	*abūtōr*	**dhebhō**	intr
acarian	*acarus*	**koris**	fem
accelerate	*accelerō*	**spreudō**	intr
acorn	*glans*	**célənd**i**s**	fem
acorn	*glans*	**medjom**	neu
acquire	*potior*	**potíjomoi**	inc
activate	*ciō*	**kjējō**	cau
active	*strēnuus*	**strēnwos**	adI
Adam's apple	*adamī malum*	**croghos**	mas
address	*directiō*	**deikos**	mas
adhere	*adhaerō*	**gleibhō**	tr
adjust	*adaptō*	**árarjō**	tr
administrate	*administrō*	**médnumi**	tr
adorn	*ornō*	**mondō**	tr
adorn	*ornō*	**peikō**	tr
advantage	*praestō*	**(sí)stāmi antí/prāi**	den
advise	*suadeō*	**plākējō**	cau
affirm	*aiō*	**əgjō**	intr
afflict	*affligō*	**ághnumi**	tr
after	*post*	**pos(ti)**	ind
afterwards	*postea*	**pósteri**	ind
again	*re(d)*	**ati**	ind
against	*contrā*	**komtrōd**	ind
against	*contrā*	**proti**	ind
aggravate	*exulceror*	**odáugjomoi**	intr
agitate	*agitō*	**dhúnumi**	tr
agitate	*permoueō*	**kreutō**	tr

agitated	*agitātus*	**kighrós**	mas
agnus castus	*uitēx*	**weitēks**	mas
agonise	*praepatior*	**cəlnāmi**	intr
agreement	*pacta*	**koimā**	fem
agreement	*contractus*	**meitrom**	
air	*aer*	**porā**	fem
alas	*uae*	**troughi**	ind
alas	*uae*	**wai**	ind
alder	*alnus*	**álesnos**	fem
alder	*betullla*	**wernā**	fem
alife	*uīuus*	**cejwos**	adI
alike	*quasi*	**jota sei**	ind
allergy	*allergia*	**dedrus**	mas
alleyway	*angustiae*	**smoughos**	mas
along	*praeter*	**práiteri**	ind
already	*iam*	**jāmi**	ind
also	*quoque*	**toqe**	ind
altar	*āra*	**āsā**	fem
always	*semper*	**áiw(es)i**	ind
ancestor	*abauus*	**strutjos**	mas
and	*ac*	**atqe**	
and	*et*	**enim**	ind
and	*que*	**qe**	ind
and	*et*	**joqe**	ind
and also	*itaque*	**itaqe**	ind
and not	*neque*	**neqe**	ind
angelica	*angelica*	**kwondhros**	fem
angle	*angulus*	**qedos**	mas
animal	*bestiola*	**bhugos**	mas
animal	*animāl*	**céjwotos**	mas
animal	*animal*	**smalos**	mas
ankle	*talus*	**spðros**	
announce	*nuntiō*	**kárkarjō**	
annoy	*molestō*	**peigō**	tr
annoyance	*molestia*	**oghlos**	mas
annoying	*mōlestus*	**mōlestos**	adI
annoying	*molestus*	**trudsmós**	adI
anorak	*peplum*	**kroknos**	mas
another	*alius*	**onjos**	adII
another	*alius*	**aljos**	lois
anounce	*nuntiō*	**məlgājō**	tr
ant	*formīca*	**mərmeikā**	fem
antique	*antiqūs*	**ántijos**	adI
anus	*ānus*	**ghodos**	mas
apart	*separātim*	**sðni**	ind
apparent	*appararens*	**windos**	adI
appear	*appareō*	**mlōskō**	intr
appease	*litō*	**litājō**	
appendix	*appendix*	**plighā**	fem
apple	*malum*	**ábelos**	mas
arch	*incuruō*	**weitō**	cau
arch	*flectō*	**wekō**	intr
ardour	*ardor*	**aisdhom**	neu
arid	*aridus*	**kserós**	adI
arm	*armus*	**armos**	mas
arm	*bracchium*	**bhāghus**	mas
arm	*braccium*	**dóusontos**	mas
armour	*armatūra*	**twakos**	neu
army	*exercitus*	**korjos**	neu
army	*exercitus*	**strðtos**	
around	*circum*	**ambhí**	ind
arrangement	*institūtiō*	**stāmðn**	neu
arrival	*aduentus*	**ghētis**	fem
arrive	*perueniō*	**ghēmi**	intr
arrow	*sagitta*	**kēlom**	neu
art	*ars*	**artis**	fem
article	*articulus*	**melmðn**	neu
articulation	*rotula*	**anglos**	mas
articulation	*artus*	**kðnksos**	mas
as	*quām*	**qām**	ind
ash	*cinis*	**kinēs**	fem
ashtree	*frāxinus*	**bhðrksnos**	fem

ashtree	*ornus*	**ósonos**	fem
ask	*poscō*	**pərkskō**	tr
asp	*pōpulus tremula*	**apsā**	fem
aspect	*speciēs*	**spekjēs**	fem
aspire	*appetō*	**wéenāmoi**	tr
ass	*cūlus*	**kūlos**	mas
asunder-legged	*uārus*	**wāros**	mas
at	*ad*	**ad**	ind
at hand	*praestō*	**práighestŏ**	ind
at least	*quīdem*	**ge**	ind
at that point	*tam*	**tām**	ind
ate	*ēdī*	**ghosóm**	tr
atribute	*addicō*	**bhagō**	cau
attack	*impetus*	**wərgos**	
attack	*oppugnō*	**wendhō**	intr
attack (to be in)	*urgeō*	**wərgējō**	den
attention	*audientia*	**kleutis**	fem
auger	*terebra*	**téredhrom**	neu
augur	*augurium*	**kailom**	neu
aument	*augeō*	**āugējō**	cau
aunt	*amita*	**ámetā**	fem
aunt	*mātertera*	**mātérterā**	fem
autumn	*autumnus*	**osēn**	mas
avanced	*prouectus*	**prokos**	adI
avoid	*uitō*	**leinō**	tr
awaken	*expergefaciō*	**bhoudhējō**	cau
axe	*ascia*	**áksijā**	fem
axe	*secūris*	**sekūris**	fem
axe	*secūris*	**tekslā**	fem
axle	*axis*	**aksis**	mas
babble	*locutiō sine sensu*	**batā**	fem
babble	*garriō*	**plabrā́jomoi**	intr
babble	*blaterō*	**lalājo**	intr
baby	*lactans*	**dhēljos**	mas
back	*retrō*	**awou**	ind
back	*dorsum*	**gurnos**	mas
back	*retrō*	**retrōd**	ind
backbone	*spīna*	**wərraghmən**	neu
backwards	*retrō*	**postrōd**	ind
bad	*malē*	**dus**	ind
bad	*malus*	**upelos**	adI
badger	*mēlēs*	**brokos**	mas
bag	*follis*	**bholghis**	mas
bag	*saccus*	**kŏ́rukos**	mas
bald	*glaber*	**kalwos**	adI
ball	*pila*	**ghroudos**	mas
ball	*globus*	**gugā**	fem
ball	*pila*	**orghis**	fem
ball	*pila*	**qeqlom**	∂m
band	*uitta*	**seimā**	fem
bandy-legged	*ualgus*	**walgos**	adI
barbaric	*barbarus*	**bálbalos**	and
barefoot	*planipēs*	**bhosos**	adII
bargain	*negotior*	**wesnējō**	tr
bark	*latrō*	**baubā́jomoi**	intr
barley	*hordeum*	**ghórdejom**	neu
barley	*hordeum*	**jewom**	neu
barrel	*dōlium*	**dōljom**	mas
basin	*uallis*	**wəlghis**	fem
basket	*cista*	**kistā**	fem
basket	*cista*	**qasjos**	mas
basket	*sporta*	**sportā**	fem
basket	*uidulus*	**woidlos**	mas
bast	*liber*	**lubhros**	mas
bath	*lābrum*	**lowtrom**	neu
be	*sum*	**esmi/somi/bhewmi**	dur
be	*sum*	**bhewmi**	dur
be	*sum*	**esmi**	dur
be afraid	*metuō*	**timējō**	tr
be allowed	*licēt*	**likējō**	tr
be angry	*irāscor*	**eisā́skomoi**	inc

be annoying	*molestus (esse)*	**pigējō**	den
be bitter	*acūtus sum*	**geigō**	den
be born	*nāscor*	**gnā́skomoi**	inc
be bright	*splendeō*	**splə́ndējō**	den
be cold	*algeō*	**alghējō**	den
be cold	*frigeō*	**srigējō**	den
be concealed	*lateō*	**lə́tējō**	den
be curved	*uieō*	**wijējō**	den
be dekayed	*moror*	**stə́ntējō**	
be experienced	*calleō*	**kaldējō**	den
be fit	*ualeō*	**wə́lējō**	den
be flat	*plānus sum*	**lə́pējō**	den
be followed	*secūtus ueniō*	**swemōr**	dur
be free	*uacūs sum*	**ghə́rējō**	den
be high	*excellō*	**kelsō**	intr
be hot	*caleō*	**kə́lējō**	den
be necessary	*opportet*	**opos esti**	intr
be pregnant	*grauidus sum*	**kuwējō**	den
be proper	*decet*	**dekējō**	intr
be rotten	*pūteō*	**pūtējō**	cau
be sad	*lugeō*	**lugējō**	den
be scratched	*carreō*	**kə́rsējō**	den
be situated	*sum*	**ēsmoi**	intr
be strong	*uegeō*	**wegō**	dur
be strong	*uigeō*	**wigējō**	den
be swollen	*tumeō*	**oidējō**	den
be swollen	*tumeō*	**tumējō**	den
be thirsty	*sitiō*	**tə́rsējō**	den
be used	*colō*	**eukō**	tr
be wet	*madeō*	**mə́dējō**	den
be withered	*marceō*	**mə́rkējō**	den
beacause	*quia*	**jod qid**	ind
beak	*rōstrum*	**rōstrom**	neu
beak	*rostrum*	**sroknā**	fem
beam	*tignum*	**tegnom**	neu
beam	*trabs*	**trabhis**	fem

bean	*faba*	**bhabhā**	fem
bear	*ursus*	**ə́rtkos**	mas
bear	*bherō*	**bhermi (bherō)**	tr
beard	*barba*	**bhardhā**	fem
bearing	*portātiō*	**bhə́rtis**	fem
beast	*fera*	**cherā**	fem
beast of burden	*iūmentum*	**jóugsmə́ntom**	mas
beastly	*ferīnus*	**cherīnós**	
beat	*uerberō*	**wə́leisō**	tr
beat up	*contundō*	**orgājō**	tr
beautiful	*pulcher*	**chaisos**	adI
beautiful	*pulcher*	**wēmos**	adI
beaver	*fīber*	**bhebhros**	mas
become accustomed	*suēscō*	**swēdhskō**	inc
become vigorous	*uigescō*	**kíikumi**	intr
bed	*lectus*	**spondhā**	fem
bee	*apēs*	**bheiklā**	fem
beech	*fāgus*	**bhāgos**	fem
beer	*ceruisia*	**álumə́n**	neu
beer	*ceruisia*	**kremom**	neu
beer	*zythum*	**sudhjom**	mas
before	*ante*	**antí**	ind
before	*prae*	**pə́ros**	ind
before	*prae*	**prāi**	ind
before dawn	*anteluciō*	**anksi**	ind
beget	*gignō*	**gignō**	cau
begird	*cingō (to)*	**jṓsnumi**	tr
beguile	*dēcipiō*	**dreughō**	cau
behind	*post*	**apóteri**	ind
belch	*ructō*	**reugō**	intr
believe	*crēdō*	**kréddōmi**	tr
belly	*uenter*	**tarsós**	mas
belong	*pertineō*	**ainō**	den
belt (for safety)	*cinctus*	**wérunos**	mas
bend	*curuō*	**greugō**	intr

bending	*plecāmentum*	**nðmtos**	mas
beneficial	*benignus*	**síslāwos**	adI
benefit	*fruor*	**lawō**	
benefit	*lucrum*	**lawtlom**	
bent	*tortus*	**kambos**	adI
bent	*pandus*	**pandos**	mas
berry	*mōrum*	**morom**	neu
beseech	*precor*	**prekō**	tr
besides	*praeterea*	**perom**	ind
betrothed	*sponsus*	**sponstós**	mas
better	*melius*	**bhodjós**	adI
between	*inter*	**énteri**	ind
beware	*caueō*	**kðwējō**	den
beyond	*praeter*	**ektós**	ind
biceps	*biceps*	**kiskā**	fem
big	*grossus*	**grotsos**	adI
big	*magnus*	**mðgnos**	adI
bile	*fel*	**cheldi**	neu
bilge out	*excupāre*	**semjō**	tr
bind	*nectō*	**nedskō**	tr
bind	*ligō*	**bhendhō**	tr
bind	*nectō*	**kikājō**	tr
bind	*ligō*	**ligājō**	tr
bind	*alligō*	**reigō**	tr
bind	*ligō*	**séinumi**	tr
biped	*bīpēs*	**dwipods**	adII
birch	*betulla*	**bherāgs**	fem
bird	*auis*	**awis**	fem
bite	*admordeō*	**denkō**	tr
bite	*mordeō*	**mordējō**	tr
black	*āter*	**ātros**	adI
black	*āter*	**dhoubhús**	adI
black	*āter*	**kðrsnos**	
blackbird	*merula*	**meslā**	fem
blade	*aciēs*	**akjēs**	fem
blame	*culpō*	**onējō**	tr

blaze	*flagrō*	**sweidō**	
bleach	*aqua lixiuiae*	**kormnos**	mas
bleat	*bēbō*	**bebājō**	intr
bleat	*bēbō*	**blēkājō**	intr
blind	*caecus*	**andhos**	
blind	*caecus*	**kaikos**	adI
blister	*callus*	**kaldos**	mas
blister	*uensīca*	**wenseikā**	fem
block	*inctercludō*	**mersō**	tr
blood	*sanguis*	**ēsðr**	neu
blood	*cruor*	**kruwós**	mas
bloom	*floreō*	**bhlosējō**	den
blow	*exhalō*	**(í)wēmi**	tr
blow	*spirō*	**bhesmi**	intr
blow	*flō*	**bhlāmi**	tr
blow out	*ēmungō*	**munkō**	tr
blue	*caeruleus*	**ghlastos**	adI
boar	*aper*	**apros**	mas
board	*tabula*	**ploutos**	mas
boast	*glorior*	**bhledō**	intr
boast	*glorior*	**ghelbō**	intr
bodkin	*cuspis*	**ēlā**	
body	*corpus*	**kðrpos**	neu
boil	*feruō*	**bherwō**	inc
boil	*ferueō*	**seutō**	den
bold	*audax*	**dhðrsus**	adI
boldness	*audacia*	**dhðrstis**	fem
bone	*ossum*	**ostis**	mas
border	*limēs*	**krēqā**	fem
bore	*forō*	**bhorājō**	tr
both	*ambō*	**ambhou**	lois
boundary	*margō*	**margōn**	mas
bow	*arcus*	**arqos**	mas
bowels	*intestīnum*	**gudom**	
bowl	*testa*	**tekstā**	
box	*capsa*	**kðpsā**	fem

boy	*ephebus*	**kelots**	mas
boy	*ephebus*	**maqos**	mas
boy	*puer*	**póweros**	mas
brain	*cerebrum*	**kerðsrom**	neu
bramble	*dūmus*	**dristos**	mas
bran	*furfur*	**tolkos**	mas
branch	*ramulus*	**kankus**	mas
branch	*ramus*	**osdos**	mas
branches	*foliamen*	**cespis**	fem
brass	*aes*	**ajos**	neu
brassy	*aereus*	**ájesnos**	adII
brave	*audāx*	**tregsnos**	mas
breach	*fissūra*	**bhernā**	
bread	*pānis*	**bharsjom**	neu
break	*frangō*	**bhrðngō**	tr
break	*defringō*	**bhrúsnāmi**	tr
break	*rumpō*	**rumpō**	tr
breast	*pectus*	**bhrusos**	mas
breath	*animus*	**ánðmos**	mas
breath	*halitus*	**spoisnā**	fem
breathe	*respirō*	**etō**	intr
breathe	*anhelō*	**pneusō**	intr
breeze	*aura*	**áwelā**	fem
brew	*concoquō*	**bhrewō**	tr
briar	*sentis*	**ksentis**	fem
bridge	*pons*	**bhrēwā**	fem
bright	*lucidus*	**bhānús**	adI
bright	*lucens*	**leukós**	adI
brilliant	*splendidus*	**argós**	adI
bring out	*prōmō*	**dhraghō**	tr
broad	*latus*	**plātús**	adI
brooch	*fibula*	**bharkos**	mas
brooch	*fibula*	**dhéicodhlā**	
brood	*prōlēs*	**aglā**	fem
brook	*amnis*	**apnis**	fem
brook	*rīuus*	**reiwos**	mas

broom	*genista*	**aksteinos**	fem
broom	*everriculum*	**swoplom**	neu
broth	*ius*	**jeus**	neu
brother	*frāter*	**bhrātēr**	mas
brother-in-law	*leuir*	**daiwēr**	mas
brotherly	*frāternus*	**bhrā́trijos**	adII
brother's son	*sobrīnus*	**bhrātreinos**	mas
brown	*castaneus*	**bhrounos**	adI
bud	*geniculum*	**gnoubhos**	mas
bug	*cīmex*	**keimēx**	mas
building	*aedes*	**aidhis**	fem
building	*aedēs*	**demos**	neu
building place	*locus operum*	**dðmpedom**	neu
bull	*bouuculus*	**porsis**	mas
bull	*taurus*	**tauros**	mas
bulrush	*iuncus*	**bhrughnos**	fem
bulrush	*iuncus*	**joinkos**	mas
bumblebee	*crābrō*	**krāsrōn**	mas
bundle	*fascis*	**bhaskis**	mas
bundle	*fascis*	**dhrighsós**	mas
burglar	*fur*	**tājots**	mas
burn	*ardeō*	**aidhō**	intr
burn	*urō*	**smelō**	dur
burn	*areō*	**asējō**	den
burn	*ardeō*	**dhechō**	dur
burn	*ūrō*	**eusō**	intr
burn	*combūrō*	**konkējō**	cau
burn	*cremō*	**kremājō**	cau
burnt	*ustus*	**ustós**	adI
burst in	*irrumpō*	**skekō**	intr
bury	*inhumō*	**ghrebhō**	tr
bury	*sepeliō*	**sepēlijō**	tr
bush	*frutex*	**bhrutēks**	mas
bush	*dūmus*	**dousmos**	mas
bush	*arbustus*	**qðrsnos**	mas
but	*sed*	**mō**	ind

butter	*aruīna*	**arwā**	fem
butter	*butyrum*	**ghertom**	neu
butterfly	*pāpiliō*	**pāpeljos**	mas
buttock	*clūnis*	**klounis**	fem
buttocks	*pūga*	**pougā**	fem
buy	*emō*	**qrínāmi**	
buy	*emō*	**selō**	tr
buzz	*susurrō*	**susājō**	intr
cabbage	*caulis*	**kaulis**	fem
cable	*mitra*	**sneurom**	neu
cable	*cable*	**winis**	fem
cackle	*gracillō*	**grakijō**	intr
cackle	*cacillō*	**kaklājō**	intr
calculate	*calculō*	**deljō**	tr
calf	*uitulus*	**loigos**	mas
calf	*uitulus*	**wetlos**	mas
call	*uocō*	**ghawō**	tr
calm	*calmōsus*	**sēknis**	adI
camp	*castra*	**kastra**	neu
can	*possum*	**maghō**	tr
cancer	*cancer*	**ghəndhus**	mas
cannabis	*cannabis*	**worgjom**	neu
canopy	*umbraculum*	**skostrom**	neu
captive	*captus*	**kəptos**	
car	*uehiculum*	**woghnos**	mas
carbon	*carbō*	**kərdhōn**	mas
caress	*mulceō*	**ghénumi**	tr
carrot	*carota*	**mərkā**	
carry	*portō*	**portājō**	tr
carry	*uehō*	**weghō**	tr
cart	*currus*	**kərsus**	mas
carve	*scalpō*	**skalpō**	tr
carve	*caelō*	**skreidō**	tr
carve	*caelō*	**smeidhō**	tr
castle	*castellum*	**kasterlom**	neu
castrate	*castrō*	**skerdō**	

cat	*fēlēs*	**kattā**	fem
catch	*capiō*	**kəpjō**	tr
cattle	*armentum*	**ármənтom**	neu
cattle	*pecu*	**peku**	neu
cauldron	*catīnus*	**qorjom**	neu
cause	*causō*	**winsō**	cau
caution	*uas*	**wadhis**	mas
cave	*tugurium*	**antrom**	neu
cave	*specus*	**speqos**	mas
cavern	*cauerna*	**kowər**	neu
cavity	*cauitās*	**celom**	
cedar	*cedrus*	**bhrosdhos**	fem
ceiling	*tectum*	**tegtom**	neu
cellar	*pitheūs*	**gupā**	fem
cereal	*cereāle*	**dhōnā**	fem
cereal	*cereāle*	**jéwornjom**	fem
cerebellum	*cerebēlum*	**mosgom**	neu
certain	*certō*	**smā**	ind
certain	*quīdam*	**enis**	adII
certainly	*certō*	**dā**	ind
certainly	*certō*	**ghi**	ind
certainly	*sīc*	**ka**	ind
certainly	*profectō*	**toi**	ind
chain	*catēna*	**katēsna**	fem
chain	*catēna*	**seinus**	mas
chalk	*crēta*	**krētā**	fem
chamber	*cella*	**kēlā**	fem
chance	*uicis*	**wikis**	fem
change	*mūtō*	**mejnō**	inc
character	*ingenium*	**mōs**	mas
charge	*naulus*	**merkēds**	fem
charioteer	*auriga*	**ərots**	mas
chatter	*blaterō*	**blatsājō**	intr
cheap	*uīlis*	**wésolis**	adI
cheat	*dēlūdō*	**meugō**	intr
cheer	*ouō*	**owājō**	tr

cheese	*caseus*	**qatsos**	mas
cheese	*caseus*	**tūrós**	mas
cherry tree	*cornus*	**kornos**	
chest	*pectus*	**pegtos**	neu
chew	*mandō*	**gjewō**	tr
chew	*mandō*	**mandō**	tr
child	*pūpus*	**pūpos**	mas
child	*infans*	**putlom**	neu
chin	*mentum*	**mǝntom**	neu
chin	*mentum*	**smekslā**	fem
chirp	*frigō*	**bhrigijō**	intr
chirp	*titiō*	**titijō**	intr
choke	*suffocō*	**bhleusō**	tr
choose	*ēligō*	**opjō**	tr
circle	*circus*	**kirkos**	mas
circuit	*circuitus*	**ámbhinom**	neu
circulate	*uersor*	**qelō**	dur
citizen	*cīuis*	**keiwis**	and
city	*urbs*	**polis**	fem
ciurve	*incuruō*	**qelpō**	tr
civil	*cīuīlis*	**kéiwijos**	adII
clack	*glociō*	**glokijō**	intr
claim	*uindicō*	**qéinumoi**	tr
clang	*clangō*	**klagjō**	intr
classical	*classicus*	**ántitjos**	
clean	*mundus*	**mūdnós**	
clean	*purgō*	**pewō**	tr
cleanse	*putō*	**sǝrpijō**	
clear	*clārus*	**aiskrós**	kour
clear	*candidus*	**bhlaidos**	adI
cleave	*findō*	**bhindō**	cau
close	*claudō*	**klawdō**	tr
close	*claudō*	**wǝrijō**	tr
closed	*clausus*	**klawstós**	adI
cloth	*uestis*	**westis**	fem
cloud	*nūbes*	**nebhis**	fem

clown	*scurrā*	**skoirsās**	adII
club	*baculum*	**baktlom**	
club	*uirga*	**lorgos**	mas
club	*fustis*	**seikā**	fem
club	*uirga*	**wísogā**	fem
coal	*carbō*	**ángelos**	mas
coast	*litus*	**molā**	fem
coat	*sagum*	**pǝltom**	
cockoo	*cucūlus*	**kukūlós**	mas
cockoo	*cucu facere*	**kukulājō**	intr
cockroach	*blatta*	**blaktā**	fem
cold	*frigidus*	**ougros**	adI
cold	*frīgus*	**srigos**	neu
collapse	*ruō*	**rewō**	inc / tr
collar	*monīle*	**monīli**	neu
collect	*carpō*	**karpō**	tr
collect	*legō*	**legō**	tr
collection	*collectiō*	**kómāglom**	neu
collection	*collectioo*	**qejtis**	fem
colony	*colonia*	**ápowoiks**	mas
colorant	*colorans*	**keimos**	neu
colour	*colōr*	**kiwos**	mas
colour	*color*	**wornos**	mas
coloured	*uarius*	**pǝrqos**	adI
colt	*equulus*	**kánkestos**	mas
comb	*pectō*	**kesō**	tr
comb	*pectō*	**pekō**	tr
comb	*pecten*	**pektēn**	mas
comb	*pectō*	**pektō**	tr
come	*ueniō*	**cemjō**	intr
come back	*redeō*	**ghighējō**	intr
come out	*pāreō*	**pārējō**	
command	*iubeō*	**judhējō**	tr
commit	*mandō*	**mǝndōmi**	tr
common	*commūnis*	**kómmoinis**	adII
communicate	*communicō*	**mesgō**	tr

community	*commūnitas*	**kommoinitā́ts**	fem
compasses	*circinus*	**kirknos**	mas
compete	*certō*	**sperdhō**	tr
complain	*queror*	**kwésomoi**	intr
complete	*complētus*	**kómplēnos**	adII
complexed (to be)	*tortus sum*	**wə́nghējō**	den
compose	*compōnō*	**qejō**	tr
comprehend	*teneō*	**tə́nējō**	den tr
conceive	*concipere*	**désāmi**	tr
concubine	*paelex*	**pareikā**	fem
condense	*spissō*	**stejō**	inc
condition	*habitus*	**dhēmə́n**	neu
conducted	*gessī*	**elóm**	tr
conflagration	*incendium*	**dáwetus**	mas
connect	*serō*	**serō**	tr
conscience	*conscientia*	**kómwoistis**	fem
consider	*opīnor*	**mə́njō**	den
consideration	*considerātiō*	**qeistis**	fem
consort	*coniux*	**komjugs**	epi
conspiracy	*coniurātiō*	**jālos**	mas
conspirator	*conspirātor*	**jōrós**	mas
conspire	*coniurō*	**jā́numi**	tr
contain	*arceō*	**ə́rkējō**	den tr
contend	*litigō*	**bhogājō**	intr
contend	*certō*	**wikjō**	dur
contrive	*machinor*	**smudhnō**	intr
convex	*conuexus*	**weksós**	adI
cook	*coquō*	**peqō**	tr
coot	*fulica*	**bhelēks**	fem
copy	*imitor*	**áimnumi**	
core	*nucleus*	**pūrós**	mas
corn	*grānum*	**niktis**	fem
corner	*angulus*	**bhə́rstís**	fem
cornice	*corona*	**ghrendhā**	fem
corruption	*tābēs*	**tādhis**	fem
couch	*solium*	**stōlos**	mas

cough	*tussis*	**qostā**	fem
cough	*tussiō*	**tustijō**	intr
coughing	*tussis*	**tustis**	fem
courage	*audacia*	**nantis**	fem
course	*cursus*	**drewā**	fem
course	*cursus*	**kə́rstus**	mas
court	*curia*	**kómwoirjom**	neu
courtyard	*forum*	**dhworom**	neu
cousin	*cognātus*	**jentēr**	mas
cover	*uelō*	**skemō**	tr
cover	*obruō*	**skeumō**	tr
cover	*operiō*	**skeutō**	tr
cover	*tegō*	**tegō**	tr
cow	*bōs*	**cows**	and
cow	*bōs*	**lāpos**	mas
cow	*uacca*	**wakkā**	fem
crab	*cancer*	**karkros**	
crackle	*crepō*	**krépāmi**	intr
cradle	*cūnae*	**gretlom**	
crane	*grus*	**gə́rús**	fem
crawl	*rēpō*	**rēpō**	intr
crawl	*serpō*	**serpō**	intr
crazy	*insānus*	**dhwolnos**	adI
create	*generō*	**genesājō**	cau
create	*creō*	**krēmi**	tr
creature	*crātūra*	**teknom**	neu
creep	*rēpō*	**snə́ghjō**	intr
crest	*crista*	**kristā**	fem
crime	*crīmen*	**kreimə́n**	neu
crime	*dēlictus*	**lōbā**	fem
crimpy hair	*turbidō*	**gouros**	mas
crook	*amnis*	**bhogjos**	mas
crop	*messis*	**sasjom**	neu
cross	*crux*	**kreuks**	fem
cross	*transeō*	**térnumi**	tr
crossbeam	*patibulum*	**ghlaghos**	mas

crow	*cornīx*	**kornēiks**	fem
crowd	*multitūdō*	**plēdhwis**	fem
crowd	*multitūdō*	**slougos**	mas
crown	*corōna*	**grendjom**	
crumb	*grūmus*	**groumos**	mas
crumb	*mīca*	**smeikā**	neu
crumble	*friō*	**bhrijājō**	tr
crush	*conterō*	**mərtājō**	tr
crush	*pinsō*	**pinsō**	tr
cry	*drensō*	**dhrensājō**	intr
cry	*uāgiō*	**wāghijō**	intr
cry	*gemō*	**kreugō**	intr
cry	*clamor*	**krigā**	
cry	*rūdō*	**reudō**	intr
crying	*plōrātus*	**roudos**	mas
cudge	*dolō*	**dolājō**	tr
cuirass	*lorīca*	**bhrusnjā**	fem
cup	*calix*	**kalēiks**	mas
cup	*cūpa*	**koupā**	fem
curb	*arcuō*	**bhegō**	cau
curd cheese	*lac passum*	**grutis**	fem
curly	*crispus*	**kripsos**	adI
curtail	*dēminuō*	**sneitō**	tr
curve	*curua*	**witjom**	neu
curve	*curuō*	**keubō**	cau
curved	*camur*	**kəmros**	
curved	*curuus*	**kərwos**	adI
cushion	*culcita*	**qolkā**	fem
custom	*mos*	**swēdhus**	fem
cut	*caedō*	**kaidō**	cau
cut	*exsecō*	**kretō**	tr
cut	*secō*	**sékāmi**	tr
cut	*secō*	**tmāmi**	tr
cut off	*amputō*	**snadhō**	tr
cut off	*separō*	**spəltājō**	tr
cut open	*incīdō*	**bhərijō**	cau

cut out	*abscindō*	**drepō**	
cut out	*abscindō*	**treukō**	tr
dace	*phoxinus*	**menis**	mas
dad	*pappa*	**appās**	mas
dad	*atta*	**attās**	mas
dad	*pappa*	**tātā**	neu
damage	*clādēs*	**klādis**	mas
damage	*dētrimentum*	**pēmən**	neu
damage	*perniciēs*	**wolsom**	neu
damage	*damnum*	**dapnom**	neu
damp	*imbuō*	**bewō**	tr
dare	*audeō*	**dhərsō**	tr
dark	*fuscus*	**dhóncelos**	adI
dark	*obscūrus*	**dhoncos**	adI
dark	*fuscus*	**dhuskos**	adI
dark	*obscūrus*	**keiros**	adI
dark	*mulleus*	**məlnejós**	adI
dark	*obscūrus*	**morcos**	
dark	*obscūrus*	**skeuros**	adI
darkness	*tenebrae*	**recŏs**	mas
darkness	*tenebrae*	**temesrăs**	fem
dart	*acumen*	**golbhōn**	mas
daughter	*filia*	**dhugtēr**	fem
daughter-in-law	*norus*	**snusos**	fem
dawn	*aurōra*	**ausōsā**	fem
dawn	*illūcescō*	**áussketi**	intr
day	*diēs*	**dhochos**	mas
day	*diēs*	**djēws**	mas
day	*diēs*	**djnom**	neu
day	*dies*	**latom**	mas
dead	*mortuus*	**mərtos**	adII
dead	*mortuus*	**mərwos**	adII
deaf	*surdus*	**bodhrós**	adI
deaf	*surdus*	**dhoubhos**	adI
dear	*cārus*	**prijós**	adI
death	*nex*	**chentis**	fem

death	*fūnus*	**dheunos**	neu
death	*mors*	**mərtis**	fem
death	*nex*	**neks**	mas
debt	*dēbitum*	**dhəleglā**	fem
deceive	*fallō*	**chəlnō**	tr
deceive	*defraudō*	**dhwerō**	tr
deceive	*mentior*	**melsō**	tr
decide	*dēcernō*	**skidjō**	tr
decline	*decadō*	**sterbhō**	intr
decree	*consultus*	**dhedhmós**	mas
deer	*ceruus*	**kerwos**	mas
defame	*difāmō*	**kəlwijō**	tr
defecate	*iunificō*	**ghedō**	tr
defecate	*cacō*	**kakkājō**	intr
defect	*mendum*	**smeros**	neu
defect	*dēfectus*	**wolnos**	neu
defective	*mancus*	**mənkos**	adI
defend	*dēfendō*	**mághnumi**	tr
deflect	*deflectō*	**skélnumi**	
delay	*mora*	**morā**	fem
delight	*fruor*	**bhréucomoi**	tr
demand	*exigō*	**kupjō**	tr
demon	*diabolus*	**dhwosos**	mas
dense	*crēber*	**tənkros**	adI
dense	*crēber*	**tegús**	adI
densifiy	*stīpō*	**stoipējō**	cau
depart	*proficiscor*	**óighomoi**	intr
departure	*profectiō*	**proitis**	fem
deposit	*dēpositus*	**loghos**	mas
depressed	*dēpressus*	**neiwós**	adI
desert	*desertum*	**teusqa**	neu
desert	*desertum*	**jēlom**	neu
deserve	*mereō*	**mərējō**	den
designate	*dēsignō*	**mātējō**	tr
desire	*desiderium*	**aisskā**	fem
desire	*desiderō*	**gheríjomoi**	tr
desire	*desiderō*	**awējō**	tr
desire	*desiderō*	**chelō**	tr
desire	*cupiō*	**smegō**	tr
desire	*desiderō*	**wekmi**	tr
desire	*concupiscō*	**wenō**	dur
desire eagerly	*aueō*	**jəntō**	tr
destroy	*conterō*	**dheukō**	cau
destroy	*deleō*	**nokējō**	cau
destroy	*aboleō*	**olējō**	
detergent	*dētersīuum*	**mūdlom**	neu
devotion	*dēuotiō*	**krōbhtus**	mas
devour	*uorō*	**sleugō**	tr
devour	*uorō*	**cərājō**	tr
devour	*uorō*	**cerbhō**	
dew	*ros*	**dolghos**	
diarrhea	*diarhea*	**dhorjā**	fem
dick	*crassus*	**bhənghus**	adI
die	*morior*	**məríjomoi**	intr
died	*mortus est*	**walóm**	intr
difference	*differentia*	**kritis**	fem
different	*differens*	**íteros**	
dig	*fodiō*	**bhodhjō**	tr
dig	*fodiō*	**kánāmi**	tr
dig out	*effodiō*	**teukō**	
dimension	*dīmensiō*	**mētis**	fem
dinner	*cēna*	**kersnā**	fem
dip	*bronca*	**wəronka**	fem
direct	*directus*	**dhənghus**	adI
direct	*regō*	**regō**	tr
dirt	*immunditia*	**kóqros**	mas
dirt	*excrēmentum*	**kwoinom**	mas
dirty	*immundus*	**coudhros**	adI
dirty	*immundus*	**salús**	adI
dirty	*mancillō*	**keqō**	tr
dis-	*re(d)*	**rēd/re**	ind
disabled	*murcus*	**mərkos**	adI

disgrace	*labēs*	**ghálerom**	neu
disguise	*uestiō*	**mengō**	tr
dishonour	*dedecus*	**stupróm**	neu
disk	*orbis*	**orbhis**	mas
dismantle	*dismontō*	**dhruslijō**	tr
dispersed	*rārus*	**rārós**	adI
dispossession	*spolium*	**spoljom**	neu
distaff	*colus*	**qolus**	fem
distribute	*distribuō*	**nemō**	tr
dive	*immergō*	**cadhō**	intr
divide	*diuidō*	**kəljō**	tr
divide	*dīuidō*	**weidhō**	tr
divide up	*distribuō*	**daimoi**	tr
do	*faciō*	**dhídhēmi-dhəkjō**	tr
do harm	*damnō*	**ghudjō**	
do harm	*infensō*	**kepō**	tr
do military service	*militō*	**dhreughō**	den
do not?	*nonne*	**nom nē**	ind
docile	*infirmus*	**glegos**	adI
doctor	*medicus*	**médodiks**	epic
dog	*canis*	**kolignos**	mas
dog	*canis*	**kwōn**	mas
door	*foris*	**dhweris**	fem
door	*forēs*	**wēr**	neu
double	*duplus*	**dwoplos**	adII
doubt	*dubitō*	**okējō**	den
dough	*pasta*	**reughmən**	neu
dough	*massa*	**taismos**	mas
dove	*columba*	**dhombhos**	mas
dove	*columba*	**kólumbhos**	mas
down	*sub*	**nī**	ind
dowry	*dos*	**dōtis**	fem
drag	*dūcō*	**deukō**	tr
drag	*trahō*	**traghō**	tr
drag	*uerrō*	**wersō**	
drag away	*abstrahō*	**tenghō**	tr

drapery	*drappus*	**drappos**	mas
draw	*stringō*	**streigō**	tr
draw tight	*stringō*	**stringō**	tr
dream	*somnus*	**ónerjos**	mas
dream	*somnium*	**swepər**	neu
dream	*somnium*	**swopnjom**	neu
dream	*somniō*	**swopnjājō**	intr
dregs	*colluuiēs*	**suljā**	fem
dress	*uestiō*	**westijō**	tr
drink	*pōtiō*	**pōtis**	fem
drink	*bibō*	**pibō**	tr
drinking	*pōtus*	**pōnom**	neu
drip	*egguttō*	**seilō**	intr
drive	*condūcō*	**enkō prō**	tr
drizzle	*irrorātiō*	**aghlóws**	fem
drone	*fūcus*	**bhouqos**	mas
drop	*gutta*	**bəndus**	mas
drop	*stilla*	**druptis**	fem
drop	*gutta*	**leibs**	mas
drop	*gutta*	**spakos**	mas
drum	*bombus*	**bámbalos**	
drunken	*ebrius*	**chərnos**	adI
drunken	*ebrius*	**tēmos**	mas
dry	*siccus*	**kserós**	adI
dry	*siccus*	**sisqos**	adI
dry	*siccus*	**susdos**	mas
dry	*siccus*	**tərstos**	adI
dry	*siccus*	**tərsus**	adI
dry	*torreō*	**torsējō**	cau
dry skin	*pellis sicca*	**sterbhnjom**	neu
duck	*anas*	**anəts**	mas / fem
dust	*puluis*	**pelwos**	neu
duty (religious)	*fas*	**dhas**	neu
dwell	*habitō*	**trebhō**	den
dwelling	*domicilium*	**westus**	mas

eagle	*aquila*	**éroros**	mas
eagle owl	*bubō*	**bughōn**	mas
ear	*auris*	**ousis**	fem
early	*mane*	**ájeri**	ind
earth	*humus*	**dhghəmós**	mas
earth	*terra*	**pəltéwijā**	fem
earth	*terra*	**tersā**	fem
eastern	*orientālis*	**áusteros**	
easy	*facilis*	**reidos**	adI
eat	*edō*	**áknāmi**	tr
eat	*edō*	**edmi**	tr
eat	*uescor*	**wéskomoi**	neu
edge	*ōra*	**ōrā**	fem
edge	*excellō*	**bhrenō**	intr
effort	*mōlimen*	**molos**	neu
egg	*ōuum*	**ṓw(ij)om**	neu
eight	*octo*	**oktōu**	
eighth	*octāūs*	**oktowos**	adII
eject	*iaciō*	**jəkjō**	tr
elbow	*ulnā*	**olnā**	fem
elder	*ebulus*	**edhlos**	fem
element	*ēlementum*	**skōlos**	mas
elm	*ulmus*	**olmos**	fem
elm	*ulmus*	**woighos**	fem
embank	*aggerō*	**klāmi**	tr
embryo	*fētus*	**geltis**	fem
embryon	*foetus*	**cə[…]rebhos**	mas
employee	*famulus*	**dhəmos**	mas
empty	*uānus*	**wāstos**	adI
empty	*uānus*	**wōnós**	adI
empty	*hauriō*	**ausijō**	tr
enact	*sanciō*	**sankijō**	tr
encamp	*castrō*	**kastrājō**	tr
encircle	*circumdō*	**gherdhō**	tr
enclose	*amplexor*	**twerō**	tr
enclosure	*claustrum*	**kaghos**	mas
enclosure	*claustrum*	**odhrom**	neu
enclosure	*clausūra*	**wəregis**	mas
encouragement	*hortor*	**ghoréejomoi**	cau
end	*extrēmum*	**bendā**	fem
end	*finis*	**dhigsnis**	mas
end	*terminus*	**termēn**	mas
endeavour	*conitor*	**rōdhjō**	tr
endure	*resistō*	**tulējō**	den
enemy	*inimīcus*	**nemots**	epic
enjoy oneself	*oblector*	**terpō**	intr
enjoyment	*delectātiō*	**teptis**	fem
enlarge	*augeō*	**augējō**	prog
enough	*satis*	**satsi**	ind
enough (to be)	*sufficiō*	**dheughō**	intr
entrails	*uiscus*	**sorwā**	fem
entrails	*intestina*	**sternom**	neu
entrance	*ōstium*	**ōstjom**	neu
entrance	*iānua*	**jā́nuwā**	fem
envelope	*inuolūcrum*	**wélwtrom**	neu
envy	*inuidia*	**ərsjā**	fem
equal	*aequus*	**somós**	adII m
equipment	*armāmenta*	**kómopjom**	neu
equipped with	*praeditus*	**went**	suff
erect	*horreō*	**ghorsējō**	cau
ermine	*mustēla erminea*	**kormōn**	mas
escape	*effugiō*	**skeubhō**	inc
estimate	*aestimō*	**qíqeimi**	tr
eternal	*aeūs*	**aiwos**	adII
eternity	*aetas*	**áiwotāts**	fem
even	*aeqūs*	**aiqos**	adI
even	*etiam*	**eti**	ind
even	*glaber*	**gladhros**	adI
evening	*uesper*	**wespros**	mas
evident	*euidens*	**gnōros**	adI
evil	*scelus*	**skelos**	neu
excavator	*pāla*	**kernos**	mas

excellent	*excellens*	**bhodrós**	adI
excellent	*excellens*	**wēswos**	adI
excess	*excessus*	**údcris**	fem
exchange	*commūtātiō*	**mojnos**	mas
exchange	*mūtō*	**mejō**	inc
exchange	*mūtō*	**moitājō**	tr
excite	*excitō*	**sprewō**	tr
exclusive	*exclusōrius*	**káiwelos**	neu
exhaustion	*exhaustiō*	**dhətis**	fem
expect	*expectō*	**welpō**	tr
expel	*expellō*	**(jí)jēmi**	cau
experience	*experiō*	**perijō**	tr
expression	*dictus*	**weqtlom**	neu
extend	*extendō*	**spánumi**	
extend	*extendī*	**spēmi**	prog
extend	*tendō*	**tendō**	tr
extend	*prōtēlō*	**tensō**	
extend	*prolongō*	**tenjō**	tr
extended	*extensus*	**próstōrnos**	adI
extension	*strātus*	**stərnos**	mas
external	*exterior*	**éksteros**	adI
extinguish	*exstinguō*	**césnumi**	tr
extraordinary	*rārus*	**ənswodhros**	adI
exuberant	*laetus*	**jəndros**	adI
eye	*oculus*	**oqos**	mas
eyebrow	*brus*	**bhrows**	fem
fac	*procul*	**dew**	ind
face	*ūltus*	**dərkā**	fem
fact	*factum*	**dhētis**	fem
fair weather	*serēnus*	**qoitrós, koitrós**	adI
fall	*cadō*	**kadō**	prog
fall asleep	*sōpiō*	**swōpijō**	cau
fall asleep	*obdormiscor*	**dərmijō**	dur
fall down	*praecipitor*	**piptō**	tr
fall into	*ingruō*	**ghrewō**	
fallow	*ueruactum*	**polkā**	

false	*falsus*	**məljos**	adI
family	*familia*	**gentis**	fem
family	*familia*	**wenjā**	fem
famine	*esuriēs*	**nōunā**	fem
famous	*audītus*	**klutós**	adI
fan	*flābellum*	**bhlādhrom**	neu
fan	*flabellō*	**prējō**	intr
fancy	*lascīuiō*	**ləskējō**	
far	*procul*	**porsōd**	ind
far (from)	*procul*	**qeli**	ind
farewell	*abitiō*	**ərtís**	fem
farm	*uilla*	**woikslā**	fem
farmer	*agricola*	**agróqolās**	mas
fart	*pedō*	**pesdō**	intr
fashion	*fabricor*	**teksō**	tr
fat	*adeps*	**lajos**	neu
fat	*crassus*	**pīmós**	adI
fat	*pinguis*	**piwōn**	adI
fat	*obēsus*	**tənghus**	adI
father	*pater*	**pətēr**	mas
father-in-law	*socer*	**swekros**	mas
fatherland	*patria*	**pətrjā**	fem
fatherly	*paternus*	**pətrjos**	adII
fault	*noxa*	**agos**	mas
fault	*culpa*	**loktos**	mas
fault	*mendum*	**mendom**	neu
fear	*paueō*	**pəwējō**	den
fear	*metuō*	**āghar**	intr
fear	*timeō*	**bhíbheimi**	tr
fear	*timeō*	**dweimi**	tr
fearful	*dīrus*	**dwoiros**	adI
feast	*daps*	**daps**	mas
feast	*conuiuium*	**wəldā́**	fem
feast	*daps*	**westos**	mas
feather	*plūma*	**peróm**	neu
feather	*penna*	**petsnā**	fem

feather	*plūma*	**plousmā**	fem
feeble	*tener*	**térðnros**	adI
feed	*pāscō*	**pāskō**	tr
feel	*sentiō*	**awisdhijō**	tr
feel	*sentiō*	**qeisō**	tr
feel ashamed	*pudet*	**aichesājō**	den
fence	*saepēs*	**saipis**	mas
ferment	*fermentō*	**jesō**	
fern	*filix*	**pratis**	fem
ferret	*uiuerra*	**wéiwersā**	fem
few	*paucum*	**pau**	ind
field	*arūm*	**arwom**	neu
field	*pratum*	**maghos**	mas
fierce	*saeuus*	**saiwos**	adI
fierceness	*tūlēs*	**tonslis**	fem
fifteen	*quindecim*	**penqdekðm**	ind
fifth	*quintus*	**penqtos**	adII
fifty	*quinquaginta*	**penqadkðmta**	adII
fig	*ficus*	**bheikos**	fem
fight	*pugna*	**katos**	mas
fight	*certō*	**streudō**	dur
file	*līma*	**sleimā**	fem
fill	*pleō*	**(pím)plēmi**	tr
fill	*pleō*	**pléenāmi**	inc
filth	*situs*	**mergis**	fem
finch	*passer*	**spingjā**	fem
find	*inueniō*	**(wí)wermi**	tr
find	*nanciscor*	**nðnkskomói**	tr
finger	*digitus*	**cistis**	fem
finger	*digitus*	**dékðmtulos**	mas
fingernail	*unguis*	**onchis**	mas
finish	*finiō*	**cerjō**	intr
fire	*ignis*	**egnis**	mas
fire	*ignis*	**pēwðr**	neu
firm	*firmus*	**omos**	adI
first	*prīmus*	**prāwos**	adII
first	*prīmus*	**prismos**	sup
first (of two)	*prīmus (a duobus)*	**próteros**	adII
fish	*piscis*	**piskis**	mas
fist	*pugnus*	**penqstis**	fem
fist	*pugnus*	**pougnos**	mas
five	*quinque*	**penqe**	ind
fix	*fixus*	**pastos**	adI
flake	*floccus*	**bhlokos**	mas
flame	*flamma*	**bhlðgsmā**	fem
flame	*focus*	**bhokos**	
flask	*obrussa*	**óbrusjā**	fem
flat	*plānus*	**lergos**	adI
flat	*plānus*	**plākos**	adI
flat	*plānus*	**plānos**	adI
flat-footed	*plautus*	**plautos**	adI
flax	*līnum*	**leinom**	neu
flea	*pūlēx*	**puslēks**	mas
fleabane	*pulicāria*	**dhwestus**	fem
flee	*fūgō*	**bhougājō**	cau
flee	*fugiō*	**bhugjō**	dur
fleece	*uellus*	**gnebhis**	fem
flexible	*flexibilis*	**lugnós**	adI
flight	*fūga*	**bhougā**	fem
flimmer	*fulgeō*	**merkō**	
flimmer	*micō*	**míkāmi**	dur
floor	*contabulātiō*	**plārom**	neu
flour	*farīna*	**melwom**	neu
flour	*farīna*	**mlātóm**	neu
flourishing	*fluorescentia*	**ghlustis**	adI
flow	*fluxus*	**sorā**	fem
flow	*fluō*	**bhleucō**	intr
flow	*meō*	**mejājō**	intr
flow	*fluō*	**srewō**	intr
flow	*fluō*	**weisō**	den
flow down	*dēfluō*	**stelghō**	intr
flower	*flōs*	**bhlos**	mas

flower	*flos*	**bhlōtis**	fem
fluoresce	*superluceō*	**bhelō**	intr
flush away	*egerō*	**rínāmi**	tr
flutter	*coruscō*	**spəndō**	intr
fly	*musca*	**muskā**	fem
fly	*aduolō*	**petō**	intr
fly	*uolō*	**cəlājō**	intr
foal	*pulllus*	**kurnos**	
foam	*spūma*	**spoimā**	fem
foenum	*hay*	**koinos**	mas
fog	*cālīgo*	**kalgōn**	
fog	*nebula*	**nebhlā**	fem
foggy, to be	*nebulosus sum*	**wapējō**	den
fold	*ouīle*	**cijā**	fem
fold	*flectō*	**bheugō**	
fold	*plicō*	**plékāmi**	cau
follow	*sequor*	**séqomoi**	dur
food	*pābulum*	**pasknis**	mas
food	*cibus*	**pitús**	mas
food	*pulmentum*	**westā**	fem
foot	*pēs*	**pods**	mas
footprint	*uestigium*	**lorgā**	fem
footprint	*peda*	**pedom**	neu
forbid	*uetō*	**wétāmi**	tr
force	*uis*	**stolgos**	mas
force	*impetus*	**tewos**	neu
force	*compellō*	**twenkō**	tr
force in	*intrūdō*	**treudō**	cau
ford	*portus*	**pərtus**	mas
forearm	*lacertus*	**lakertos**	mas
forehead	*frōns*	**bhrówəntis**	mas
foreigner	*aduena*	**ghostis**	and
foremost	*prīmus*	**prījós**	adII
forest	*silua*	**kselwā**	fem
forest	*lūcus*	**loukos**	mas
forest	*nemus*	**nemos**	neu

forget	*obliuiscor*	**ledō**	tr
fork	*furca*	**ghabhlom**	neu
fork	*furca*	**mergā**	fem
form	*forma*	**pərptus**	
formerly	*ōlim*	**ōlim**	ind
fortieth	*quadragēsimus*	**qətwəorádkəmtəmos**	adII
fortification	*mūnītūra*	**karkar**	mas
fortify	*mūniō*	**moiníjomoi**	tr
forty	*quadrāgintā*	**qətwəorádkəmta**	adII
forty	*quadraginta*	**qətworadkəmta**	adII
forwards	*prō*	**prō(d)**	ind
fountain	*fons*	**awā**	fem
fountain	*fons*	**awen**	neu
fountain	*fons*	**dhontis**	mas
four	*quattuor*	**qətwəres**	adII
four days	*quadriduum*	**qətwərdjówijom**	neu
four each	*quaternī*	**qətrosnŏs**	adII
four hundred	*quadrigenti*	**qətwərkəmtŏs**	adII
four hundreth	*quadrigentesimus*	**qətwərkəmtémtəmos**	adII
four times	*quater*	**qətros**	ind
four years	*quadrienniu m*	**qətwəratnjom**	neu
fourteen	*quattuordecim*	**qətwrdekəm**	ind
fourth	*quartus*	**qətwərtos**	adII
fox	*uulpēs*	**wolpis**	fem
foxglove	*digitālis purpurea*	**spjonos**	fem
fragment	*frūstum*	**bhroustom**	neu
fragrant	*fragrant*	**swekos**	adI
fraud	*dolus*	**dolos**	mas
fray	*diffilor*	**sremsō**	intr
free	*liber*	**léudheros**	adI
free	*recipiō*	**nosējō**	cau
freeze	*gelō*	**prunsō**	tr
frequent	*frequens*	**menghos**	adI
friend	*amīca*	**ámeikā**	fem

friend	*amīcus*	**amēiks**	mas
fringe	*antiae*	**antjăs**	
from	*ab*	**apo**	ind
from	*ex*	**extrōd**	ind
from there	*inde*	**imde**	ind
from there	*inde*	**totrōd**	ind
from this side	*hinc*	**kina**	ind
from upwards	*dē*	**dē**	ind
from which	*unde*	**jomde**	rel
frost	*pruīna*	**pruswā́**	fem
fruit	*fructus*	**ágrēnom**	neu
fruit	*frux*	**bhreugs**	mas
fry	*frigō*	**bhagjō**	tr
fry	*frigō*	**bhreicō**	tr
frypan	*sartagō*	**landhom**	neu
fuck	*futtuō*	**eibhō**	intr
fuel	*cibus ignis*	**dawtis**	fem
fugacious	*fugax*	**tokwós**	adI
full	*plēnus*	**plēnós**	adI
full	*plēnus*	**plētós**	adI
fundament	*fundamentum*	**upósēdjom**	neu
fungus	*fungus*	**swombhós**	mas
furniture	*suppellex*	**endósēdjom**	neu
furrow	*sulcus*	**pərkā́**	fem
further	*ulterus*	**ólteros**	adI
furthest	*ultimus*	**óltəmos**	sup
gall	*bīlis*	**bistlis**	fem
gape	*hiō*	**ghjājō**	inc
garden	*hortus*	**ghortos**	mas
garlic	*ālium*	**álujos**	mas
gather	*cogō*	**gercō**	tr
gather	*cōgō*	**katsājō**	tr
gaul	*gallus*	**galnos**	mas
gaze	*prospectō*	**qekō**	
gentle	*gentilis*	**klisrós**	adI
germ	*germen*	**genmən**	neu

get angry	*stomachor*	**kərdíjomoi**	prog
get cumulated	*cumulō*	**derghō**	intr
get dressed	*induō*	**ewō**	inc
get drunk	*inebriō*	**pojējō**	cau
get dry	*serescō*	**térsomoi**	intr
get encrusted	*incrustor*	**kreupō**	inc
get furious	*saeuiō*	**sājō**	den
get in a space	*locus mihi est*	**telpō**	intr
get injured	*ferior*	**steugō**	inc
get tired	*dēfetiscor*	**kmāmi**	prog
gift	*dōnum*	**dōnom**	neu
gird	*cingō*	**kingō**	tr
girl	*puella*	**maqā**	fem
give	*dō*	**(dí)dōmi**	tr
give birth	*pariō*	**pərijō**	tr
give joy	*sōlor*	**sōlā́jomoi**	tr
give one's opinion	*opīnor*	**tongējō**	tr
glance	*fascis*	**augā́**	fem
glare	*splendeō*	**swelō**	intr
glass	*pōculum*	**pōtlom**	
glide	*surrēpō*	**sleidhō**	intr
glimmer	*fulgeō*	**bherkō**	den
glimmer	*renideō*	**ghlēmi**	intr
globe	*globus*	**globhos**	mas
gloomy	*fuscus*	**mauros**	adI
glory	*gloria*	**klewos**	neu
glove	*digitābulum*	**ghesris**	fem
glow	*candō*	**kandō**	tr
glowing ash	*fauilla*	**geulom**	neu
glue	*glūten*	**gloiten**	neu
gnat	*cūlex*	**kūleks**	mas
gnaw	*frendō*	**ghrendō**	intr
gnaw away	*corrōdō*	**trowō**	tr
go	*eō*	**ərskomói**	intr
go	*eō*	**eimi**	dur
go aside	*mē auertō*	**greubhō**	dur

go away	*abeō*	**cícāmi**	inc
go down	*descendō*	**keidō**	intr
goat	*caper*	**bokkos**	mas
goat	*capra*	**dighā**	fem
goat	*hircus*	**ghabhros**	mas
goat	*capra*	**kaprā**	fem
goat	*caper*	**kapros**	
goatish	*haedīnus*	**ghaidīnós**	adII
god	*deus*	**deiwos**	mas
goddess	*dea*	**deiwā**	fem
godly	*dīūs*	**déiwijos**	adII
gold	*aurum*	**ausom**	neu
gold	*aurum*	**ghəltom**	neu
golden	*aureus*	**ghəltnós**	adII
good	*bonus*	**āsús**	adI
good	*bonus*	**bhilis**	adI
good	*bonus*	**dwenos**	adI
good	*bonus*	**mānos**	adI
good	*bonus*	**probhwos**	adI
goos	*anser*	**ghansōr**	mas
grace	*gratia*	**rātóm**	mas
grain	*grānum*	**grānom**	neu
grand-daughter	*neptis*	**neptis**	fem
grandfather	*auus*	**awos**	mas
grandfather	*aūs*	**dhēdhjos**	
grandmother	*anus*	**anus**	fem
grandmother	*auia*	**áwijā**	fem
grandson	*nepos*	**nepēts**	mas
granny	*anus*	**annā**	fem
grant	*donō*	**pərnāmi**	tr
grass	*grāmen*	**ghrāsmən**	neu
grass	*herba*	**ghrāsom**	əb
grave	*fossa*	**bhodsā**	fem
gravel	*calculus*	**geisā**	fem
greasy	*adipōsus*	**liprós**	adI
green	*uiridis*	**chelwos**	mas

grey	*cānus*	**kasnos**	mas
grey	*albogiluus*	**pəlowós**	adI
grey	*pallidus*	**pálowos**	adI
grey	*rāuus*	**rāwos**	adI
grill	*cratis*	**kratis**	fem
grind	*conterō*	**ghrewō**	cau
grind	*molō*	**melō**	tr
groan	*uncō*	**onkājō**	
groin	*inguen*	**əncéen**	fem
groin	*intestīnum*	**ili**	neu
groom	*pubēs*	**pusbhis**	mas
groove	*sulcus*	**solkos**	mas
ground	*fundus*	**bhudhnos**	mas
ground	*solea*	**swólejā**	fem
ground	*tellus*	**telsus**	fem
group	*caterua*	**qelos**	neu
grow	*crēscō*	**krēskō**	prog
grow	*crēscō*	**ərdhjō**	intr
grow fat	*pinguescō*	**peidō**	prog
grow thin	*tenuescō*	**kerkō**	inc
growl	*grunniō*	**ghelijō**	intr
grown	*grandis*	**grəndhís**	adI
grumble	*fremō*	**ghremō**	intr
grumble	*ringor*	**wrəngomói**	intr
grunt	*fremō*	**bhremō**	intr
grunt	*grunniō*	**grundijō**	intr
guerrilla	*guerrilla*	**bhogā**	fem
guest	*hospes*	**ghóstipots**	adII
guile	*astus*	**astus**	mas
guilty	*sons*	**sontis**	adI
gull	*mergus*	**medgós**	mas
gullet	*gula*	**cəlā**	fem
gulp	*lurcō*	**slərgjō**	tr
gum	*gingiua*	**gengā**	fem
gush	*scateō*	**skatējō**	dur
gush up	*exuberō*	**bhrendhō**	intr

hail	*grandō*	**grōdis**	mas
hair	*capillum*	**ghaitā**	fem
hair	*capillum*	**kaisrom**	neu
hair	*caesariēs*	**kerom**	
hair	*pilus*	**pilos**	mas
hair	*capillum*	**rewmə́n**	neu
hair	*uellus*	**welnos**	neu
hair	*caesariēs*	**wondhos**	
hair (strong)	*saeta*	**saitā**	fem
hairdresser	*tonsōr*	**tonstṓr**	adII
hairless	*caluus*	**kalwos**	adI
half	*medius*	**sēmi-**	adII
hall	*uestibulum*	**werstidhlom**	neu
ham	*perna*	**persnā**	fem
hammer	*malleus*	**matlā**	fem
hammer	*malleus*	**ordhos**	mas
hand	*manus*	**ghēsə́r**	neu
hand	*manus*	**ghestos**	neu
hand	*manus*	**mə́nus**	fem
handle	*ansa*	**ansā**	
handle	*stīua*	**ghetlā**	fem
handle	*manubrium*	**skāpos**	mas
handle	*gerō*	**qérumi**	dur
hang	*suspendō*	**lembō**	tr
hang	*pendō*	**pendō**	tr
happen	*accidō*	**leidō**	pro
hard	*dūrus*	**kartús**	adI
harm	*damnō*	**dápnāmi**	tr
harm	*damnum*	**skodhos**	mas
harn	*urīna*	**wə́reinā**	
harrow	*occa*	**ókētā**	fem
harsh	*asper*	**drismós**	adI
harvest	*segēs*	**ə́snātis**	fem
haste	*coactus*	**spoudā**	tr
hasten	*percurrō*	**bhūsjō**	intr
hasten	*festīnō*	**skegō**	intr

hatchet	*bipennis*	**tōkslos**	mas
hate	*ōdi*	**odjō (ōda)**	tr
hatred	*ōdium*	**ōdjom**	neu
have	*habeō*	**eikō**	tr
have fever	*febriō*	**cerō**	den
have taste	*sapiō*	**sə́pijō**	tr
have wrinkle	*rugātus sum*	**gə́rbējō**	den
haven	*portus*	**kopnos**	mas
hawk	*accipiter*	**ōqípteros**	mas
hazel	*corilus*	**kósolos**	fem
hazelnut	*abellāna*	**árusā**	fem
head	*caput*	**ghebhlā**	fem
head	*caput*	**kaput**	neu
head	*caput*	**kersə́n**	neu
head of cereal	*spīca*	**speikā**	fem
head towards	*uergō*	**wergō**	den
health	*ualētūdō*	**kóilutāts**	fem
healthy	*sānus*	**koilús**	adI
healthy	*sānus*	**jekos**	adI
heap	*struēs*	**struwis**	fem
hear	*clueō*	**kluwējō**	den
hear	*audiō*	**gheusō**	
hear	*audiō*	**kélnumi**	tr
hearing	*audītus*	**kleumə́n**	neu
heart	*cor*	**kə́rdi / kə́rdjom**	neu
hearth	*fornus*	**chornos**	mas
heat	*calor*	**cheros**	neu
heat	*adoleō*	**olējō**	cau
heath	*silua*	**kaitom**	neu
heave	*erigō*	**erō**	tr
heaven	*caelum*	**kémelom**	neu
heavy	*grāuis*	**cə́r(āw)ús**	adI
heavy	*brūtus*	**crə́tos**	adI
hedgehog	*er*	**eghjos**	mas
hedgehog	*ēr*	**ghēr**	mas
heel	*calx*	**persā**	fem

height	*summum*	**kolmos**	mas
hello	*heus!*	**alā!**	excl
helmet	*galea*	**kelmos**	mas
help	*adiuuō*	**jewō**	intr
hen	*gallīna*	**kerkos**	fem
henbane	*hyosciamus*	**bhélunā**	fem
herb	*herba*	**lubhjā**	fem
herd	*grex*	**gregs**	mas
herdsman	*pāstor*	**cówqolos**	mas
herdsman	*pāstor*	**kerdhjos**	mas
here	*hic*	**kei**	ind
heron	*ardea*	**árdejā**	fem
hesitate	*uacillō*	**kénkomoi**	intr
hide	*cēlō*	**kēlājō**	cau
hide	*abdī*	**keudhō**	
high	*altus*	**altós**	adI
high	*altus*	**bhərghos**	adI
high	*superus*	**úperos**	
high	*altus*	**úpselos**	mas
hill	*collis*	**kolnis**	fem
hill	*mons*	**montis**	mas
himself	*se*	**se**	pron
himself	*sē*	**sēd**	ind
hinge	*cardō*	**kərdéen**	
hint	*posterus*	**apóteros**	adI
hip	*coxa*	**koksā**	fem
hip	*lumbus*	**londhwos**	mas
his	*suus*	**séwijos**	adII
hiss	*stridō*	**streidō**	dur
hit	*contusiō*	**bhenjom**	
hit	*quatiō*	**bhətjō**	tr
hit	*tundō*	**bhlagō**	tr
hit	*flīgō*	**bhleicō**	intr
hit	*quatiō*	**bhutjō**	tr
hit	*cūdō*	**keudō**	tr
hit	*offendō*	**slakō**	tr

hit	*quatiō*	**steupō**	tr
hoard	*refugium*	**kusdhos**	
hold	*possideō*	**potējō**	tr
hold	*retineō*	**seghō**	tr
hole	*orificium*	**lugjā**	fem
hollow	*cauitas*	**dholos**	mas
hollow	*uōla*	**dhónejā**	fem
hollow	*fouea*	**ghéwejā**	
hollow	*cauus*	**kowos**	adI
hollow out	*excauō*	**skerbhō**	tr
holy	*sanctus*	**noibhos**	adII
holy	*sacer*	**kwentos**	adII
holy	*sacer*	**sakros**	adI
honey	*mel*	**melit**	neu
honour	*mactō*	**məgtājō**	tr
hoof	*ungula*	**kophos**	mas
hook	*ancus*	**ankos**	mas
hook	*hamus*	**kenkos**	mas
hook	*hāmus*	**khamos**	mas
hook	*uncus*	**onkos**	mas
hoopoe	*upupa*	**ópopā**	fem
hope	*spes*	**spes**	fem
horn	*cornū*	**kərnu**	neu
hornbeam	*carpīnus betulus*	**gərbeinā**	
hornless	*incornis*	**kemos**	adII
horse	*eqūs*	**ekwos**	mas
horse	*equus*	**markos**	mas
hostage	*obses*	**gheislos**	mas
house	*domus*	**domos**	fem
house	*domus*	**weiks**	mas
housemaster	*erus*	**esos**	m
hovel	*gurgustium*	**cərcestjom**	neu
hover	*pullulo*	**prewō**	dur
how	*quālis*	**qālis**	adII
how	*ut*	**qota**	int
how	*quōmodo*	**jota**	rel

how many	*quot*	**qot(j)ŏs**	int
howbeit	*autem*	**aw**	ind
howgreat	*quantus*	**qáwɘntos**	pron
howl	*ululō*	**ululājō**	intr
humble	*humilis*	**wailos**	mas
humiliate	*humiliō*	**neidō**	tr
hump	*gibba*	**gibbā**	fem
hundred	*centum*	**kɘmtom**	ind
hunger	*famēs*	**dhɘmis**	fem
hunger	*fames*	**ghrēdhus**	mas
hunt	*uēnātus*	**woitā**	fem
hunt	*uēnor*	**(wí)weimi**	tr
hurry	*festinō*	**sperghō**	intr
hurry	*accelerō*	**speudō**	tr
hut	*casa*	**kleitis**	fem
hut	*mapālia*	**koutā**	fem
I	*egō*	**egō**	pron
ice	*gelū*	**eisom**	neu
ice	*gelū*	**gelu**	neu
ice	*glaciēs*	**glɘgjēs**	fem
ice	*glaciēs*	**jegis**	mas
icicle	*crustula*	**krustā**	fem
icicle	*stīria*	**stejsjā**	fem
ill	*aeger*	**aigros**	adI
illuminate	*illūminō*	**bhā́numi**	tr
imbue	*inficiō*	**magō**	tr
immediate	*immediātus*	**ūdhús**	adI
immediately	*citō*	**kitōd**	ind
immortal	*immortālis*	**ɘnmrótijos**	adII
impel	*pellō*	**peldō**	tr
important	*sērius*	**swērús**	adI
impregnate	*tingō*	**tengō**	tr
in	*in-*	**en**	ind
in excess	*magis etiam*	**ɘndhi**	ind
in the middle	*in mediā parte*	**meti**	
in the morning	*mane*	**prōi**	ind

incise	*insecō*	**ghelō**	intr
incision	*incisiō*	**bhɘrmā**	
incite	*sollicitō*	**ɘrghējō**	tr
incite	*incitō*	**trenkō**	tr
inclined	*prōnus*	**nīqos**	adII
include	*inclūdō*	**glembhō**	cau
increase	*augmentum*	**augmɘn**	neu
increase	*augō*	**augō**	cau
indeed	*quippe*	**qidpe**	ind
indication	*indicātiō'*	**deiktis**	fem
indulge in	*indulgeō*	**dhɘlgējō**	intr
infere	*dēdūcō*	**densō**	tr
inferior	*inferior*	**níiteros**	adI
inflate	*inflor*	**bhleidō**	intr
inflate	*infō*	**pusjō**	tr
inform	*ēnuntiō*	**steumi**	tr
insect	*insectus*	**empis**	fem
inside	*in*	**endo**	ind
inside	*intus*	**entós**	ind
inside	*interior*	**ētɘr**	mas
insipid	*insipidus*	**merwos**	
inspect	*inspiciō*	**skewō**	tr
insult	*insultō*	**pējō**	tr
intellect	*intellectus*	**menmɘn**	neu
intelligence	*sensus*	**sɘnstus**	
intelligent	*callidus*	**glēkis**	adI
intend	*intendō*	**mɘnsjomói**	neu
internal	*interior*	**énteros**	adI
interval	*interuallum*	**énterom**	neu
intestine	*intestīnus*	**énteros**	adI
intestine	*intestīna*	**ghoros**	mas
intestiones	*intestīnum*	**routos**	mas
invoke	*inuocō*	**kiklēskō**	tr
iron	*ferrum*	**isarnom**	neu
irritate	*irritō*	**prousijō**	intr
island	*insula*	**enslā**	fem

item	*item*	**itim**	ind
iuxta	*close to*	**pðra**	ind
ivy	*hedera*	**khéderos**	fem
jaws	*fauces*	**gopos**	mas
join	*iungō*	**jungō**	tr
joint	*artus*	**artus**	mas
joint	*artus*	**koubos**	mas
joke	*nuga*	**ghloumos**	
joke	*nugor*	**ghleumi**	intr
journey	*itō*	**itājō**	freq
joy	*gaudium*	**gaudhjom**	neu
joyful	*alacer*	**rōdos**	adI
judge	*iudex*	**jousdiks**	adII
juice	*succus*	**sapos**	fem
juice	*sūcus*	**soukos**	mas
jump	*saltō*	**rebhājō**	intr
jump	*saltō*	**dhérnumoi**	intr
jump	*saliō*	**leigō**	intr
juniper	*picea*	**lentos**	fem
juniper	*iuniperus*	**toksos**	fem
just	*iūstus*	**joustos**	adI
keel	*carīna*	**kareinā**	fem
keep	*conseruō*	**bherghō**	tr
keep	*praeseruō*	**kadhō**	tr
key	*clāuis*	**klāws**	fem
kidney	*rēnis*	**neghrōn**	mas
kill	*necō*	**nékāmi**	tr
kin	*genus*	**genos**	neu
kindness	*beneficium*	**prósēdjom**	neu
king	*rex*	**regs**	mas
kingdom	*regnum*	**regnom**	neu
kingly	*regius*	**regjos**	adII
kiss	*basium*	**kusis**	mas
kiss	*sauia*	**sówijā**	fem
kiss	*osculō*	**bhusājō**	tr
knead	*commisceō*	**bheurō**	tr
knead	*depsō*	**debhō**	tr
knee	*genū*	**genu**	neu
knee	*genuflector*	**teupō**	inc
knock	*battuō*	**bheldō**	intr
knot	*nōdus*	**nōdos**	mas
knot	*nodus*	**osbhos**	mas
know	*nōscō*	**(gí)gnōskō (gnōwa)**	tr
know	*sciō*	**skijō**	tr
known	*nōtus*	**gnōtós**	adI
lack	*egeō*	**egējō**	den
lack	*careō*	**kðsējō**	den
lack	*dēsum*	**meitō**	den
ladder	*scāla*	**skandslā**	fem
ladle	*trua*	**trowā**	fem
lake	*lacus*	**ágherom**	neu
lake	*lacus*	**laqos**	mas
lamb	*agnus*	**agnos**	mas
lamb	*ueruēx*	**wðrēn**	mas
lame	*claudus*	**klaudos**	adI
lamp	*lampās*	**lapsā**	fem
land	*ager*	**agros**	mas
land	*campus*	**kampos**	mas
land	*regiō*	**londhom**	neu
land	*terra*	**oudðn**	neu
land estate	*fundus*	**kāpos**	mas
landlady	*domina*	**dómūnā**	fem
landlord	*dominus*	**dómūnos**	mas
lap	*gremium*	**gremjom**	neu
lapwing	*uanellus*	**cówijā**	fem
large fish	*squalus*	**sqalos**	mas
last	*ultimus*	**ópitjos**	adII
last	*porstrēmus*	**póstðmos**	sup
last year	*anno praeterito*	**péruti**	ind
late	*tarde*	**lodi**	neu
later	*posterus*	**pósteros**	adI
laugh	*cachinnus*	**khákhatnos**	mas

laugh	*rīdeō*	**wə́risdējō**	intr
law	*lēx*	**legs**	fem
law	*iūs*	**jous**	neu
lax	*salmō*	**loksos**	mas
lay	*strāmən*	**strāmən**	
lazy	*pīger*	**leskos**	adI
lead	*dūxī*	**nijóm**	
lead	*plumbum*	**plúwaidhom**	neu
lead	*addūcō*	**wedhō**	tr
leader	*dux*	**deuks**	and
leaf	*folium*	**bhuljom**	neu
leaf	*folium*	**leups**	mas
lean	*nītor*	**gneichō**	intr
leap	*saltus*	**rebhā**	fem
leap	*saltō*	**kekō**	intr
learn	*dīscō*	**didkskō**	tr
leather	*corium*	**korjom**	neu
leave	*linquō*	**linqō**	tr
leek	*porrum*	**pə́rsom**	neu
left	*laeūs*	**laiwos**	adII
left	*sinister*	**soujós**	adII
left-handed	*scaeuus*	**skaiwós**	adI
leg	*crus*	**kanmā**	fem
leg	*crūs*	**krous**	neu
legal suit	*lis*	**stlītis**	fem
legbent	*uatius*	**watjos**	adI
legitimate	*legitimus*	**tə́nktos**	adI
lend	*commodō*	**gherō**	tr
lend	*commodātus*	**loiqnom**	neu
length	*longitudō*	**də́lə́nghotā**	fem
leprosy	*leprae*	**trudskā**	fem
less	*minus*	**mínusi**	ind
less	*sētius*	**séetjosi**	
lessen	*minuō*	**sewājō**	prog
leuer	*uectis*	**weghtis**	fem
lick	*lingō*	**linghō**	tr

lie	*iaceō*	**keimoi**	inc
lie	*cubō*	**kúbāmi**	den
lie	*mentior*	**leughō**	intr
lie	*occubō*	**leghō**	den
lie open	*pateō*	**pə́tējō**	den
life	*uita*	**cejtā**	fem
lifetime	*saeculum*	**saitlom**	neu
ligament	*ligāmen*	**tenos**	neu
light	*leuis*	**lə́nghros**	adI
light	*leuis*	**leghús**	adI
light	*lux*	**leuks**	fem
light	*lūmen*	**leuksmən**	neu
lighting	*illumināti̯ō*	**bhānom**	
like	*libet (mihi)*	**lubhējō**	tr
lily	*liilium*	**leiljom**	neu
limb	*membrum*	**karōn**	fem
lime	*calx*	**kalkis**	
lime	*tilia*	**leipā**	fem
limit	*līmes*	**bhrēunā**	neu
limp	*claudicō*	**skə́ngjō**	intr
line	*linea*	**streibā**	fem
line	*stria*	**strigjā**	fem
link	*nōdō*	**nedō**	tr
link	*ligō*	**wédhnumi**	tr
lion	*leō*	**wlewā**	fem
lip	*labrum*	**ghelnom**	neu
lip	*labrum*	**lə́bjom**	neu
lip	*labrum*	**mēknos**	mas
liquid	*latex*	**latēks**	mas
liquid	*serum*	**serom**	neu
liquid	*liquor*	**wə́leiqos**	neu
liquid (to be)	*liqueō*	**wə́liqējō**	den
list	*seriēs*	**rēimən**	neu
listen	*audiō*	**kleumi**	neu
little	*paucus*	**paukos**	adI
little owl	*noctua*	**warnā**	fem

live	*uīuō*	**cejwō**	dur
liver	*iecur*	**jeqə́r**	neu
load	*onus*	**onos**	neu
lobster	*langusta*	**kə́mertos**	mas
lock	*cirrus*	**ghrendhos**	neu
lock of hair	*crīnis*	**pulgā**	fem
lofty	*excelsus*	**mlōdhrós**	adI
long	*longus*	**də́lə́nghos**	mas
long for	*aueō*	**gheidhō**	tr
long hair	*caesariēs*	**káisə́rjēs**	fem
longer time	*diutius*	**peros**	ind
long-lasting	*sērus*	**sēros**	adI
look	*speciō*	**spekjō**	tr
look like	*uideor*	**prepō**	intr
loom	*textrīnum*	**weimə́n**	neu
lot	*copia*	**koupnā**	fem
lot	*cumulus*	**teusmə́n**	neu
lotus	*lotus*	**kémeros**	fem
loud	*penetrans*	**torós**	adI
louse	*pedis*	**lousēn**	fem
love	*amō*	**kāmi**	tr
love	*amō*	**stergō**	tr
love	*amor*	**wenos**	neu
love	*amō*	**amājō**	tr
love potion	*uenēnum*	**wenēsnom**	neu
lovely	*cārus*	**koimos**	adI
lovely	*cārus*	**leubhos**	adI
lower	*inferus*	**nérteros**	adII
luck	*fortūna*	**toughā**	fem
lung	*pulmō*	**pleumōn**	mas
luxury	*sumptus*	**ghloidos**	mas
lynx	*lynx*	**louksos**	mas
magic	*magicus*	**kudnos**	adI
magic	*uenēficiumj*	**soitos**	mas
magic force	*magia*	**kwedos**	neu
magnanimous	*magnanimus*	**mə́gnánə́mos**	adI

magpie	*pīcus*	**peikos**	mas
maid	*uirgō*	**ándhesā**	fem
maim	*truncō*	**skutājō**	tr
make afraid	*terreō*	**tersējō**	intr
make bitter	*acerbō*	**streubhō**	tr
make hot	*foueō*	**dhochējō**	cau
make money	*lucror*	**pelō**	tr
make noise	*strepō*	**bhelō**	intr
make noise	*strepō*	**strepō**	intr
make up	*perspiciō*	**də́rkjō**	tr
male	*mās*	**wersis**	mas
man	*homō*	**dhghomōn**	mas
man	*homō*	**mánnusos**	mas
man	*uir*	**woiros**	mas
mane	*crīnis*	**krisnis**	fem
manner	*modus*	**koitús**	fem
mantle	*sagum*	**sagom**	neu
maple	*acer*	**ákeris**	fem
maple	*acer*	**kleinos**	fem
march	*itus*	**cə́mtis**	fem
march	*itus*	**oimos**	mas
mare	*equa*	**ekwā**	fem
marrow	*medulla*	**smerwā**	fem
marry	*nūbō*	**sneubhō**	tr
marsh	*mariscus*	**máreskos**	mas
mass	*globus*	**kōmos**	mas
mass	*mōlēs*	**mōlis**	fem
mass	*massa*	**sloidhos**	mas
massacre	*trucidatiō*	**agrā**	fem
mast	*mālus*	**masdos**	neu
master	*dominus*	**potis**	mas
mate	*collēga*	**bhendhros**	mas
mate	*sodālis*	**dāmos**	mas
mattock	*ligō*	**sligōn**	mas
maxilla	*maxilla*	**genus**	neu
mead	*mel*	**medhu**	neu

meager	*petilus*	**pétəlos**	adI
measure	*mensūra*	**mestis**	fem
measure	*mensūra*	**metrom**	neu
measure	*modus*	**modos**	neu
measure	*metior*	**mēmi**	tr
measure	*mētior*	**mētíjomoi**	tr
meat	*carō*	**memsom**	ənеu
meet	*congredior*	**katsā́jomoi**	intr
meet	*accurrō*	**mimdō**	inc
meeting	*congregātiō*	**komnom**	neu
melodious	*melodicus*	**bhendos**	adI
melt	*tābēscō*	**tādhēskō**	intr
memory	*memoria*	**menos**	neu
memory	*memoria*	**smemorjā**	fem
mention	*mentiō*	**məntos**	mas
mention	*allūdō*	**cotējō**	tr
metal	*metallum*	**raudos**	neu
midday	*meridiēs*	**médhidjōws**	mas
middle	*medius*	**medhjos**	adII
middle (in the)	*ob*	**obhi**	ind
middling	*sublestus*	**leswos**	adI
might	*potestās*	**maghtis**	fem
mild	*mitis*	**loisós**	adI
mild	*comēs*	**moilos**	adI
milk	*lac*	**glakti**	neu
milk	*mulgeō*	**molgējō**	tr
mill	*molīna*	**moleinā**	fem
millet	*milium*	**meljom**	neu
millstone	*mola*	**cərā́wenros**	mas
mind	*mens*	**məntis**	fem
miracle	*mirāculum*	**smeirātlom**	neu
miserable	*miser*	**treughos**	adI
missing	*absente*	**səntерí**	ind
mist	*uapor*	**mighlā**	fem
mistletoe	*uiscum*	**wiskom**	neu
mistress	*domina*	**potnjā**	fem

mix	*misceō*	**miskējō**	cau
mix	*permisceō*	**krāmi**	tr
model	*fingō*	**dhinghō**	tr
modest	*modestus*	**nesros**	adI
molder	*putēscō*	**pujō**	inc
moment	*mōmentum*	**mēqos**	neu
money	*pecūnia*	**alchos**	mas
monster	*monstrum*	**ansus**	mas
month	*mēnsis*	**mēnsis**	mas
moo	*mugiō*	**mugijō**	intr
moon	*lūna*	**louksnā**	fem
more	*magis*	**məgsi**	ind
more than that	*immō*	**immō**	adII
morning	*mane*	**amros - amrei**	mas
morning	*matina*	**wēsros**	mas
mortar	*mortārium*	**mərtāsjom**	neu
moss	*muscus*	**muskos**	
mother	*mamma*	**ammā**	fem
mother	*māter*	**mātéer**	fem
mother-in-law	*socrus*	**swekrús**	fem
motley	*uarius*	**pərknos**	adI
mould	*fūtis*	**gheutis**	fem
mound	*tumulus*	**tumlós**	mas
mount	*scandō*	**skandō**	dur
mountain	*mons*	**ceri**	neu
mountain	*mons*	**pérkūnjom**	neu
mountain-path	*callis*	**kəldis**	fem
mouse	*glis*	**gleis**	mas
mouse	*mūs*	**meus**	neu
mouth	*ōs*	**os**	neu
mouthful	*bucca*	**bukkā**	fem
move	*cieō*	**ərnumi**	intr
move	*moueō*	**djejō**	intr
move	*mutō*	**meicō**	intr
move	*moueō*	**mowējō**	cau
move	*migrō*	**pelkō**	intr

move away	*spernō*	**spðrnō**	cau
movement	*mōmentum*	**ðrnutis**	fem
much	*multum*	**pelu**	ind
mucus	*mūcus*	**moukos**	
mud	*caenum*	**korkos**	adI
mud	*līmus*	**leimos**	mas
mud	*lutum*	**mūtrom**	neu
mud	*lūtum*	**penom**	neu
mud	*līmus*	**sleimos**	mas
multitude	*copiae*	**luktos**	mas
mundane	*mundānus*	**cécālos**	adI
murder	*interficiō*	**chenmi**	tr
murmur	*murmurō*	**dðrdrājō**	intr
murmur	*murmurō*	**mðrmrājō**	
muscle	*mūsculus*	**kīkus**	mas
muscle	*mūs*	**meus / muskós**	neu
must	*mustus*	**mudstos**	mas
mutilate	*mutilō*	**kersō**	tr
mutilated	*mutilus*	**klambós**	adI
mutter	*muttiō*	**muttijō**	den
mutual	*mutuus*	**moitwos**	adII
myop	*myops*	**neukos**	adI
mystery	*mysterium*	**kelgā**	fem
nail	*clāuus*	**klawos**	mas
nail	*clāuus*	**onghlos**	mas
nail	*pangō*	**pðngō**	tr
naked	*nūdus*	**nócodos**	adII
name	*nōmen*	**nōmðn**	neu
name	*praenōmen*	**práinōmðn**	neu
name	*nōminō*	**kðlējō**	tr
name	*nōminō*	**nōmnājō**	tr
nates	*natis*	**nðtis**	fem
navel	*umbilicus*	**onbhlos**	mas
near	*propinquus*	**nedjos**	adI
near	*prope*	**proqēd**	ind
neck	*ceruix*	**knokos**	mas
neck	*collus*	**mongos**	fem
neck	*ceruix*	**monos**	mas
neck	*collum*	**kolsos**	mas
need	*necesse est*	**ðnkējō**	tr
needle	*acus*	**akos**	neu
neighbour	*uīcīnus*	**épijos**	adII
nest	*nīdus*	**nisdos**	mas
net	*rēte*	**grebhos**	mas
net	*nassa*	**nedsā**	fem
nettle	*urtīca*	**nedis**	fem
network	*gerra*	**gersā**	fem
never	*nunquam*	**neqom**	ind
new	*noūs*	**new(ij)os**	adI
nigh	*propinquus*	**proqos**	adI
night	*nox*	**noqtis**	neu
night bird	*strīx*	**streigs**	fem
nightmare	*somnus terrorificus*	**morā**	fem
nine	*nouem*	**newðn**	ind
ninth	*nouenus (nōnus)*	**néwðnos**	adII
nipple	*tetta*	**spēnos**	mas
nit	*ouum*	**sknidā**	fem
no	*nē*	**nē**	ind
noble	*nōbilis*	**atlos**	adI
noble	*nōbilis*	**mðglos**	adI
nobody, nothing	*nemō, nihil*	**neqis, neqid**	pron
nod	*nuō*	**newō**	intr
noisy	*strepitosus*	**bholós**	adI
nord	*septentriō*	**skouros**	mas
nose	*nārēs*	**nāsis**	fem
not	*haud*	**ghawōd**	ind
not	*nē*	**mē**	ind
not at all	*nequaquam*	**nei**	ind
nourish	*alō*	**alō**	
now	*nunc*	**nū**	
now	*nunc*	**numki**	ind
nut	*nux*	**knouks**	fem

oak	*robus*	**aigā**	fem
oak	*quercus*	**perqos**	fem
oak tree	*quercus suber*	**grōbhos**	fem
oakum	*stūpā*	**stoupā**	fem
oar	*rēmus*	**retsmos**	mas
oat	*auēna*	**awigsnā**	fem
oath	*sacramentum*	**loughjom**	neu
oath	*sacrāmentum*	**oitos**	mas
obedience	*oboedientia*	**kleustis**	fem
obey	*oboediō*	**kleusō**	tr
obscurity	*obscuritās*	**temos**	neu
observe	*seruō*	**sə́rwājō**	tr
observe	*tueor*	**téwomoi**	tr
occipital	*occipitium*	**moldhā**	fem
occupation	*cūra*	**koisā**	fem
odor	*odor*	**odós**	mas
of this side	*citer*	**kíteros**	adI
oil	*oleum*	**solpos**	mas
oint	*unguō*	**oncō**	tr
oint	*linō*	**linō**	tr
ointment	*unguen*	**oncēn**	neu
old	*senex*	**gerlós**	adI
old	*senex*	**senēks**	mas
old (to become)	*sēnēscō*	**gerō**	prog
omoplate	*scapulae*	**skubtis**	fem
on	*insuper*	**epi**	ind
on account of	*causā*	**rōdhí**	ind
once	*semel*	**semli**	ind
one	*ūnus*	**oinos**	adII
one	*ūnus*	**semos**	mas
one-eyed	*unioculis*	**kolnos**	adII
onion	*caepa*	**kaipā**	fem
onion	*caepa*	**krémusom**	neu
open	*aperiō*	**werjō**	tr
open land	*rūs*	**rows**	neu
opening	*caula*	**kaghlā**	fem

opinate	*censeō*	**kə́nsējō**	tr
opinion	*sententia*	**dhōmós**	mas
oppress	*angō*	**amghō**	tr
oppress	*opprimō*	**ipjō**	
or	*aut*	**awti**	ind
or	*ue*	**we**	encl
oral	*buccale*	**goulos**	mas
orange	*badius*	**badjos**	adI
order	*ordō*	**kerdhos**	mas
orphan	*orbus*	**orbhos**	adII
otherwise	*autem*	**awtim**	ind
otherwise	*altrinsecus*	**perti**	ind
otter	*lutra*	**wə́drā**	fem
our	*noster*	**ə́nserós**	adII
out	*ex*	**uti, ud**	neu
outdoors	*forās*	**rew**	ind
outside	*ex*	**ek(sí)**	
over	*super*	**(s)úperi**	ind
over	*super*	**uperi**	ind
over there	*ultrā*	**oltrōd**	ind
owen	*fornus*	**uqnós**	mas
owl	*noctua*	**káwonā**	fem
own	*possideō*	**ghə́bhējō**	tr
ox	*bos*	**uksōn**	and
pain	*dolor*	**edunā**	
pain	*dolor*	**kormos**	mas
paint	*pingō*	**pingō**	tr
palate	*palātum*	**stōmə́n**	neu
pale	*tenuis*	**bhlendhos**	adI
palisade	*uallum*	**edhə́r**	neu
palm	*palma*	**pə́lmā**	fem
panic	*horror*	**mórmoros**	mas
parent	*genitor*	**gentṓr**	mas
part	*pars*	**aitis**	fem
part	*pars*	**pə́rtis**	fem
parterre	*līra*	**leisā**	fem

particle	*particula*	**bhrustóm**	neu
partridge	*perdix*	**kákabā**	fem
pass	*perambulō*	**trepō**	tr
pass	*transeō*	**jāmi**	intr
passage	*trāiectiō*	**teqom**	neu
path	*sēmita*	**sentos**	neu
patient	*patiens*	**tlātjos**	adI
paunch	*pantex*	**pǝndēks**	mas
pause	*cessātiō*	**rowā**	fem
pay attention	*faveō*	**ghowējō**	tr
pea	*cicer*	**kikēr**	mas
peace	*pax*	**pags**	fem
pebble	*calculus*	**ghrowā**	fem
pee	*uriina*	**moighos**	mas
peel	*glūbō*	**gleubhō**	tr
peg	*cippus*	**kippos**	mas
penetrate	*penetrō*	**neghō**	tr
penis	*pēnis*	**bhalnós**	mas
penis	*pēnis*	**lalu**	ind
penis	*mūtō*	**moutos**	mas
penis	*pēnis*	**pesnis**	mas
penis	*pēnis*	**poutos**	mas
penthouse	*cēnaculum*	**kéliknom**	neu
penury	*lack*	**loigós**	mas
people	*populus*	**teutā**	fem
people	*uulgus*	**wolgos**	neu
pepper	*piper*	**píperi**	neu
perch	*perca*	**dhghusā**	fem
perfect	*perfectus*	**kómsqǝrtos**	adI
perform	*efficiō*	**sénumi**	tr
perhaps	*forsan*	**an**	ind
period	*aetas*	**áiwesos**	mas
permissive	*permissīiuus*	**mǝldhos**	adI
persecute	*persequor*	**wǝrnāmi**	tr
persecute	*persequor*	**jeghō**	tr
perspire	*spirō*	**spoisājō**	intr

phantom	*phasma*	**lemsos**	mas
pickaxe	*sacēna*	**sǝkesnā**	fem
piece	*fragmentum*	**pǝrsnā**	fem
pig	*porcus*	**porkos**	mas
pig	*sūs*	**sews**	mas
pig	*porcus*	**trogos**	mas
pike	*ueru*	**ceru**	neu
pile	*acerūs*	**ákeswos**	mas
pile	*sublīca*	**kolnom**	neu
pile up	*struō*	**strewō**	tr
pillage	*diripiō*	**wélumi**	tr
pillar	*sublicā*	**stobhos**	mas
pin down	*siffilō*	**gangō**	intr
pin down	*carinō*	**karnājō**	tr
pinetree	*pīnus*	**bharwos**	fem
pinetree	*abiēs*	**dhanwos**	fem
pink	*rosaceus*	**elwos**	
pinnacle	*pinaculus*	**stertos**	mas
pintle	*cnodax*	**bendlā**	mas
pipe	*canna*	**strudsmā**	fem
piss	*mingō*	**minghō**	intr
pit	*maciō*	**mākājō**	cau
pit	*scrobis*	**skrobhis**	fem
pitch	*pix*	**peiks**	fem
place	*locus*	**stānom**	neu
place	*locus*	**stlokos**	mas
place	*sinō*	**sinō**	tr
place	*condō*	**stānējō**	tr
plait	*plectō*	**plektō**	tr
plait	*plectō*	**resgō**	tr
plane	*ēfodiō*	**glabhō**	tr
planet	*planēta*	**rewis**	mas
planitiēs	*campus*	**plātom**	neu
plate	*lamina*	**stlāmǝn**	neu
platform	*catasta*	**stātlom**	neu
plea	*prex*	**preks**	fem

pleasant	*amoenus*	**seljos**	adI
pleasant	*suauis*	**swādús**	adI
pleasant	*amoenus*	**moghjos**	adI
pleasantly	*libenter*	**ghornim**	ind
plough	*arātrum*	**arātrom**	neu
plough	*arō*	**arājō**	tr
plough animal	*iūmentum*	**aghjā**	fem
plough handle	*stīua*	**steiwā**	fem
ploughshare	*uomer*	**wogsmis**	
pluck	*uellicō*	**gnebhō**	tr
plum	*prunum*	**sloiwom**	neu
plump	*crassus*	**kratsos**	
pod	*siliqua*	**gherghros**	fem
pod	*siliqua*	**skəliqā**	fem
poet	*uatēs*	**wātis**	mas
point	*punctus*	**ardis**	fem
point	*cuspis*	**glōghis**	fem
poison	*uenēnum*	**woisos**	mas
pole	*asser*	**pēlwis**	fem
pole	*pertica*	**pertā**	fem
policeman	*tresuir*	**worós**	mas
polish	*līmō*	**sleimājō**	tr
pond	*lacus*	**stagnom**	neu
ponder	*medeor*	**médomoi**	intr
poodle	*lāma*	**lāmā**	fem
pool	*stagnum*	**staknom**	neu
poor	*pauper*	**ormos**	adI
poppy	*papauer*	**mā́kōn**	mas
porridge	*puls*	**poltos**	mas
portico	*antae*	**antă̆s**	
portico	*porticus*	**pərgā**	fem
portion	*portiō*	**bhagos**	mas
position	*status*	**stətus**	mas
post	*mēta*	**mētā**	fem
post	*sparus*	**sparos**	mas
posterity	*subolēs*	**troghos**	mas

pot	*aula*	**auqslā**	fem
pot	*catīnus*	**kumbhā**	fem
potter wheel	*tornus*	**dhroghnom**	neu
pouch	*crumēna*	**makēn**	mas
pour	*fundō*	**ghundō**	cau
power	*potentia*	**galnos**	mas
powerful	*potens*	**kúwəros**	adI
praise	*laus*	**loudis**	mas
praise	*superbia*	**molpā**	fem
praise	*laudō*	**cerō**	tr
pray	*rogō*	**chedhō**	tr
pray	*precor*	**meldhō**	intr
pray	*ōrō*	**ōrājō**	tr
prayer	*prex*	**moldhos**	mas
precarious	*precārius*	**dúsōpis**	adI
preceding	*anterior*	**preistos**	adI
precipitate	*praecipitor*	**krepō**	intr
precision	*subtilitās*	**nomər**	neu
predator	*praedator*	**dhaunos**	adI
prepare	*praeparō*	**adējō**	tr
presence	*praesentia*	**weidos**	neu
present	*praesens*	**práiloghos**	adII
press	*premō*	**bhríkāmi**	tr
press	*imprimō*	**dhenghō**	tr
press	*premō*	**premō**	tr
press	*premō*	**presō**	tr
press tightly	*comprimō*	**kamō**	tr
prevail	*praeualeō*	**cínāmi**	intr
previous	*praecēdens*	**kintos**	adII
previous	*anterior*	**préwijos**	adI
price	*pretium*	**pretjom**	neu
prick	*centrum*	**kentrom**	neu
prickle	*agna*	**aknā**	fem
prickle	*spīna*	**speiksnā**	fem
priest	*flāmen*	**bhlaghmən**	neu
priest	*sacerdos*	**sákrodhots**	mas

principal	*prīmus*	**promos**	sup
productive	*fēlix*	**dhēlēiks**	adI
profession	*ars*	**kerdos**	neu
profit	*compendium*	**bhéwedā**	fem
progeny	*progeniēs*	**teukmən**	neu
promise	*spondeō*	**spondējō**	tr
promontory	*promontoriu m*	**akrom**	neu
promontory	*tumulus*	**prostos**	mas
promote	*foueō*	**káknumi**	tr
property	*possessiō*	**rentus**	fem
property	*possessiō*	**selwā**	fem
propice	*idōneus*	**sinísteros**	adI
propiety	*rēs*	**rēis**	fem
prosper	*maturō*	**mājō**	prog
protect	*tueor*	**alkējō**	tr
protect	*protegō*	**pālājō**	tr
protest	*querēla*	**glaghā́**	fem
proud	*superbus*	**bhorsos**	adI
proud	*superbus*	**meudos**	adI
prove	*probō*	**probhwājō**	tr
provide	*asportō*	**porējō**	cau
provide	*parō*	**sepō**	tr
provision	*prouisiō*	**penos**	neu
pubescent	*pūbes*	**mərjos**	mas
pulse	*erūm*	**ercom**	neu
pumice	*pūmex*	**poimēiks**	mas
punch	*pungō*	**pungō**	tr
puncture	*figō*	**dheicō**	tr
punish	*puniō*	**membhō**	tr
punishment	*poena*	**woinā**	fem
pure	*castus*	**kəstos**	adI
pure	*pūrus*	**powros**	adI
pus	*pūs*	**puwos**	neu
push	*agō*	**agō**	cau
push	*impellō*	**kelō**	tr
pustule	*pustula*	**pustlā**	fem

put	*ponō*	**dhejō**	tr
put	*pōnō*	**stelō**	tr
put forth	*prodō*	**pŕōddōmi**	tr
put in order	*ordinō*	**tagjō**	tr
put off	*exuō*	**nocējō**	cau
put on	*mentior*	**məntíjomoi**	tr
quadruped	*quadrupēs*	**qətwərpods**	adII
qualify	*qualificō*	**tādējō**	tr
queen	*regīna*	**regeinā**	fem
question	*quaestiō*	**pərkskā**	fem
quick	*celer*	**peimis**	adI
quick	*uelox*	**twərtos**	adI
quickly	*citō*	**bhersi**	ind
raffle	*sortior*	**kleutō**	tr
rag	*pannus*	**kentom**	mas
rag	*pannus*	**pannos**	mas
rage	*rabō*	**rəbhjō**	intr
rain	*pluō*	**plewō**	intr
rain	*pluuia*	**plówijā**	fem
raise	*tollō*	**təlnō**	tr
ram	*ariēs*	**agós**	mas
ram	*ariēs*	**erjos**	mas
range	*ordinō*	**kerdhō**	tr
range	*ordinō*	**réknumi**	tr
rank	*agmen*	**agmən**	neu
raven	*raucus*	**korwos**	adI
raw	*crūdus*	**ōmós**	adI
ray	*radium*	**rədjom**	neu
raze	*rādō*	**gneibhō**	tr
razor	*nouācula*	**ksnowātlā**	fem
reach	*apīscor*	**əpjō**	inc
reach	*ic(i)ō*	**aikō**	tr
reach	*ic(i)ō*	**ikjō**	tr
realise	*percipiō*	**pretō**	tr
reap	*metō*	**metō**	tr
reason	*ratiō*	**rətis**	fem

reason	*arguō*	**argujō**	tr
receive	*accipiō*	**tekō**	tr
receive	*accipiō*	**ghɔndō**	tr
recent	*recens*	**kainós**	adI
recitate	*recitō*	**spelō**	intr
reckon	*reor*	**rēmoi**	neu
reckon	*computō*	**puwējō**	tr
recline	*accumbō*	**kumbō**	intr
recommend	*suādeō*	**swādējō**	cau
red	*rūber*	**dherghos**	adI
red	*ruber*	**rudhrós**	adI
red (-haired)	*rūfus*	**reudhos**	adI
red ochre	*minium*	**miljom**	neu
reduce	*minuō*	**mínumi**	cau
region	*pagus*	**pagos**	mas
rejoice	*gaudeō*	**gaudhējō**	intr
rejoice oneself	*delector*	**túsjomoi**	intr
relative	*familiāris*	**pāsós**	mas
relative	*familiāris*	**sweljos**	mas
relax	*requiescō*	**remō**	intr
relief	*podium*	**podjom**	neu
religion	*religiō*	**perístānom**	neu
remain	*maneō*	**mɔnējō**	den
remain (water)	*remaneō*	**stagō**	den
remaining	*reliquus*	**loiqós**	adII
remember	*memini*	**mímnāskō (memna)**	intr
remnant	*reliquiae*	**atiloiqos**	mas
renew	*nouō*	**newājō**	tr
renowned	*nōbilis*	**mōros**	adI
rent	*locō*	**keusō**	tr
repair	*sarciō*	**sɔrkijō**	tr
repellent	*repellens*	**aghlós**	adI
replication	*effigĭēs*	**aimom**	neu
reprove	*orbiurgō*	**kudājō**	intr
reputation	*reputātiō*	**kléumɔntom**	neu
request	*quaerō*	**áisoskō**	tr

require	*postulō*	**bhedhō**	intr
residence	*sedēs*	**sedos**	neu
resin	*bitūmen*	**cetus**	mas
resin	*resīna*	**peitus**	mas
resonate	*tonō*	**tónāmi**	intr
resound	*personō*	**boukājō**	intr
resound	*resonō*	**gewō**	intr
respect	*uereor*	**wɔréejomoi**	tr
rest	*requiescō*	**ermi**	intr
rest	*quiēscō*	**qejēskō**	intr
rest	*requiescō*	**tɔlijō**	den
restrict	*obstringō*	**strengō**	
result	*ēueniō*	**tenkō**	prog
retain	*retineō*	**dhermi**	tr
retaliation	*ulciscātiō*	**qoiná́**	fem
retire	*sēcēdō*	**spleighō**	intr
revenge	*represalia*	**apóqoitis**	fem
rheum	*grāmiae*	**grammā**	fem
rheum	*lippa*	**lippā**	fem
rhyme	*rīma*	**reimā**	fem
rib	*costa*	**kostā**	fem
ribbon	*taenia*	**tenā**	fem
rich	*dīues*	**deiwots**	adI
riches	*ops*	**ops**	mas
ride	*equitō*	**reidhō**	tr
right	*dexter*	**déksteros**	adII
right	*rectus*	**regtós**	mas
right way	*uia recta*	**jeunis**	fem
rigid (to be)	*stupeō*	**stupējō**	den
ring	*anus*	**anos**	mas
ring	*anus*	**krenghos**	mas
rite	*ritus*	**admɔn**	neu
river	*flūius*	**dānus**	mas
river ford	*uadum*	**wadhom**	neu
road	*uia*	**kelus**	fem
roam	*uagor*	**wɔgā́jomoi**	intr

roar	*gemitus*	**dhrēnos**	mas
roar	*rugiō*	**rugijō**	intr
roaring	*fremitus*	**ghromos**	mas
rob	*fūror*	**sterō**	tr
rock	*rūpēs*	**kárrēkā**	fem
rock	*saxum*	**ondos**	neu
rock	*rūpēs*	**pelsā**	fem
rock	*trepidō*	**kə́rdjō**	intr
rod	*uirga*	**cosdhos**	mas
rod	*lituus*	**litwos**	mas
rod	*ferula*	**slatā**	fem
roebuck	*gazella*	**jorkos**	mas
roe-deer	*alcēs*	**alkis**	mas / fem
roof	*tectus*	**robhos**	mas
room	*cubiculum*	**kētjā**	fem
root	*rādix*	**rādēiks**	fem
root	*rādix*	**wə́rdjā**	fem
rope	*restis*	**resgtis**	fem
rope	*retinaculum*	**sognos**	mas
rotten	*cariēs*	**kə́rjēs**	fem
rough	*rudis*	**bhorcos**	adI
rough	*raucus*	**brenghos**	adI
rough	*rudis*	**də́mpus**	adI
row	*rēmō*	**rējō**	intr
rowan tree	*sorbus*	**sorbhos**	fem
rub	*mulceō*	**melkō**	tr
rub	*teirō*	**terjō**	tr
rubber	*glūtinum*	**gloidos**	mas
rubbish	*immunditia*	**ceudhos**	neu
rubbish	*sordēs*	**swordis**	fem
rudder	*tēmō*	**oisjā**	fem
rude	*rudis*	**rudlós**	adI
ruin	*ruina*	**réwesnā**	fem
ruin	*ruinō*	**rikjō**	tr
rule	*imperō*	**wə́ldhējō**	tr
ruler (in topography)	*uirga*	**stolbos**	mas
rūmen	*rūmen*	**reusmə́n**	neu
ruminate	*rūminō*	**reusmnājō**	intr
rummage	*rūspor,*	**ruspā́jomoi**	
rumor (to produce)	*rūmorem faciō*	**reumi**	
run	*currō*	**bhecō**	intr
run	*currō*	**dhewō**	
run	*currō*	**dremō (dídrāmi)**	intr
run	*currō*	**kə́rsō**	tr
run	*currō*	**retō**	intr
run around	*circumcurrō*	**dhreghō**	intr
run away	*ēcurrō*	**teqō**	intr
rush	*agitātiō*	**sretus**	mas
rust	*rōbīgō*	**roudhstos**	mas
rye	*sēcale cereāle*	**wə́rughis**	mas
ryegrass	*lolium*	**airā**	fem
sack	*saccus*	**coinos**	mas
sacrifice	*sacrificium*	**sákrodhokjom**	neu
sad	*maestus*	**creughos**	adI
sad	*tristis*	**gorgós**	adI
sad	*tristis*	**treistis**	adI
sadness	*tristitia*	**gorgnóm**	neu
sailor	*nauta*	**nawāgós**	epic
saint	*sanctus*	**kadros**	adII
salary	*sālārium*	**misdhom**	neu
saliva	*salīua*	**saleiwā**	fem
salt	*sāl*	**sāli**	neu
salt	*sallō*	**saldō**	cau
sanctuary	*sanctuārium*	**némētom**	neu
sand	*sabulum*	**samdhos**	mas
sand/gravel	*saburra*	**pēnsús**	mas
sandal	*sandalia*	**pedlom**	neu
saucer	*patera*	**pə́terā́**	fem
say	*dīcō*	**seqō**	tr
scabies	*scabiēs*	**skabhjēs**	fem
scald-crow	*corūs*	**bhodhwos**	mas

scale	*squāma*	**bhrounóm**	neu
scandal	*scandalum*	**bhloskos**	mas
scant	*insignificans*	**mənwos**	adI
scanty	*exiguus*	**sneitos**	adI
scar	*cicatrix*	**kíkātrēiks**	fem
scar	*cicātrix*	**krenktis**	fem
scatter	*dispergor*	**skedō**	intr
scene	*pulpitus*	**polpos**	mas
scold	*obiurgō*	**lājō**	tr
scorch	*accendō*	**dáwnumi**	tr
scrape	*abrādō*	**gneidō**	tr
scrape off	*abrādō*	**greumō**	tr
scrape out	*abrādō*	**reubō**	intr
scratch	*charaxō*	**gərbhō**	tr
scratch	*scabō*	**gredō**	tr
scratch	*ērōdō*	**meukō**	tr
scratch	*scabō*	**skabhō**	tr
scrath out	*desculpō*	**meilō**	tr
scream	*clamō*	**waplājō**	den
scythe	*falx*	**dhēlgs**	fem
sea	*mare*	**mari**	neu
sea	*mare*	**tríjətos**	mas
seabream	*sparus aurata*	**atis**	fem
seal	*phoca*	**swelāks**	mas
seam	*sūtūra*	**sewmən**	neu
season	*tempus*	**jōrom**	neu
seat	*sella*	**sedlā**	fem
seat	*solium*	**sodjom**	neu
second	*secundus*	**dwóteros**	adII
second	*secundus*	**éteros**	adII
second	*secundus*	**ónteros**	adII
secret	*secrētum*	**rounā**	fem
secrete	*abdō*	**músnāmi**	tr
secretion	*secrētiō*	**seimən**	neu
sect	*secta*	**wereinā**	fem
sedge	*ulua*	**olwā**	fem
sedge	*spartum*	**sesqos**	fem
see	*uideō*	**dərkō**	tr
see	*uideō*	**oqō**	tr
see	*uideō*	**welō**	tr
see	*uideō*	**widējō**	tr
seed	*sēmen*	**sēmən**	neu
seek	*sāgiō*	**sāgijō**	tr
seen	*uisus*	**dərktis**	fem
seesaw	*oscillō*	**sweigō**	prog
seeside	*litus*	**leitos**	neu
seize	*captō*	**ghreibhō**	tr
self	*sui*	**sewe**	igenes
sell	*uēnum*	**wesnom**	neu
send	*mittō*	**smeitō**	tr
send	*mittō*	**sontējō**	cau
send away	*amandō*	**īljō**	tr
separate	*sē*	**wī**	ind
separate	*sēparō*	**derō**	tr
serpent	*natrix*	**natrēiks**	fem
servant	*serūs*	**ambhíqolos**	mas
serve	*fungor*	**bhúncomoi**	intr
service	*seruitium*	**upóstānom**	neu
set	*instaurō*	**staurējō**	tr
set out	*orior*	**əríjomoi**	inc
settle	*sēdō*	**sēdājō**	cau
seven	*septem*	**septəm**	ind
seventh	*septimus*	**séptəmos**	adII
sew	*suō*	**sewō**	tr
sewer's awl	*sūbula*	**sūdhlā**	fem
shackle	*uinciō*	**winkijō**	tr
shadow	*umbra*	**skotos**	mas
shake	*agitor*	**kreitsō**	intr
shake	*agitō*	**krotjājō**	tr
shake	*quatiō*	**qətjō**	tr
shaker	*mixtarium*	**mənkstrom**	neu
shall	*debeō*	**skelō**	tr

shameful	*pudendus*	**kaunós**	adI
sharing	*socius*	**sokjos**	mas
sharp	*acer*	**akris**	adI
sharp	*acūtus*	**gigrós**	adI
sharp	*picans*	**pikrós**	adI
sharpen	*exacuō*	**(kí)kēmi**	tr
shatter	*disrumpō*	**bhresjō**	tr
shave	*abrādō*	**ksnowājō**	tr
shave	*rādō*	**rādō**	rac
shave	*tondeō*	**tondējō**	tr
sheath	*uagīna*	**wageinā**	fem
sheep	*ouis*	**owis**	fem
shelf	*pluteus*	**skolpos**	mas
shell	*concha*	**konkhā**	fem
shepherd	*pāstor*	**pōimōn**	mas
sherd	*scrūpus*	**skroupos**	mas
shield	*tegō*	**rebhō**	tr
shield	*scūtum*	**skoitom**	neu
shift	*permutātiō*	**mejtis**	fem
shimmer	*fulgeō*	**bhəlgējō**	den
shin-bone	*tībia*	**teibhjā**	fem
shine	*splendeō*	**erqō**	intr
shine	*luceō*	**bhrēgō**	intr
shine	*splendeō*	**dhelō**	intr
shine	*luceō*	**lukējō**	den
shine	*niteō*	**nitējō**	den
shine	*luceō*	**skejō**	den
ship	*nāuis*	**nāws**	fem
ship	*nāuis*	**plowós**	mas
shirt	*camisia*	**kərdsus**	fem
shit	*merda*	**coucis**	fem
shit	*excrēmentum*	**dherghs**	fem
shit	*merda*	**skerdā**	fem
shit	*merda*	**smerdā**	fem
shit	*stercus*	**sterkos**	neu
shit	*stercus*	**sterkos**	neu

shiver	*tremō*	**tresō**	
shoe	*calceus*	**kerpjos**	mas
shoot	*disparō*	**selgō**	tr
shoot	*ēmittō*	**skeudō**	tr
shore	*ripa*	**ắperos**	mas
short	*breuis*	**mərghús**	mas
shoulder	*umerus*	**omsos**	mas
shoulder-blades	*scapulae*	**pletjā**	fem
show	*monstrō*	**deikō**	tr
shrew	*sorēx*	**sworēx**	
shriek	*crociō*	**krokijō**	intr
shuttle	*agitō*	**kristājō**	cau
sibling	*fraterculans*	**səmópətōr**	epi
sickle	*falcicula*	**sərpā**	fem
side	*latus*	**splighstós**	mas
side	*latus*	**stlātos**	mas
sieve	*crībrum*	**kreidhrom**	neu
sieve	*cōlum*	**sējdhlom**	neu
sieve	*crinō*	**krinō**	tr
sieve	*cōlō*	**sējō**	tr
silent	*silens*	**tausos**	adI
silent (to be)	*sileō*	**silējō**	intr
silent (to be)	*taceō*	**təkējō**	inc
silently	*silenter*	**tausnim**	ind
silver	*argentum*	**árgəntom**	neu
similar	*similis*	**səmlis**	adI
simple	*merus*	**meros**	adI
sincere	*sincērus*	**əndwojos**	adI
sing	*canō*	**kanō**	intr
sing	*canō*	**senchō**	intr
single	*ūnicus*	**óinoikos**	adII
sink	*mergō*	**mergō**	cau
sink	*mergō*	**senqō**	inc
sip	*lambō*	**ləmbō**	tr
sip	*sorbeō*	**sorbhējō**	tr
sir		**arjos**	

sir	*dominus*	**audhos**	mas
sister	*soror*	**swesōr**	fem
sister-in-law	*glōs*	**glōs**	fem
sister's son	*sobrīnus*	**swesreinos**	mas
sit	*sedeō*	**sedējō**	den
sit down	*sīdō*	**sisdō**	intr
site	*situs*	**loghjom**	neu
six	*sex*	**seks / sweks**	ind
sixth	*sextus*	**sekstos**	adII
skeletton	*larua*	**skroutos**	mas
skillful	*habilis*	**dhabhros**	mas
skin	*cutis*	**kutis**	mas
skin	*pellis*	**pelnis**	fem
skirt	*falda*	**baitā**	fem
slack	*ēneruis*	**mlīnós**	adI
slanting	*obliquus*	**loksós**	adI
slate	*ardesia*	**lēwanks**	fem
slave	*seruos*	**dōsos**	mas
sleep	*somnus*	**swopnos**	mas
sleep	*dormiō*	**sesmi**	
sleep	*dormiō*	**swepō**	dur
sleeper	*traversa*	**swelom**	neu
slender	*gracilis*	**kərklos**	adI
slender	*macer*	**makrós**	adI
slip	*labor*	**slábomoi**	intr
slip	*prolabor*	**sleibō**	
slip	*prolabor*	**sleubō**	inc
slip in	*irrēpō*	**sméughnumi**	tr
sloe	*prūnus spinōsa*	**dherghnos**	fem
slope	*clinō*	**klóināmi**	cau
slow	*lentus*	**məlsos**	mas
slow	*tardus*	**tárudos**	adI
small	*parūs*	**alpos**	adI
small	*exigūs*	**gherús**	
small	*paruus*	**paulos**	adI
small pillar	*columella*	**skolmā**	fem

smaller	*minor*	**meiwijós**	adI
smell	*oleō*	**bhrðgrājō**	den
smell	*olō*	**odējō**	tr
smell	*olfaciō*	**sísghrāmi**	tr
smell good	*fragrō*	**swekō**	intr
smile	*arrideō*	**smejō**	intr
smog	*turbulentia*	**sneudhs**	fem
smoke	*fūmus*	**dhoumos**	mas
smoke	*fūmus*	**smoughos**	mas
smoke	*fūmō*	**smeughō**	intr
smooth	*glaber*	**rastós**	adI
smooth	*explanō*	**sleigō**	
snail	*cochlea*	**sleimāks**	mas
snake	*anguis*	**enchis**	fem
snake	*coluber*	**kélodhros**	mas
snake	*serpens*	**snoghā**	
snappy	*transpuntorius*	**swerwos**	adI
snare	*laqueus*	**merghā**	fem
snatch	*rapiō*	**rðpjō**	tr
sneeze	*sternuō*	**stérnumi**	intr
snore	*sternuō*	**srenkō**	intr
snore	*stertō*	**stertō**	intr
snow	*nix*	**sneighs**	fem
snow	*ninguit*	**sníncheti**	den
so	*ita*	**ita**	ind
so	*etenim*	**mān**	ind
so	*num*	**nom**	ind
so many	*tot*	**tot(j)ŏs**	adII
so much	*tantus*	**tā́wðntos**	pron
sob	*hippitō*	**gheipō**	intr
soft	*mollis*	**məldus**	adI
soften	*molliō*	**məlduwijō**	tr
softened	*ēmollītus*	**məldsnos**	adI
soil	*solum*	**bhudhmðn**	neu
soldier	*milēs*	**neros**	mas
solid	*solidus*	**dhobos**	adI

solid	*solidus*	**māterós**	mas
solidify	*solidificō*	**greutō**	intr
someone	*quisquis*	**neqos**	pron
someone	*ecquis*	**edqis, edqid**	pron
son	*filius*	**sūnus**	mas
song	*carmen*	**kanmən**	neu
son-in-law	*gener*	**gemros**	mas
soon	*mox*	**moksi**	ind
soot	*fūligo*	**dhoulis**	
soot	*fuligō*	**sotos**	mas
sorrow	*maestitia*	**croughnos**	adI
soul	*animus*	**etmən**	neu
sound	*sonitus*	**dhwonos**	mas
sound	*clangō*	**klən̥gō**	intr
sound	*sonō*	**swénāmi**	intr
soup	*ius*	**supā**	fem
sour	*amārus*	**amrós**	adI
sour	*acerbus*	**sauros**	adI
sow	*porca*	**trogjā**	fem
sow	*serō*	**segō**	tr
sow	*serō*	**sisō**	tr
sowing	*segēs*	**segēts**	fem
space	*spatium*	**ghewos**	es
spade	*pāla*	**laghā**	fem
sparrow	*parra*	**parsā**	fem
sparrow	*parra*	**sparwos**	mas
speak	*for*	**bhāmoi**	intr
speak	*loquor*	**tlóqomoi**	intr
speak	*loquor*	**wíweqmi**	tr
spear	*gaesum*	**ghaisom**	neu
spear	*hasta*	**lostos**	mas
spearshaft	*hasta*	**ghastā**	fem
speckled	*uarius*	**bhərktos**	adI
speckled	*uarius*	**mərktos**	adI
speech	*contiō*	**əgtis**	fem
speechless	*mutus*	**muttis**	adI

spelt	*ador*	**ados**	neu
spelt	*alica*	**alēiks**	
spend	*impendō*	**neudō**	tr
spend the night	*pernoctō*	**awō**	dur
spill	*effundō*	**seikō**	tr
spill	*effundō*	**sujō**	tr
spin	*neō*	**snēmi**	tr
spit	*spuō*	**spewō**	intr
splash	*respergō*	**persō**	intr
spleen	*lien*	**spelghā**	fem
splendid	*splendidus*	**ghlēiwos**	adI
split	*fragmentum*	**dərnos**	mas
split	*abiungō*	**delō**	tr
split	*scindō*	**skəljō**	tr
split	*scindō*	**skerjō**	tr
split	*scindō*	**skindō**	tr
split	*secō*	**spleidō**	tr
spoil	*ruinō*	**deusō**	tr
spoon	*ligula*	**leiglā**	fem
spot	*macula*	**kālis**	fem
spray	*ros*	**ros**	mas
spread	*sternō*	**stərnō**	tr
spread	*mānō*	**mānājō**	intr
spring	*fons*	**lendhā**	fem
spring	*uēr*	**wēsər**	neu
spring	*saliō*	**səlíjomoi**	inc
spring	*scatō*	**skatō**	inc
spring	*exsultō*	**skerō**	intr
sprout	*germinō*	**geimō**	intr
sprout	*uireō*	**wisējō**	den
spurn	*contemnō*	**tembhō**	tr
square	*quadrum*	**qəddrom**	neu
squeak	*pipiō*	**pipjājō**	intr
squeeze	*exprimō*	**wēskō**	tr
stab	*baculum*	**pinjos**	neu
stab	*talea*	**tálejā**	fem

stable	*stābilis*	**stārós**	adI
stain	*maculō*	**dherkō**	cau
stain	*macula*	**smitlā**	fem
stain	*maculō*	**sméenumi**	inc
stalk	*calamus*	**kóldmos**	mas
stalk	*tibia*	**tibhjā**	neu
stall	*stābulum*	**stādhlom**	neu
stamp on	*conculcō*	**stembhō**	tr
stand	*stō*	**(sí)stāmi**	intr
standing post	*statiō*	**stətis**	fem
star	*stella*	**sterlā**	fem
star	*stella*	**steros**	mas
star	*sīdus*	**sweidos**	neu
stare	*intueor*	**stelpō**	intr
start	*functionem incipiō*	**dherbhō**	inc
stay	*maneō*	**wesō**	den
steady	*firmus*	**dhərmos**	adI
steal	*clepō*	**klepō**	tr
steal	*fūror*	**tājō**	tr
steam	*uapor*	**bholos**	mas
steam up	*uaporō*	**dhemō**	intr
steep	*ardūs*	**ərdhwos**	adI
steep	*clīūs*	**kloiwos**	adI
step	*gradus*	**cāmən**	neu
step	*uadō*	**ghenghō**	intr
step	*gredior*	**ghrədjomói**	dur
sterile	*sterilis*	**stérolis**	adI
stick	*pilum*	**ghaisom**	neu
stick	*uirga*	**spōnos**	mas
stick	*stīpēs*	**steipēts**	fem
stick	*pālus*	**stupos**	mas
stick	*pālus*	**sworos**	mas
stick	*haereō*	**ghaisējō**	den
stick	*adhaerō*	**glínāmi**	intr
stick	*adhaerō*	**koljō**	tr
stick	*haereō*	**limpō**	den

stick	*instigō*	**stigājō**	tr
sticky	*glutinoosus*	**gloijós**	adI
still	*dum*	**dom**	ind
stink	*foeteō*	**smerdō**	intr
stir up	*torqueō*	**mendhō**	tr
stock	*dēpositō*	**kreumi**	tr
stone	*lapis*	**akmōn**	mas
stone	*lapis*	**lədpods**	mas
stone	*saxum*	**sədksom**	neu
stool	*scamnus*	**skabhnom**	neu
stop	*dētineō*	**stāwō**	tr
stop	*strigō*	**strigājō**	intr
stop up	*obtuurō*	**teurō**	tr
stork	*ciconia*	**kíkōnjā**	fem
storm	*imber*	**ədmbhros**	mas
storm	*procella*	**twoimos**	mas
story	*historia*	**kleutrom**	neu
strain	*adnītor*	**kemō**	intr
strainer	*colum*	**rēti**	neu
strap	*infula*	**telsmən**	neu
strap	*lōrum*	**wəlōrom**	
straw	*palea*	**pálejā**	fem
stream	*flūmen*	**bhleugsmən**	neu
stream	*amnis*	**bhoglā**	fem
stream	*cursus*	**sroumos**	
street	*uia*	**stoighos**	mas
strenght	*uis*	**belom**	neu
strength	*uis*	**weis**	neu
strengthen	*corroborō*	**dherghō**	tr
stretched	*tentus*	**tənts**	adI
strew	*spargō*	**spargō**	tr
strick	*fūnis*	**dhōunis**	mas
strike	*tundō*	**bhínāmi**	tr
strike	*mulceō*	**bhreukō**	tr
strike	*percellō*	**keldō**	tr
strike	*plangō*	**pləngō**	tr

strike	*tundō*	**tundō**	tr
strike	*caedō*	**wedhskō**	tr
string	*corda*	**strengom**	
string	*fūnis*	**tentrom**	neu
stroll	*ambulō*	**alā́jomoi**	intr
strom	*fluxus*	**srewtis**	fem
strong	*robustus*	**bélowents**	neu
strong	*robustus*	**melos**	adI
strong	*robustus*	**nertos**	adI
study	*studium*	**stoudjom**	neu
stuff	*farcio*	**bhərkjō**	tr
stumble	*titubō*	**stemō**	intr
stupid	*stultus*	**mlākós**	adI
stupid	*mōrus*	**mōros**	adI
stutter	*balbutiō*	**lepō**	intr
succeed	*eueniō benē*	**bheughō**	perf
success	*euentus*	**kobom**	neu
such	*tālis*	**tālis**	adII
suck	*sūgō*	**seugō**	tr
suck	*sūgō*	**dheimi**	tr
suck	*sūgō*	**mendō**	tr
sudden	*repentinus*	**abhnos**	adI
suffer	*patior*	**pətjomói**	tr
suitor	*procus*	**prokós**	mas
sulphur	*sulpur*	**swelplos**	neu
summer	*aestus*	**ghrensmos**	mas
summer	*aestas*	**samos**	mas
summit	*cacumen*	**bhroigos**	mas
summit	*culmen*	**kolmən**	neu
sun	*sōl*	**sā́wel(jos)**	
superior	*superior*	**(s)úperos**	adI
supplementary	*complementārius*	**wíteros**	adI
support	*destina*	**leghtrom**	mas
support	*fulciō*	**bhəlkjō**	tr
support	*sustineō*	**steutō**	tr
surname	*cognōmen*	**kómnōmən**	neu

swamp	*palus*	**palwóds**	mas
swan	*olor*	**elōr**	mas
sway	*oscillō*	**kēwējō**	intr
sweat	*sūdō*	**swoidājō**	intr
sweet	*dulcis*	**dəlkus**	adI
swell	*tumefaciō*	**bhreusō**	cau
swell	*tumescō*	**pankō**	intr
swell	*salum*	**salom**	neu
swell	*tumefaciō*	**swelājō**	tr
swell	*turgeō*	**turgējō**	den
swelling	*tumōr*	**cotlós**	mas
swelling	*turgentia*	**keulom**	neu
swelling	*pannus*	**panknos**	
swelling	*papula*	**paplā**	fem
swelling	*turgentia*	**pounā**	fem
swift	*rapidus*	**ōkús**	adI
swim	*nō*	**snāmi**	intr
swindle	*dēcrēscō*	**swendhō**	prog
sword	*ensis*	**ənsis**	mas
sword	*gladius*	**kladjos**	mas
syrup	*dēfrutum*	**bhrwtom**	
table	*tabula*	**speltā**	
tablet	*tabella*	**klāros**	mas
tablet	*līra*	**loisā**	fem
tail	*cauda*	**doklom**	mas
tail	*caudula*	**dumbos**	mas
tail	*cauda*	**ersā**	fem
tail	*cauda*	**ersábhaljom**	neu
tail	*cauda*	**pukos**	mas
take	*emō*	**emō**	tr
take	*emō*	**labhō**	tr
take care	*cūrō*	**swerghō**	tr
take possession	*potior*	**áinumoi**	tr
talk	*garriō*	**gálgaljō**	intr
talk	*garriō*	**garsijō**	intr
tame	*cicur*	**kékuros**	adI

tame	*domō*	**dómāmi**	tr
taste	*gustus*	**geustis**	fem
taste	*gustō*	**gusnō**	tr
team	*squadra*	**lāwós**	mas
tear	*lacrima*	**dakrus**	fem
tear	*lacerō*	**lədkesājō**	cau
tear	*rōdō*	**rōdō**	tr
tear off	*uellō*	**weldō**	tr
tearing	*lacerātiō*	**lədkós**	mas
teat	*tetta*	**tettā**	fem
technique	*ars*	**teksnā**	fem
teeth	*dentes*	**gombhos**	mas
tell	*narrō*	**jekō**	tr
tell	*narrō*	**wedō**	tr
tell off	*obiurgātiō*	**lā́mədntom**	neu
temple	*templum*	**temlom**	neu
temple	*tempus*	**tenjom**	neu
ten	*decem*	**dekədm**	ind
tendon	*tendō*	**kenklom**	
tendril	*cincinnus*	**olgjā**	fem
tension (engine)	*tormentum*	**tórkmədntom**	neu
termite	*tarmes*	**tədrmos**	mas
terrible	*terrens*	**ghouros**	adI
terror	*terror*	**tersós**	mas
that	*ut*	**ei**	ind
that	*ille illa illud*	**elne elnā elnod**	
that one	*iste*	**oisos**	adII
that, the one that	*is quis*	**jos (je), jā, jod**	rel
the other one	*alter*	**álteros**	adII
then	*deinde*	**ədndha**	ind
then	*tum*	**tom**	ind
then	*tunc*	**tom-ke**	ind
there	*ibī*	**idhei**	ind
therefore	*ergō*	**ar**	ind
therefore	*propterea*	**tori**	ind
thick	*densus*	**dədnsus**	adI
thigh	*poples*	**morjods**	mas
thigh	*perna*	**touknā**	fem
thin	*flaccus*	**bhlakkos**	adI
thin	*tenuis*	**speimis**	adI
thin	*tenuis*	**tədnus**	adI
thing	*rēs*	**weqtis**	fem
think	*cōgitō*	**sədntējō**	
thinnen	*tenuefaciō*	**kakō**	cau
third	*tertius*	**tritjos**	adII
thirst	*sitis*	**tədrstis**	fem
this	*hic haec hoc*	**ghei-ke ghāi-ke ghod-ke**	
this	*is, ea, id*	**is, id**	pron
this	*hic hae hoc*	**ke kā kod (eke ekā ekod)**	
this	*iste ista istud*	**se/sos sā/sī tod**	
thorn	*spīna*	**sqijā**	fem
thorn	*spīna*	**tədrnā**	fem
thousand	*mille*	**smeighsli**	neu
thrash	*studeō*	**studējō**	den
thread	*quālus*	**koreibs**	mas
threaten	*minor*	**tercō**	tr
threatening	*minax*	**torcós**	adI
three	*trēs*	**trejes trija trísores**	adII
three in a go	*trīnī*	**trisnôs**	
three times	*ter*	**trĩs**	ind
throat	*guttur*	**bhədrugs**	mas
throat	*guttur*	**gutədr**	mas
through	*trāns*	**trāntis**	ind
throw	*iaceō*	**jədkējō**	den
throw	*iaciō*	**supājō**	tr
throw away	*abiciō*	**celō**	tr
thrush	*turdus*	**tədrsdos**	mas
thumb	*pollēx*	**polnēks**	mas
thunder	*tonitrus*	**tontrom**	neu
thunder	*tonitrum*	**torsmədn**	neu
thunderbolt	*fulmen*	**meldhjā**	

thurify	*turificō*	**kodējō**	tr
thus	*sīc*	**seike**	ind
tick	*rihipicephalus*	**deghā**	fem
tick	*ricinus*	**rekā**	
tile	*tegula*	**teglā**	fem
time	*tempus*	**daitis**	fem
time	*uix*	**qðrtus**	mas
time	*tempus*	**tempos**	neu
time	*tempus*	**wetos**	neu
time before dawn	*antelucānum*	**ánksitjom**	neu
tire	*fatigō*	**lðnchō**	cau
tired	*lassus*	**cðlēnós**	adI
to	*ad*	**ana**	ind
to another place	*aliō*	**áljote**	ind
today	*hodie*	**edjēw**	ind
toga	*toga*	**togā**	fem
together	*cunctim*	**sðm**	ind
tomb	*sepulcrum*	**sépeltrom**	neu
tomorrow	*cras*	**krasi**	ind
tongue	*lingua*	**denchā**	fem
tongue-tied	*balbus*	**balbos**	adI
tool	*instrumentum*	**kaplos**	mas
tooth	*dens*	**dentis**	mas
top	*turbēn*	**kōnos**	mas
torch	*fax*	**chēks**	fem
torch	*taeda*	**dáwētā**	fem
torment	*cruciō*	**cedhō**	tr
torpid (to be)	*torpeō*	**tðrpējō**	den
tortoise	*testudō*	**ghelus**	fem
torture	*tormentō*	**rigjō**	tr
totality	*integritās*	**solwotāts**	fem
touch	*commoueō*	**krēwō**	tr
touch	*tangō*	**palpājō**	tr
touch	*tangō*	**tðngō**	tr
tough	*rudis*	**raukos**	adI

towards	*uersus*	**anta**	ind
towards	*uersus*	**poti**	ind
towards there	*eō*	**totrēd**	ind
towards this side	*citrō*	**kitrōd**	
towel	*mantellum*	**tergslom**	neu
tower	*turris*	**tursis**	fem
tower	*ēmineō*	**mðnijomoi**	omc
town	*oppidum*	**dounom**	neu
track	*indāgō*	**pentō**	tr
traitor	*próditor*	**pródðtŏr**	adII
trap	*laciō*	**lðkjō**	
trap	*pedica*	**segnom**	neu
trap	*capiō*	**ségnumi**	tr
travel	*iter facere*	**kelujō**	intr
tread	*calcō*	**spðrāmi**	
treat	*consuēscō*	**drewō**	tr
tremble	*tremō*	**tremō**	dur
trestle	*uara*	**stoghos**	mas
trouble	*cūra*	**kādos**	neu
trouble	*inquietō*	**oghlējō**	cau
trough	*potārium*	**aldhōn**	mas
trousers	*pantalōnus*	**skousā**	fem
trout	*tructa*	**perknā**	fem
true	*uērus*	**wēros**	adI
trunk	*truncus*	**stðmnos**	mas
trunk	*stirps*	**stērps**	mas
trust	*fīdō*	**bheidhō**	tr
try	*cōnōr*	**kōnā́jomoi**	inc
tube	*conductus*	**aulos**	fem
tube	*conductus*	**rebhrus**	mas
tuff of hair	*caesariēs*	**wðltis**	fem
tunic	*tunica*	**ruktus**	mas
tunnel	*cuniculus*	**bolkos**	mas
turban	*tiara*	**wosis**	mas
turfgrass	*agrostis*	**smelgā**	fem
turkey	*pavō*	**téturos**	mas

turmoil	*tumultus*	**túmolos**	mas
turn	*gyrō*	**derbhō**	intr
turn	*reuertor*	**kwerpō**	inc
turn	*gyrescō*	**swerbhō**	inc
turn	*torqueō*	**torqējō**	cau
turn	*uertō*	**wərtō**	tr
turn	*uoluō*	**welwō**	tr
turn around	*circumeō*	**witājō**	intr
turned aside	*perperām*	**pérperənks**	ind
turnip	*rāpum*	**rāpom**	neu
twenty	*uigintī*	**dwidkəmtói**	adII
twin	*geminus*	**jemós**	neu
twisted	*tortus*	**lordós**	adI
two	*duo*	**dwou, dwāu, dwou**	adII
two each	*bīnī*	**dwīsnōs**	lois
two times	*bis*	**dwīs**	lois
udder	*ūber*	**ūdhər**	neu
udder	*ūber*	**ūdhros**	adI
ugly	*foedus*	**bhoidhos**	adI
ugly	*foedus*	**bhoidos**	neu
ugly	*turpis*	**tərrpis**	adI
un-	*in-*	**ən**	ind
unbind	*luō*	**luwō (lewō)**	tr
uncle	*avunculus*	**áwontlos**	mas
uncle	*patruus*	**pətrujós**	mas
under	*sub*	**sup**	ind
under	*sub*	**upo**	ind
underly	*inferior*	**əndherós**	adI
understand	*intellegō*	**peumi**	tr
unexpected	*necopiinus*	**nekopīnós**	mas
unfair	*iniustus*	**ənjoustos**	adI
union	*coniunctiō*	**kómjougos**	mas
unjustice	*iuiuria*	**ənjousjom**	neu
unknown	*ignōtus*	**əngnōtós**	adI
unmade	*infectus*	**əndhētós**	adII
unmuddy	*illimis*	**ənsloimis**	adII

until	*tenus*	**teni**	ind
uppest	*summus*	**(s)upmos**	sup
use	*ūsus*	**bhreugtis**	fem
uter	*úterus*	**úderos**	mas
valley	*uallis*	**klopnis**	fem
value	*ualor*	**wertos**	mas
vanish	*abeō*	**ghdhínāmi**	inc
vegetable	*olus*	**chelwos**	neu
vegetation	*uiridia*	**dhalnā**	fem
veil	*rīca*	**wəreikā**	fem
veil	*obumbrō*	**gheughō**	tr
vein	*uēna*	**weisnā**	fem
venerate	*ueneror*	**áidomoi**	tr
very	*per-*	**abhro-**	prae fix
vessel	*fiscus*	**bhidhós**	mas
vessel	*collectāculum*	**kaukos**	mas
veteran	*ueterānus*	**gerwós**	mas
vibrate	*uibrō*	**wibrājō**	cau
victim	*uictima*	**wéiktomā**	fem
victory	*uictoria*	**seghos**	mas
vigor	*alacer*	**ghoilos**	adI
vigor	*uigor*	**wərgā**	fem
vigorous	*uiridis*	**súnoros**	mas
village	*uīcus*	**woikos**	mas
vine	*uītis*	**weitis**	fem
vine-leaf	*pampinus*	**pámponos**	mas
violent	*uiolentus*	**twoisós**	adI
violet	*liueus*	**sleiwos**	adI
virginal	*uirginālis*	**poughos**	adI
virtue	*decus*	**dekos**	neu
vis-à-vis	*aduersum*	**seqi**	ind
viscose	*conglūtīnōsus*	**cobhōn**	adI
vision	*conspectus*	**dərktis**	fem
visitor	*uisitātor*	**setis**	epic
vivid	*uiuidus*	**coikos**	adI
vivid	*uiuidus*	**ētros**	adI

voice	*uox*	**woqs**	fem
vomit	*uomō*	**wémāmi**	tr
vow	*uoueō*	**wochējō**	tr
vulture	*ūltur*	**bhāsos**	mas
vulture	*uultur*	**cəlturós**	mas
wade	*sūra*	**sworā**	fem
wake up	*expergiscōr*	**bheudhō**	inc
wake up	*expergiscor*	**gerjō**	intr
walk	*ambulō*	**steighō**	intr
walk	*uādō*	**wadhō**	intr
walk silently	*uadō*	**selkō**	intr
wall	*mūrus*	**mākesjā**	
wall	*uallum*	**walnom**	neu
wall	*moenia*	**dhoighǒs**	mas
walls	*moenia*	**moinja**	neu
walnut	*nux*	**knuwā**	fem
wander	*errō*	**ersājō**	den
want	*delectō*	**torpējō**	cau
war	*bellum*	**dsā**	fem
warm	*formus*	**chormos**	adI
warm	*calefaciō*	**cherō**	tr
warm (bo be)	*tepeō*	**tepējō**	den
warmth	*tepor*	**topnos**	mas
warn	*moneō*	**monējō**	cau
warp	*inflectō*	**keukō**	dur
warrior	*milēs*	**meilēts**	mas
wart	*uerrūca*	**wersmən**	neu
wash	*purgō*	**klewō**	tr
wash	*lauō*	**lowō**	tr
wash	*lauō*	**neicō**	tr
wasp	*uespa*	**wopsā**	fem
watcher	*uigil*	**bhulkos**	mas
water	*aqua*	**aqā**	fem
water	*aqua*	**wedər**	neu
water	*aqua*	**wodā**	fem
water	*aqua*	**wopjā**	fem

water	*rigō*	**préusnumi**	tr
watercress	*berrum*	**cérurom**	neu
wave	*unda*	**tusnā**	fem
wave	*unda*	**wəndā**	fem
way	*iter*	**itər**	neu
way	*uia*	**pontis**	mas
way	*uia*	**tropos**	mas
way	*uia*	**weghjā**	fem
we	*nōs*	**wejes / weje**	pron
weak	*dēbilis*	**klamrós**	adI
weak	*lēnis*	**lēnis**	
weaken	*dēbilitō*	**mlājō**	cau
weakness	*dēbilitas*	**bhelu**	neu
wealth	*substantia*	**opnā**	fem
weapon	*arma*	**wedhər**	neu
wear	*gerō*	**gesō**	tr
weasel	*mustela*	**kérberos**	mas
weather	*tempus*	**wedhrom**	neu
weave	*texō*	**krekō**	
weave	*texō*	**webhō**	tr
weave	*texō*	**wegō**	tr
webbing	*ricinium*	**wəréikonjom**	neu
wedge	*cuneus*	**kúnejos**	mas
wedge	*cuneus*	**tərmēts**	fem
weed	*runcō*	**runkō**	tr
weed	*sarriō*	**sərijō**	
weep	*fleō*	**bhlēmi**	intr
weft	*trāma*	**traghsmā**	fem
weigh	*pendō*	**kenkō**	inc
weight	*pondus*	**pondos**	neu
well	*puteus*	**bhrewər**	neu
well	*benē*	**sū**	lois
went	*īī*	**ludhóm**	intr
went	*īī*	**sodóm**	intr
west	*occidens*	**éperom**	neu
wet	*madidus*	**molqos**	adI

wet	*madidus*	**wosmós**	adI
wet	*rigō*	**rðgājō**	tr
wet (to be)	*umeō*	**uchējō**	den
what	*qui quae quod*	**qis qid**	int
wheat	*far*	**bhar**	neu
wheat	*farīna*	**bharseinā**	fem
wheat	*frūmentum*	**bhreugsmðn**	neu
wheel	*rota*	**dhroghós**	fem
wheel	*rota*	**rotā**	fem
wheelrim	*cantus*	**kantos**	mas
whelp	*catulus*	**kuwos**	mas
whelp	*cattulus*	**mondós**	mas
when	*quandō*	**qðmdō**	int
when	*cum*	**qom**	ind
when	*cum*	**jom**	rel
whenever	*sī*	**sei**	neu
where	*unde*	**qomde**	ind
where	*ubī*	**qodhei**	int
where	*quō*	**qŏi**	ind
where (rel)	*ūbī*	**jodhei**	rel
wherefore	*quapropter*	**jori**	rel
wherefrom	*unde*	**qotrōd**	ind
whether	*ecquī, -quae, -quod*	**edqos, -qā, -qod**	pron
whey	*sērum lactis*	**misgā**	fem
which	*quā*	**qād**	ind
which	*uter*	**qóteros**	dh°r
whine	*hirriō*	**ghirrijō**	intr
whip	*lepeō*	**wðlepējō**	den
whip	*flagellum*	**werbos**	neu
whirl	*gurgues*	**cðrcots**	mas
whirl	*turbō*	**tworbhōn**	fem
whirl	*contorqueō*	**snerō**	intr
whirlpool	*uertex*	**dhwolsā**	fem
whisper	*susurrō*	**swerō**	intr
whisper	*susurrō*	**swrswrājō**	intr
whistle	*sībilō*	**sweighlājō**	intr
whistle	*siffilō*	**sweisdō**	
white	*albus*	**albhos**	adI
white	*candidus*	**kweitos**	mas
white-stained	*candidē maculātus*	**bhlōros**	
whither	*quō*	**qote**	int
whither	*quō*	**qotrēd**	ind
who, which	*quī quae quod*	**qos qā(i) qod**	rel
whoever	*quisque*	**qāqos**	pron
whole	*tōtus*	**solwos**	adII
whore	*merētrix*	**loutsā**	fem
whore	*scortum*	**skortom**	neu
why ?	*cūr*	**qori**	ind
wicked	*improbus*	**ðnprobhwos**	adI
wide	*latus*	**plākos**	adI
wide	*amplus*	**urús**	adI
widely known	*satis constans*	**wíklutom**	adII
widow	*uidua*	**wídhewā**	fem
wife	*uxor*	**sðmloghós**	fem
wife	*uxor*	**uksōr**	fem
wild	*ferus*	**cheros**	adI
wild	*rudis*	**reudos**	adI
will	*uolō*	**welmi**	tr
willlow	*salīx*	**widhos**	fem
willow	*salix*	**salēiks**	fem
win	*uincō*	**winkō**	tr
wind	*uentus*	**wentos**	mas
wind	*contorqueō*	**gergō**	cau
wind	*torqueō*	**wondhējō**	cau
window	*fenestra*	**louksā**	fem
wine	*uīnum*	**woinos**	mas
wine-cask	*cupa*	**kðlpros**	mas
wing	*āla*	**agslā**	fem
wing	*āla*	**peterós**	mas
winnow	*ventilō*	**neikō**	tr
winter	*hiems*	**ghjems**	mas
wipe	*abrādō*	**mðntrājō**	tr

wipe	*tergō*	**tergō**	tr
wire	*fīlum*	**chislom**	neu
wire	*fūnis*	**weiros**	mas
wise	*nāuus*	**gnōwos**	
witch	*uenēfica*	**wikkā**	fem
with	*cum*	**kə́mti**	dh°r
with	*cum*	**kom**	ind
withdraw	*remoueō*	**anjō**	tr
wither	*uiēscō*	**wijēskō**	inc
without	*sine*	**ə́neu**	ind
withraw	*cēdō*	**kesdō**	intr
witness	*testis*	**tristis**	adII
wolf	*lupus*	**wə́lqos**	mas
wolf	*lupus*	**wailós**	mas
woman	*mulier*	**cenā**	fem
woman	*mulier*	**morignā**	fem
womb	*uterus*	**colbhos**	mas
wonder	*admīror*	**sméiromoi**	tr
wonderful	*mīrus*	**smeiros**	adI
wood	*lignum*	**deru**	neu
woodpecker	*pīca*	**kikjā**	fem
woodpecker	*pīca*	**peikā**	fem
woodpiece	*lignum*	**skoidos**	mas
woodworker	*lignārius*	**tetkōn**	mas
wool	*lāna*	**wə́lnā**	fem
word	*uerbum*	**wə́rdhom**	neu
work	*labos*	**drātis**	fem
work	*laborō*	**drājō**	intr
work	*opus*	**opos**	neu
work	*laborō*	**wə́rgjō**	intr
work	*labos*	**wergom**	neu
workman	*operārius*	**drātə́r**	mas
world	*mundus*	**dhoubnom**	neu
worm	*lombrīcus*	**longhros**	mas
worm	*lombrīcus*	**ochis**	mas
worm	*uermis*	**qə́rmis**	mas
worm	*uermis*	**wormis**	mas
worn	*gestāmen*	**bhoros**	mas
worry	*turbō*	**mérnumi**	tr
worse	*dēterius*	**pedjós**	adI II
worship	*uēneror*	**aisō**	tr
worthy	*dignus*	**deknos**	adI
wound	*ulcus*	**elkos**	neu
wound	*feriō*	**chendō**	cau
wound	*uulnerō*	**swérnumi**	tr
wrap	*inuoluō*	**weipō**	tr
wrap out	*ēuoluō*	**werpō**	tr
wrapping	*tegmen*	**wélwə́men**	neu
wrath	*ira*	**eisā**	fem
wring out	*ēguttō*	**légnumi**	tr
wrinkle	*rūga*	**gorbos**	mas
wrist	*manicula*	**dornom**	neu
write	*scribō*	**skreibhō**	tr
yarn	*glomus*	**glomos**	neu
yawn	*hiātus*	**ghanos**	neu
year	*annus*	**atnos**	mas
yell	*clamō*	**klāmājō**	intr
yellow	*flāūs*	**bhlāwos**	adI
yellow	*glaesus*	**knakos**	adI
yes	*certō*	**jāi**	ind
yesterday	*herī*	**dhghesi**	ind
yew	*taxus*	**oiwos**	fem
yoke	*iugum*	**jugóm**	neu
you	*tū*	**tū**	pron
you	*uōs*	**juwes / juwe**	pron
young	*iuuenis*	**júwə́nkos**	adII
young	*iuuenis*	**júwenis**	adII
young	*iuuenis*	**juwōn**	adI
young goat	*haedus*	**ghaidos**	mas
youngster	*iuuenis*	**machos**	mas
youth	*iuuebtūs*	**machotis**	fem
youth	*iuuentus*	**júwə́ntā**	fem

APPENDIX II: PROTO-INDO-EUROPEAN PHONOLOGY

II.1. DORSALS: THE PALATOVELAR QUESTION

1. Direct comparison in early IE studies, informed by the *Centum-Satem* isogloss, yielded the reconstruction of three rows of dorsal consonants in Late Proto-Indo-European by Bezzenberger (1890), a theory which became classic after Brugmann (*Grundriss*, 1879) included it in its 2nd Edition. The palatovelars *$\boldsymbol{k^j}$, *$\boldsymbol{g^j}$, and *$\boldsymbol{g^{jh}}$ were supposedly [k]- or [g]-like sounds which underwent a characteristic phonetic change in the satemized languages – three original "velar rows" had then become two in all Indo-European dialects attested.

NOTE. It is disputed whether Albanian shows remains of two or three series (cf. Ölberg 1976, Kortlandt 1980, Pänzer 1982), although the fact that only the worst known (and neither isolated nor remote) IE dialect could be the only one to show some remains of the oldest phonetic system is indeed very unlikely.

After that original belief, then, The centum group of languages merged the palatovelars *$\boldsymbol{k^j}$, *$\boldsymbol{g^j}$, and *$\boldsymbol{g^{jh}}$ with the plain velars **k**, **g**, and $\mathbf{g^h}$, while the satem group of languages merged the labiovelars $\mathbf{k^w}$, $\mathbf{g^w}$, and $\mathbf{g^{wh}}$ with the plain velars **k**, **g**, and $\mathbf{g^h}$.

NOTE. Such hypothesis would then support an evolution [$\boldsymbol{k^j}$] → [$\boldsymbol{k}$] of *Centum* dialects before **e** and **i**, what is clearly against the general tendence of velars to move forward its articulation and palatalize in these environments.

2. The existence of the palatovelars as phonemes separate from the plain velars and labiovelars has been disputed. In most circumstances they appear to be allophones resulting from the neutralization of the other two series in particular phonetic circumstances. Their dialectal articulation was probably constrained, either to an especial phonetic environment (as Romance evolution of Latin [k] before [e] and [i]), either to the analogy of alternating phonetic forms. However, it is difficult to pinpoint exactly what the circumstances of the allophony are, although it is generally accepted that neutralization occurred after ***s*** and ***u***, and often before ***r*** or ***a***; also apparently before ***m*** and ***n*** in some Baltic dialects

NOTE. The original allophonic distinction was disturbed when the labiovelars were merged with the plain velars. This produced a new phonemic distinction between palatal and plain velars, with an unpredictable alternation between palatal and plain in related forms of some roots (those from original plain velars) but not others (those from original labiovelars). Subsequent analogical processes generalized either the plain or palatal consonant in all forms of a particular root. Those roots where the plain consonant was generalized are those traditionally reconstructed as having "plain velars" in the parent language, in contrast to "palatovelars".

Many PIE linguists still believe that all three series were distinct in Late Proto-Indo-European, although newest research show that the palatovelar series were a later phonetic development of certain

Satem dialects, later extended to others; this belief was originally articuled by Antoine Meillet in 1893, and was followed by linguists like Hirt (1899, 1927), Lehman (1952), Georgiev (1966), Bernabé (1971), Steensland (1973), Miller (1976), Allen (1978), Kortlandt (1980), Shields (1981), Adrados (1995), etc.

NOTE. There is, however, a minority who consider the labiovelars a secondary development from the pure velars, and reconstruct only velars and palatovelars (Kuryłowicz), already criticized by Bernabé, Steensland, Miller and Allen. Still less acceptance had the proposal to reconstruct only a labiovelar and a palatal series (Magnusson).

There is residual evidence of various sorts in the Satem languages of a former distinction between velar and labiovelar consonants:

- In Sanskrit and Balto-Slavic, in some environments, resonant consonants (denoted by *R*) become *iR* after plain velars but *uR* after labiovelars.
- In Armenian, some linguists assert that k^w is distinguishable from *k* before front vowels.
- In Albanian, some linguists assert that k^w and g^w are distinguishable from *k* and *g* before front vowels.

NOTE. This evidence shows that the labiovelar series was distinct from the plain velar series in Late PIE, and cannot have been a secondary development in the Centum languages. However, it says nothing about the palatovelar vs. plain velar series. When this debate initially arose, the concept of a phoneme and its historical emergence was not clearly understood, however, and as a result it was often claimed (and sometimes still is claimed) that evidence of three-way velar distinction in the history of a particular IE language indicates that this distinction must be reconstructed for the parent language. This is theoretically unsound, as it overlooks the possibility of a secondary origin for a distinction.

3. The original (logical) trend to distinguish between series of “satemizable” dorsals, called ‘palatovelars’, and “non-satemizable” dorsals, the ‘pure velars’, was the easiest explanation found by neogrammarians, who apparently opened a different case for each irregularity they found. Such an initial answer should be considered erroneous today, at least as a starting-point to obtain a better explanation for this “phonological puzzle” (Bernabé).

NOTE. “Palatals” and Velars appear mostly in complementary distributions, what supports their explanation as allophones of the same phonemes. Meillet (1937) establishes the contexts in which there are only velars: before **a**,**r**, and after **s**,**u**, while Georgiev (1966) states that the palatalization of velars should have been produced before **e**, **i**, **j**, and before liquid or nasal or **w** + **e**, **i**, offering statistical data supporting his conclusions. The presence of palatalized velar before o is then produced because of analogy with roots in which (due to the apophonic alternance) the velar phoneme is found before e and o, so the alternance ****k*ʲ***e**/****ko*** would be leveled as ****k*ʲ***e**/****k*ʲ***o**.

Arguments in favor of only two series of velars include:

A) The plain velar series is statistically rarer than the other two, is entirely absent from affixes, and appears most often in certain phonological environments (described above).

B) Alternations between plain velars and palatals are common in a number of roots across different "*Satem*" languages, where the same root appears with a palatal in some languages but a plain velar in others. This is consistent with the analogical generalization of one or another consonant in an originally alternating paradigm, but difficult to explain otherwise.:

- **ak**/**ok**-, *sharp*, cf. Lith. *akúotas*, O.C.S. *ostru*, O.Ind. *asrís*, Arm. *aseln*, but Lith. *asrùs*.
- **akmn**-, *stone*, cf. Lith. *akmuõ*, O.C.S. *kamy*, O.Ind. *áśma*, but Lith. *âsmens*.
- **keu**-, *shine*, cf. Lith. *kiáune*, Russ. *kuna*, O.Ind. *Svas*, Arm. *sukh*.
- **bʰleg**-, *shine*, cf. O.Ind. *bhárgas*, Lith. *balgans*, O.C.S. *blagu*, but Ltv. *blâzt*.
- **gʰerdʰ**-, *enclose*, O.Ind. *grhá*, Av. *gᵒrᵒda*, Lith. *gardas*, O.C.S. *gradu*, Lith. *zardas*, Ltv. *zârdas*.
- **swekuros**, *father-in-law*, cf. O.Sla. *svekry*, O.Ind. *śvaśru*.

B) The existence of different pairs ("*satemized*" and "*not-satemized*") in the same language, as e.g.:

- **selg**-, *throw*, cf. O.Ind. *sṛjáti*, *sargas*
- **kau**/**keu**-, *shout*, cf. Lith. *kaukti*, O.C.S. *kujati*, Russ. *sova* (as Gk. *kauax*); O.Ind. *kauti*, *suka*-.
- **kleu**-, *hear*, Lith. *klausýti*, *slove*, O.C.S. *slovo*; O.Ind. *karnas*, *sruti*, *srósati*, *śrnóti*, *sravas*.
- **leuk**-, O.Ind. *rokás*, *ruśant*-.

NOTE. The old argument proposed by Brugmann (and later copied by many dictionaries) about "*Centum loans*" is not tenable today. For more on this, see Szemerény (1978), Mayrhofer (1952), Bernabé (1971).

C) Non-coincidence in periods and number of satemization stages;

- Old Indian shows two stages,
  1. PIE **k** → O.Ind. *s*, and
  2. PIE **kʷe**, **kʷi** → O.Ind. *ke*, *ki*, & PIE **ske**, **ski** > O.Ind. *c* (cf. *cim*, *candra*, etc.).
- In Slavic, however, three stages are found,
  1. PIE **k**→s,
  2. PIE **kʷe**, **kʷi**→č (*čto*, *čelobek*), and
  3. PIE **kʷoi**→*koi*→*ke* gives *ts* (as Sla. *tsená*).

D) In most attested languages which present aspirated as result of the so-called "palatals", the palatalization of other phonemes is also attested (e.g. palatalization of labiovelars before e, i, etc.), what may indicate that there is an old trend to palatalize all possible sounds, of which the palatalization of velars is the oldest attested result.

E) The existence of 'Centum dialects' in so-called Southern dialects, as Greek and some Paleo-Balkan dialects, and the presence of Tocharian, a 'Centum dialect', in Central Asia, being probably a northern IE dialect.

NOTE. The traditional explanation of a three-way dorsal split requires that all Centum languages share a common innovation that eliminated the palatovelar series. Unlike for the Satem languages, however, there is no evidence of any areal connection among the Centum languages, and in fact there is evidence against such a connection -- the Centum languages are geographically noncontiguous. Furthermore, if such an areal innovation happened, we would expect to see some dialect differences in its implementation (cf. the above differences between Balto-Slavic and Indo-Iranian), and residual evidence of a distinct palatalized series (such evidence for a distinct labiovelar series does exist in the Satem languages; see below). In fact, however, neither type of evidence exists, suggesting that there was never a palatovelar series in the Centum languages.

4. It is generally believed that Satemization could have started as a late dialectal 'wave' (although not necessarily), which eventually affected almost all PIE dialectal groups. The origin is probably to be found in velars followed by ***e***, ***i***, even though alternating forms like ***gen***/***gon*** caused natural analogycal corrections within each dialect, which obscures still more the original situation. Thus, non-satemized forms in so-called Satem languages are actually non-satemized remains of the original situation, just as Spanish has *feliz* and not **heliz*, or *fácil* and not *hácil*, or French uses *facile* and *nature*, and not **fêle* or **nûre* as one should expect from its phonetic evolution. Some irregularities are indeed explained as borrowings from non-satemized dialects.

5. Those who support the model of the threefold distinction in PIE cite evidence from Albanian (Pedersen) and Armenian (Pisani) that they treated plain velars differently from the labiovelars in at least some circumstances, as well as the fact that Luwian apparently had distinct reflexes of all three series: *$\boldsymbol{k^j}$ > *z* (probably [*ts*]); *$\boldsymbol{k}$ > *k*; *$\boldsymbol{k^w}$ > *ku* (possibly still [k^w]) (Craig Melchert).

NOTE 1. Also, one of the most difficult problems which subsist in the interpretation of the satemization as a phonetic wave is that, even though in most cases the variation *$\boldsymbol{k^j}$/$\boldsymbol{k}$ may be attributed either to a phonetic environment or to the analogy of alternating apophonic forms, there are some cases in which neither one nor the other may be applied. Compare for example ***ok^{j}tō***(***u***), eight, which presents k before an occlusive in a form which shows no change (to suppose a syncope of an older ****ok^{j}itō***, as does Szemerényi, is an explanation *ad hoc*). Other examples in which the palatalization cannot be explained by the next phoneme nor by analogy are **swekrū-**, *husband's mother*, **akmon**, *stone*, **peku**, *cattle*. Such (still) unexplained exceptions, however, are not sufficient to consider the existence of a third row of 'later palatalized' velars (Bernabé, Cheng & Wang), although there are still scholars who come back to the support of the three velar rows' hypothesis (viz. Tischler 1990).

NOTE 2. Supporters of the palatovelars cite evidence from the Anatolian language Luwian, which supposedly attests a three-way velar distinction ***k^j**→*z* (probably [ts]); **k**→*k*; **k^w**→*ku* (probably [k^w]), defended by Melchert (1987). So, the strongest argument in favor of the traditional three-way system is that the the distinction

supposedly derived from Luwian findings must be reconstructed for the parent language. However, the underlying evidence "hinges upon especially difficult or vague or otherwise dubious etymologies" (see Sihler 1995); and, even if those findings are supported by other evidence in the future, it is obvious that Luwian might also have been in contact with *satemization* trends of other (Late) PIE dialects, that it might have developed it's own satemization trend, and that maybe the whole system was remade within the Anatolian branch.

6. A system of two gutturals, Velars and Labiovelars, is a linguistic anomaly, isolated in the PIE occlusive subsystem – there are no parallel oppositions b^w-*b*, p^w-*p*, t^w-*t*, d^w-*d*, etc. Only one feature, their pronunciation with an accompanying rounding of the lips, helps distinguish them from each other. Labiovelars turn velars before -***u***, and there are some neutralization positions which help identify labiovelars and velars; also, in some contexts (e.g. before -***i***, -***e***) velars tend to move forward its articulation and eventually palatalize. Both trends led eventually to Centum and Satem dialectalization.

II.2. PHONETIC RECONSTRUCTION

II.2.1. PROTO-INDO-EUROPEAN SOUND LAWS

A few sound-laws can be reconstructed, that may have been effective already in Late PIE dialects, by internal reconstruction.

- Sievers' Law (Edgerton's Law, Lindeman's option)
- Hirt's Law
- Grassman's Law
- Bartholomae's Law

A. SIEVERS' LAW

Sievers' Law in Indo-European linguistics accounts for the pronunciation of a consonant cluster with a glide before a vowel as it was affected by the phonetics of the preceding syllable. Specifically it refers to the alternation between **ij* and **j,* and possibly **uw* and **u*, in Indo-European languages. For instance, Proto-Indo-European **kor-jo-s* became Gothic *harjis* "*army*", but PIE **kerd*^{h}*- jo-s* became Proto-Germanic **herdijas*, Gothic *hairdeis* [hɛrdĩs] "*shepherd*". It differs from an ablaut in that the alternation is context-sensitive: PIE **ij* followed a heavy syllable (a syllable with a diphthong, a long vowel, or ending in more than one consonant), but **j* would follow a light syllable (i.e. a short vowel followed by a single consonant). This was first noticed by Germanic philologist Eduard Sievers, and his aim was to account for certain phenomena in the Germanic languages. He originally only discussed **j* in medial position. He also noted, almost as an aside, that something similar seemed to be going on in the earliest Sanskrit texts (thus in the Rigveda *dāivya-* "*heavenly*" actually had three syllables in scansion (*dāiv*^{i}*ya-*) but say *satya-* "*true*" was scanned as written). After him, scholars would find similar

alternations in Greek and Latin, and alternation between **uw* and **u*, though the evidence is poor for all of these. Through time, evidence was announced regarding similar alternations of syllabicity in the nasal and liquid semivowels, though the evidence is extremely poor for these, despite the fact that such alternations in the non-glide semivowels would have left permanent, indeed irreversible, traces.

The most ambitious extension of Sievers' Law was proposed by Franklin Edgerton in a pair of articles in the journal *Language* in 1934 and 1943. He argued that not only was the syllabicity of prevocalic semivowels by context applicable to all six Indo-European semivowels, it was applicable in all positions in the word. Thus a form like **djēus*, "*sky*" would have been pronounced thus only when it happened to follow a word ending with a short vowel. Everywhere else it would have had two syllables, **dijēus*.

The evidence for alternation presented by Edgerton was of two sorts. He cited several hundred passages from the oldest Indic text, the Rigveda, which he claimed should be rescanned to reveal hitherto unnoticed expressions of the syllable structure called for by his theory. But most forms show no such direct expressions; for them, Edgerton noted sharply skewed distributions that he interpreted as evidence for a lost alternation between syllabic and nonsyllabic semivowels. Thus say *śiras* "*head*" (from **śṛros*) has no monosyllabic partner **śras* (from **śros*), but Edgerton noted that it occurred 100% of the time in the environments where his theory called for the syllabification of the **r*. Appealing to the "*formulaic*" nature of oral poetry, especially in tricky and demanding literary forms like sacred Vedic versification, he reasoned that this was direct evidence for the previous existence of an alternant **śras*, on the assumption that when (for whatever reason) this **śras* and other forms like it came to be shunned, the typical collocations in which they would have (correctly) occurred inevitably became obsolete pari passu with the loss of the form itself. And he was able to present a sizeable body of evidence in the form of these skewed distributions in both the 1934 and 1943 articles.

In 1965 Fredrik Otto Lindeman published an article proposing a significant modification of Edgerton's theory. Disregarding Edgerton's evidence (on the grounds that he was not prepared to judge the niceties of Rigvedic scansion) he took instead as the data to be analyzed the scansions in Grassmann's *Wörterbuch zum Rig-Veda*. From these he concluded that Edgerton had been right, but only up to a point: the alternations he postulated did indeed apply to all semivowels; but in word-initial position, the alternation was limited to forms like **djēus/dijēus* "*sky*", as cited above—that is, words where the "*short*" form was monosyllabic.

B. HIRT'S LAW

Hirt's law, named after Hermann Hirt who postulated it originally in 1895, is a Balto-Slavic sound law which states in its modern form that the inherited Proto-Indo-European stress would retract to

non-ablauting pretonic vowel or a syllabic sonorant if it was followed by a consonantal (non-syllabic) laryngeal that closed the preceding syllable.

Compare:

- PIE: **dʰūmós* "smoke" (compare Sanskrit *dhūmá* and Ancient Greek *thumós*) → Lithuanian *dū̃mai*, Latvian *dũmi*, Croatian/Serbian *dȉm*.
- PIE **gʷrīwā́* "neck; mane" (compare Sanskrit grīvā́) → Latvian grīva, Croatian/Serbian *grȉva*.
- PIE **pl̥nós* "*full*" (compare Sanskrit *pūrṇá*) → Lithuanian pìlnas, Latvian pȋlns, Serbian *pȕn*.

Hirt's law did not operate if the laryngeal preceded a vowel, or if the laryngeal followed the second component of a diphthong. Therefore, Hirt's law must be older than then the loss of laryngeals in prevocalic position (in glottalic theory formulation: to the merger of glottalic feature of PIE voiced stops who dissolved into laryngeal and buccal part with the reflexes of the original PIE laryngeals), because the stress was not retracted in e.g. PIH **tenh₂wós* (Ancient Greek *tanaós*, Sanskrit *tanú*) "*thin*" → Latvian *tiêvs*, and also older than the loss of syllabic sonorants in Balto-Slavic, as can be seen from the abovementioned reflexes of PIH **pl̥h₁nós*, and also in e.g. PIH **dl̥h₁gʰós* "*long*" (compare Sanskrit *dīrghá*, Ancient Greek *dolikhós*) → Lithuanian *ìlgas*, Latvian *ȋlgs*, Croatian/Serbian *dȕg*.

It follows from the above that Hirt's law must have preceded Winter's law, but was necessarily posterior to Balto-Slavic oxytonesis (shift of stress from inner syllable to the end of the word in accent paradigms with end-stressed forms), because oxytonesis-originating accent was preserved in non-laryngeal declension paradigms; e.g. the retraction occurs in mobile PIH **eh₂*-stems so thus have dative plural of Slovene *goràm* and Chakavian *goràmi* (< PBSl. **-āmús*), locative plural of Slovene and Chakavian goràh (< PBSl. **-āsú*), but in thematic (o-stem) paradigm dative plural of Slovene možêm (< PBSl. **-mús*), locative plural of Slovene *možéh* and Chakavian *vlāsíh* (< PBSl. **-oysú*). The retraction of accent from the ending to the vowel immediately preceding the stem-ending laryngeal (as in PBSl. reflex of PIH **gʷrH-*) is obvious. There is also a strong evidence that the same was valid for Old Prussian (in East Baltic dative and locative plural accents were generalized in non-laryngeal inflections).

From the Proto-Indo-European perspective, the importance of Hirt's law lies in the strong correspondence it provides between the Balto-Slavic and Vedic/Ancient Greek accentuation (which more or less intactly reflects the original Late PIE state), and somewhat less importantly, provides a reliable criterion to distinguish the original sequence of PIH **eH* from lengthened grade **ē*, as it unambiguously points to the presence of a laryngeal in the stem.

C. GRASSMANN'S LAW

Grassmann's law, named after its discoverer Hermann Grassmann, is a dissimilatory phonological process in Ancient Greek and Sanskrit which states that if an aspirated consonant is followed by another aspirated consonant in the next syllable, the first one loses the aspiration. The descriptive (synchronic) version was described for Sanskrit by Panini.

Here are some examples in Greek of the effects of Grassmann's Law:

- [**tʰ**u-oː] θύω *'I kill an animal'*
- [e-**t**u-**tʰ**eː] ἔτυθη *'it was killed'*
- [**tʰ**rik-s] θρίξ *'hair'*
- [**t**ri**kʰ**-es] τριχές *'hairs'*
- [**tʰ**ap-sai] θάψαι *'to bury (aorist)'*
- [**tʰ**a**pt**-ein] θάπτειν *'to bury (present)'*
- [**t**a**pʰ**-os] τάφος *'a grave'*
- [**t**a**pʰ**-e] ταφή *'burial'*

In the reduplication which forms the perfect tense in both Greek and Sanskrit, if the initial consonant is aspirated, the prepended consonant is unaspirated by Grassmann's Law. For instance [**pʰ**u-oː] φύω *'I grow'* : [**p**e-**pʰ**uː-ka] πεφυκα *'I have grown'*.

DIASPIRATE ROOTS

Cases like [tʰrik-s] ~ [trikʰ-es] and [tʰap-sai] ~ [tapʰ-ein] illustrates the phenomenon of *diaspirate roots*, for which two different analyses have been given.

In one account, the "underlying diaspirate" theory, the underlying roots are taken to be /tʰrikʰ/ and /tʰapʰ/. When an /s/ (or word edge, or various other sounds) immediately follows, then the second aspiration is lost, and the first aspirate therefore survives ([tʰrik-s], [tʰap-sai]). If a vowel follows the second aspirate, it survives unaltered, and therefore the first aspiration is lost by Grassmann's Law ([trikʰ-es], [tapʰ-ein]).

A different analytical approach was taken by the ancient Indian grammarians. In their view, the roots are taken to be underlying /trikʰ/ and /tapʰ/. These roots persist unaltered in [trikʰ-es] and [tapʰ-ein]. But if an /s/ follows, it triggers an "*aspiration throwback*" (ATB), in which the aspiration migrates leftward, docking onto the initial consonant ([tʰrik-s], [tʰap-sai]).

Interestingly, in his initial formulation of the law Grassmann briefly referred to ATB to explain these seemingly aberrant forms. However, the consensus among contemporary historical linguists is that the former explanation (underlying representation) is the correct one.

In the later course of Sanskrit, (and under the influence of the grammarians) ATB was applied to original monoaspirates through an analogical process. Thus, from the verb root *gah 'to plunge'*, the desiderative stem *jighak^{h}a-* is formed. This is by analogy with the forms *bubhutsati* (a desiderative form) and *bhut* (a nominal form, both from the root *budh 'to be awake'*, originally PIE **b^{h}ud^{h}-*).

D. BARTHOLOMAE'S LAW

Bartholomae's law is an early Indo-European sound law affecting the Indo-Iranian family, though thanks to the falling together of plain voiced and voiced aspirated stops in Iranian, its impact on the phonological history of that subgroup is unclear.

It states that in a cluster of two or more obstruents (*s* or a stop (plosive)), any one of which is a voiced aspirate anywhere in the sequence, the whole cluster becomes voiced and aspirated. Thus to the PIE root **b^{h}eud^{h}* "*learn, become aware of*" the participle **b^{h}ud^{h}-to-* "*enlightened*" loses the aspiration of the first stop (Grassmann's Law) and with the application of Bartholomae's Law and regular vowel changes gives Sanskrit *buddha-* "*enlightened*".

A written form such as *-ddh-* (a literal rendition of the devanāgarī representation) presents problems of interpretation. The choice is between a long voiced stop with a specific release feature symbolized in transliteration by *-h-*, or else a long stop (or stop cluster) with a different phonational state, "*murmur*", whereby the breathy release is an artifact of the phonational state. The latter interpretation is rather favored by such phenomena as the Rigvedic form *gdha* "*he swallowed*" which is morphologically a middle aorist (more exactly '*injunctive*') to the root *ghas-* "swallow", as follows: *ghs-t-a* > **gzdha* whence *gdha* by the regular loss of a sibilant between stops in Indic. While the idea of voicing affecting the whole cluster with the release feature conventionally called aspiration penetrating all the way to the end of the sequence is not entirely unthinkable, the alternative—the spread of a phonational state (but murmur rather than voice) through the whole sequence—involves one less step and therefore via Occam's Razor counts as the better interpretation.

Bartholomae's Law intersects with another Indic development, namely what looks like the deaspiration of aspirated stops in clusters with *s*: descriptively, Proto-Indo-European **leig^{h}-si* "*you lick*" becomes **leiksi*, whence Sanskrit *lekṣi*. However, Grassmann's Law, whereby an aspirated stop becomes non-aspirated before another aspirated stop (as in the example of *buddha-*, above), suggests something else. In late Vedic and later forms of Sanskrit, all forms behave as though aspiration was simply lost in clusters with *s*, so such forms to the root *dugh-* "*give milk*" (etymologically **dhugh-*) show the expected devoicing and deaspiration in, say, the desiderative formation *du-dhukṣ-ati* (with the root-initial *dh-* intact, that is, undissimilated). But the earliest passages of the Rigveda show something different: desiderative *dudukṣati*, aor. *dukṣata* (for later *dhukṣata*) and so on. Thus it is apparent that

what went into Grassmann's Law were forms like **dhugzhata, dhudhugzha-* and so on, with aspiration in the sibilant clusters intact. The deaspiration and devoicing of the sibilant clusters were later and entirely separate phenomena – and connected with yet another suite of specifically Indic sound laws, namely a '*rule conspiracy*' to eliminate all voiced (and murmured) sibilants. Indeed, even the example '*swallowed*' given above contradicts the usual interpretation of devoicing and deaspiration: by such a sequence, **ghs-to* would have given, first, **ksto* (if the process was already Indo-European) or **ksta* (if Indo-Iranian in date), whence Sanskrit **kta*, not *gdha*.

E. BRUGMANN'S LAW

Brugmann's law, named for Karl Brugmann, states that Proto-Indo-European **o* (the ablaut alternant of **e*) in non-final syllables became **ā* in open syllables (syllables ending in a single consonant followed by a vowel) in Indo-Iranian. Everywhere else the outcome was **a*, the same as the reflexes of PIE **e* and **a*. The rule seems not to apply to "non-apophonic **o*", that is, **o* that has no alternant, as in **poti-*, "master, lord" (thus Sanskrit *pati-*, not **pāti*, there being no such root as **pet-* "*rule, dominate*"). Similarly the form traditionally reconstructed as **owis*, "sheep" (Sanskrit *avi-*), which is a good candidate for re-reconstructing as PIH **$h_3$ewi-* with an o-coloring laryngeal rather than an ablauting o-grade.

The theory accounts for a number of otherwise very puzzling facts. Sanskrit has *pitaras*, *mātaras*, *bhrātaras* for "fathers, mothers, brothers" but *svasāras* for "sisters", a fact neatly explained by the traditional reconstruction of the stems as **-ter-* for "father, mother, brother" but **swesor-* for "sister" (cf. Latin *pater*, *māter*, *frāter* but *soror*; note, though, that in all four cases the Latin vowel in the final syllable was originally long). Similarly, the great majority of n-stem nouns in Indic have a long stem-vowel, such as *brāhmaṇas* "*Brahmins*", *śvānas* "*dogs*" from **kwones*, correlating with information from other Indo-European languages that these were actually on-stems. But there is one noun, *ukṣan-* "*ox*", that in the Rigveda shows forms like *ukṣắṇas*, "*oxen*". These were later replaced by "regular" formations (*ukṣāṇas* and so on, some as early as the Rigveda itself), but the notion that this might be an **en*-stem is supported by the unique morphology of the Germanic forms, e.g. Old English *oxa* nom.singular "ox", exen plural—the Old English plural stem (e.g., the nominative) continuing Proto-Germanic **uχsiniz* < **uχseniz*, with two layers of umlaut. As in Indic, this is the only certain Old English n-stem that points to **en*-vocalism rather than **on*-vocalism.

Perhaps the most startling confirmation comes from the inflection of the perfect tense, wherein a Sanskrit root like *sad-* "sit" has *sasada* for "I sat" and *sasāda* for "he, she, it sat". It was tempting to see this as some kind of 'therapeutic' reaction to the falling-together of the endings **-a* "*I*" and **-e*

"*he/she/it*" as *-a*, but it was troubling that the distinction was found exclusively in roots that ended with a single consonant. That is, *dadarśa* "*saw*" is both first and third person singular, even though a form like **dadārśa* is perfectly acceptable in terms of Sanskrit syllable structure. This mystery was solved when the ending of the perfect in the first person singular was reanalyzed as PIH *-h_2e, that is, beginning with an a-coloring laryngeal: that is, at the time Brugmann's Law was operative, a form of the type **se-sod-h_2e* in the first person did not have an open root syllable. A problem (minor) for this interpretation is that roots that pretty plainly must have ended in a consonant cluster including a laryngeal, such as *jan-* < **genh₁-* "*beget*", and which therefore should have had a short vowel throughout (like *darś-* "*see*" < **dork-*), nevertheless show the same patterning as *sad-*: *jajana* 1sg., *jajāna* 3sg. Whether this is a catastrophic failure of the theory is a matter of taste, but after all, those who think the pattern seen in roots like sad- have a morphological, not a phonological, origin, have their own headaches, such as the total failure of this "morphological" development to include roots ending in two consonants. And such an argument would in any case cut the ground out from under the neat distributions seen in the kinship terms, the special behavior of "ox", and so on.

Perhaps the most worrisome data are adverbs like Sankrit *prati*, Greek *pros* (< **proti*) (meaning "motion from or to a place or location at a place", depending on the case of the noun it governs) and some other forms, all of which appear to have ablauting vowels. They also all have a voiceless stop after the vowel, which may or may not be significant. And for all its charms, Brugmann's Law has few supporters nowadays – even Brugmann himself eventually gave up on it, and Jerzy Kuryłowicz, the author of the brilliant insight into the *sasada*/*sasāda* matter, eventually abandoned his analysis in favor of an untenable appeal to the agency of marked vs unmarked morphological categories. Untenable because, for example, it's a commonplace of structural analysis that 3rd person singular forms are about as "unmarked" as a verb form can be, but in Indic it is the one that "gets" the long vowel, which by the rules of the game is the marked member of the long/short opposition.

F. WINTER'S LAW

Winter's law, named after Werner Winter who postulated it in 1978, is a sound law operating on Balto-Slavic short vowels **e*, **o*, **a*, **i* and **u*, according to which they lengthen in front of unaspirated voiced stops in closed syllable, and that syllable gains rising, acute accent. Compare:

- PIE **sed-* "to sit" (that also gave Latin *sedeō*, Sanskrit *sīdati*, Ancient Greek *hézomai* and English *sit*) → Proto-Balto-Slavic **sēd-tey* → Lith. *sė́sti*, O.C.S. *sěsti* (with regular Balto-Slavic **dt→st* change; O.C.S. and Common Slavic yat (*ě*) is a regular reflex of PIE/PBSl. long *ē).

- PIE **ābl-* “apple” (that also gave English *apple*) → Proto-Balto-Slavic **ābl-* → standard Lithuanian *obuolỹs* (accusative *óbuolį*) and also dialectal forms of *óbuolas* and Samogitian *óbulas*, O.C.S. *ablъko*, modern Croatian *jäbuka*, Slovene *jábolko* etc.

Winter's law is important for several reasons. Most importantly, it indirectly shows the difference between the reflexes of PIE **b*, **d*, **g*, **g^{w}* in Balto-Slavic (in front of which Winter's law operates in closed syllable), and PIE **b^{h}*, **d^{h}*, **g^{h}*, **g^{wh}* (before which there is no effect of Winter's law). This shows that in relative chronology Winter's law operated before PIE aspirated stops **b^{h}*, **d^{h}*, **g^{h}*, merged with PIE plain voiced stops **b*, **d*, **g* in Balto-Slavic.

Secondary, Winter’s law also indirectly shows the difference between the reflexes of PIE **a* and PIE **o* which otherwise merged to **a* in Balto-Slavic. When these vowels lengthen in accordance with Winter’s law, one can see that old **a* has lengthened into Balto-Slavic **ā* (which later gave Lithuanian *o*, Latvian *ā*, O.C.S. *a*), and old **o* has lengthened into Balto-Slavic **ō* (which later gave Lithuanian and Latvian uo, but still O.C.S. *a*). In later development that represented Common Slavic innovation, the reflexes of Balto-Slavic **ā* and **ō* were merged, as one can see that they both result in O.C.S. *a*. This also shows that Winter’s law operated prior to the common Balto-Slavic change *o→*a.

The original formulation of Winter’s law stated that the vowels regularly lengthened in front of PIE voiced stops in all environments. As much as there were numerous examples that supported this formulation, there were also many counterexamples, such as OCS *stogъ* “stack” < PIE **stógos*, O.C.S. *voda* “water” < PIE **wodṓr* (collective noun formed from PIE **wódr̥*). Adjustment of Winter’s law, with the conclusion that it operates only on closed syllables, was proposed by Matasović in 1994 and which, unlike most of the other prior proposals, successfully explains away most counterexamples, although it's still not generally accepted. Matasović's revision of Winter's law has been used in the *Lexikon der indogermanischen Verben*. Other variations of blocking mechanism for Winter’s law have been proposed by Kortlandt, Shintani, Rasmussen, Dybo and Holst but have not gained wide acceptance. Today Winter's law is taken for granted by all specialists in Balto-Slavic historical linguistics, though the exact details of the restrictions of law remain in dispute.

II.2.2. CONSONANTS

NOTES: [1] After vowels. [2] Before a plosive (p, t, k). [3] Before an unstressed vowel (Verner’s Law). [4] After a (Proto-Germanic) fricative (s, f). [5] Before a (PIE) front vowel (i, e). [6] Before or after a (PIE) u. [7] Before or after a (PIE) o, u. [8] Between vowels. [9] Before a resonant. [10] Before secondary (post-PIE) front-vowels. [11] After r, u, k, i (RUKI). [12] Before a stressed vowel. [13] At the end of a word. [14] After u, r or before r, l. [15] After n.

PIE	Skr.	Av.	OCS	Lith.	Arm.	Toch.	Hitt.	Gk.	Lat.	O.Ir	Gmc.
***p**	p [p]	p [p]	p [p]	p [p]	h [h]; w	p [p]	p [p]	p [p]	p [p]	Ø; ch [x] [2]	*f; *β [3];
***t**	t [t]	t [t]	t [t]	t [t]	t‘ [tʰ]	t [t]; c	t; z [5]	t [t]	t [t]	t [t]; th [θ]	*θ; *ð [3];
***ḱ**	ś [ɕ]	s [s]	s [s]	š [ʃ]	s [s]	k; ś [ɕ] [9]	k [k]	k [k]	k [k]	c [k]; ch [x] [8]	*x; *ɣ [3]; k [4]
***k**	k [k]; c [c] [5]	k [k]; c [ʧ] [5]	k [k]; č [ʧ] [5]; c [ʦ] [10]	k [k]	k‘ [kʰ]						
***kʷ**							ku [kʷ]	p; t [5]; k [6]	qu [kʷ]; c [k] [7]	c [k]; ch [x] [8]	*xʷ; *ɣʷ, *w [3]; kʷ [4]
***b**	b [b]	b [b]	b [b]	b [b]	p [p]	p [p]	p [p]	b [b]	b [b]	b [b]	*p
***d**	d [d]	d [d]	d [d]	d [d]	t [t]	ʦ [ʦ];	t [t]	d [d]	d [d]	d [d]; dh	*t
***ĝ**	j [ɟ]	z [z]	z [z]	ž [ʒ]	c [ʦ]	k [k]; ś [ɕ] [9]	k [k]	g [g]	g [g]	g [g]; gh [ɣ] [8]	*k
***g**	g [g]; j [ɟ] [5]	g [g]; j [ʤ] [5]	g [g]; ž [ʒ] [5]; dz [ʣ] [10]	g [g]	k [k]						
***gʷ**							ku [kʷ]	b [b]; d [d] [5]; g [g] [6]	u [w]; gu [gʷ] [15]	b [b]; m, bh [w] [8]	*kʷ
***bʰ**	bh	b [b]	b [b]	b [b]	b [b]; w	p [p]	p [p]	ph [pʰ]	f [f]; b [8]	b [b]; m,	*β
***dʰ**	dh	d [d]	d [d]	d [d]	d [d]	t [t]; c	t [t]	th [tʰ]	f [f]; d [8]; b	d [d]; dh	*ð
***ĝʰ**	h [ɦ]	z [z]	z [z]	ž [ʒ]	j [ʣ]; z	k [k]; ś [ɕ] [5]	k [k]	ch [kʰ]	h [h]; h [h]/ g [g] [9]	g [g]; gh [ɣ] [5]	*ɣ
***gʰ**	gh [gʱ]; h [ɦ] [5]	g [g]; ǰ [ʤ] [5]	g [g]; ž [ʒ] [5]; dz [ʣ]] [10]	g [g]	g [g]; ǰ [ʤ] [5]						
***gʷʰ**							ku [kʷ]	ph [pʰ]; th [tʰ] [5]; ch [kʰ] [6]	f [f]; g [g] / u [w] [8]; gu [gʷ] [15]	g [g]	*ɣʷ
***s**	s [s];	h [h, x];	s [s]; x	s [s]; š [ʃ]	h [h]; s	s [s]; ṣ	š [s]	h [h]; s [s]	s [s]; r [r]	s [s]	*s; *z [3]
***m**	m [m]	m [m]	m [m]; ˛	m [m]; n	m [m];	m [m];	m [m];	m [m]; n [n]	m [m]	b [b]; m,	*m; Ø [13]
***n**	n [n]	n [n]	n [n]	n [n]	n [n]	n [n]; ñ	n [n]	n [n]	n [n]	n [n]	*n
***l**	r [r]	r [r]	l [l]	l [l]	l [l], ɬ [ɬ	l [l]	l [l]	l [l]	l [l]	l [l]	*l
***r**	r [r]	r [r]	r [r]	r [r]	r [ɹ]	r [r]	r [r]	r [r]	r [r]	r [r]	*r
***i̯**	y [j]	y [j]	j [j]	j [j]	Ø	y [j]	y [j]	z [?zd/dz > z] / h [h]; Ø [8]	i [j]; Ø [8]	Ø	*j
***u̯**	v [ʊ]	v [w]	v [v]	v [ʊ]	g [g] / w [w]	w [w]	w [w]	w > h / Ø [w > h / -]	u [w > v]	f [f]; Ø / w [w] [8]	*w
PIE	**Skr.**	**Av.**	**OCS**	**Lith.**	**Arm.**	**Toch.**	**Hitt.**	**Gk.**	**Lat.**	**O.Ir**	**Gmc.**

II.1.3. VOWELS AND SYLLABIC CONSONANTS

PIE	PIH	Skr.	Av.	OCS	Lith.	Arm.	Toch.	Hitt.	Gk.	Lat.	O.Ir	Gmc.
***e**	*e	a	a	e	e	e	ä	e, i	e	e	e	i; ai [ɛ][2]
	*h_1e											
***a**	(*a [3])			o	a	a	ā	ha, a	a	a	a	a
	*h_2e											
***o**	*h_3e					o, a	a, e	a	o	o	o	
	*o	a, ā [4]	a, ā [4]									
***ə**	*h_1	i	i, Ø	Ø	Ø	a, Ø	ā	a	e	a	a	a, Ø
	*h_2							h	a			
	*h_3								o			
***-**	*h_1	Ø	Ø			e (a?)	Ø	a	e (o)	Ø	Ø	Ø
	*h_2					a		ha	a			
	*h_3					a		a, ha	o			
***ē**	*ē	ā	ā	ě	ė	i	a/e?; ā? [8]	e, i	ē	ē	ī	ē
	*eh_1											
***ā**	(*ā [3])			a	o	a	a/o?	a, ah	ā > ē	ā	ā	ā
	*eh_2											
***ō**	*ō				uo	u	a/ā?; ū? [8]	a	ō	ō	ā; ū [8]	
	*eh_3											
***i**	*i	i	i	ь	i	i	ä	i	i	i	i	i
***ī**	*ih_1	ī	ī	i	y [i:]		i		ī	ī	ī	ei [i:]
	*ih_2					i or [(j)]a? [7]	yā		ī or [(j)]ā? [7]			
	*ih_3								ī or [(j)]ō? [7]			
***ei**	*ei	ē	ōi, aē [4]		ei, ie [5]	i	e	ei	ī	īa, ē [6]		
	*$h_1$ei											
***oi**	*oi			ě	ai, ie[5]	e		oi	ū	oe	ai	
	*$h_3$ei											
***ai**	(*ai [3])							ay	ai	ae		ae
	*$h_2$ei											
***ēi**	*ēi	āi; ā [8]	āi; ā(i) [8]	i					āi > ēi	ī?		ai
***ōi**	*ōi			y; u [8]	ai; ui [8]			ai	āi > ēi	ō	u [8]	
***āi**	*eh_2e			ě					āi > ēi	ae		ai
PIE	**PIH**	**Skr.**	**Av.**	**OCS**	**Lith.**	**Arm.**	**Toch.**	**Hitt.**	**Gk.**	**Lat.**	**O.Ir**	**Gmc.**

PIE	PIH	Skr.	Av.	OCS	Lith.	Arm.	Toch.	Hitt.	Gk.	Lat.	O.Ir	Gmc.
***u**	*u	u	u	ъ	u	u	ä	u	u	u	u; o [1]	u; au
***ū**	*uh₁	ū	ū	y	ū		u		ū	ū	ū	ū
	*uh₂					u or (w)a? [7]	wā		ū or (w)ā? [7]			
	*uh₃								ū or (w)ō? [7]			
***eu**	*eu	ō	ēu, ao [4]	ju	iau	oy	u	u	eu	ū	ūa; ō [9]	iu
	*h₁eu											
***ou**	*ou			u	au		o, au		ou			au
	*h₃eu											
***au**	(*au[3])					aw			au	au		
	*h₂eu											
***ēu**	*ēu	āu	āu	u	iau					ū?		au
***ōu**	*ōu								ō			
***m̥**	*m̥	a	a	ę	im̃;	am	äm	am	a	em	em am	um
***m̥̄**	*mH	ā	ā		ìm;ùm	ama	mā		mē,mā,mō	mā	mā	
***m̥m**		am	am	ьm/ъ	im;um	am			am	em	am	
***n̥**	*n̥	a	a	ę	iñ;uñ [14]	an	än	an	a	en	en an	un
***n̥̄**	*nH	ā	ā		ìn; ùn [14]	ana	nā		nē, nā, nō	nā	nā	
***n̥n**		an	an	ьn/ъn	iñ; uñ [14]	an			an	en	an	
***l̥**	*l̥	ṛ	ərə	lь/lъ	ĩl; ũl [14]	al	äl	al	la	ol	li	ul
***l̥̄**	*lH	īr; ūr	arə		ìl; ùl [14]	ala	lā		lē, lā, lō	lā	lā	
***l̥l**		ir; ur	ar	ьl/ъl	il; ul [14]	al, la			al	el	al	
***r̥**	*r̥	ṛ	ərə	rь/rъ	ĩr; ũr [14]	ar	är	ar	ra	or	ri	aur
***r̥̄**	*rH	īr; ūr	arə		ìr; ùr [14]	ara	rā		rē, rā, rō	rā	rā	
***r̥r**		ir; ur	ar	ьr/ъr	ir; ur [14]	ar			ar	ar	ar	
PIE	**PIH**	**Skr.**	**Av.**	**OCS**	**Lith.**	**Arm.**	**Toch.**	**Hitt.**	**Gk.**	**Lat.**	**O.Ir**	**Gmc.**

NOTES: [1] Before *wa*. [2] Before *r, h*. [3] The existence of PIE non-allophonic *a* is disputed. [4] In open syllables (Brugmann's law). [5] Under stress. [6] Before palatal consonants. [7] The so-called breaking is disputed (typical examples are *proti-h₃kʷo- > Ved. *prátīkam* ~ Gk. πρόσωπον; *gʷih₃u̯o- > Ved. *jīvá-* ~ Arm. *keank'*, Gk. ζωός; *duh₂ro- > Ved. *dūrá-* ~ Arm. *erkar*, Gk. δηρός) [8] In a final syllable. [9] Before velars and unstressed [10] Before *ā* in the following syllable. [11] Before *i* in the following syllable. [12] In a closed syllable. [13] In the neighbourhood of labials. [14] In the neighbourhood of labiovelars.

II.3. THE LARYNGEAL THEORY

1. The **laryngeal theory** is a generally accepted theory of historical linguistics which proposes the existence of a set of three (or up to nine) consonant sounds that appear in most current reconstructions of the Proto-Indo-European language, which usually target Middle PIE or Indo-Hittite (PIH), i.e. the common IE language that includes Anatolian. These sounds have since disappeared in all existing IE languages, but some laryngeals are believed to have existed in the Anatolian languages.

NOTE. In this Modern Indo-European grammar, such uncertain sounds are replaced by the vowels they yielded in Late PIE dialects (an ***-a*** frequently substitutes the traditional *schwa indogermanicum*), cf. MIE ***patér*** for PIH **ph₂tér*, MIE ***ōktō*(*u*)**, *eight*, for PIH **h₃ekteh₃*, etc. Again, for a MIE based on the northwestern dialects, such stricter reconstruction would give probably a simpler language in terms of phonetic irregularities (*ablaut* or *apophony*), but also a language phonologically too different from Latin, Greek, Germanic and Balto-Slavic dialects. Nevertheless, reconstructions with laryngeals are often shown in this grammar as 'etymological sources', so to speak, as Old English forms are shown when explaining a Modern English word in modern dictionaries. The rest of this chapter offers a detailed description of the effects of laryngeals in IE phonology and morphology.

2. The evidence for them is mostly indirect, but serves as an explanation for differences between vowel sounds across Indo-European languages. For example, Sanskrit and Ancient Greek, two descendents of PIE, exhibit many similar words that have differing vowel sounds. Assume that the Greek word contains the vowel *e* and the corresponding Sanskrit word contains *i* instead. The laryngeal theory postulates these words originally had the same vowels, but a neighboring consonant which had since disappeared had altered the vowels. If one would label the hypothesized consonant as **h₁*, then the original PIH word may have contained something like **eh₁* or **ih₁*, or perhaps a completely different sound such as **ah₁*. The original phonetic values of the laryngeal sounds remain controversial (v.i.)

3. The beginnings of the theory were proposed by Ferdinand de Saussure in 1879, in an article chiefly devoted to something else altogether (demonstrating that **a* and **o* were separate phonemes in PIE). Saussure's observations, however, did not achieve any general currency until after Hittite was discovered and deciphered in the early 20th century. Hittite had a sound or sounds written with symbols from the Akkadian syllabary conventionally transcribed as *ḫ*, as in *te-iḫ-ḫi* , "*I put, am putting*". Various more or less obviously unsatisfactory proposals were made to connect these (or this) to the PIE consonant system as then reconstructed. It remained for Jerzy Kuryłowicz (*Études indoeuropéennnes I,* 1935) to propose that these sounds lined up with Saussure's conjectures. Since then, the laryngeal theory (in one or another form) has been accepted by most Indo-Europeanists.

4. The late discovery of these sounds by Indo-Europeanists is largely due to the fact that Hittite and the other Anatolian languages are the only Indo-European languages where at least some of them are attested directly and consistently as consonantal sounds. Otherwise, their presence is to be seen mostly

through the effects they have on neighboring sounds, and on patterns of alternation that they participate in; when a laryngeal is attested directly, it is usually as a vowel (as in the Greek examples below). Most Indo-Europeanists accept at least some version of laryngeal theory because their existence simplifies some otherwise hard-to-explain sound changes and patterns of alternation that appear in the Indo-European languages, and solves some minor mysteries, such as why verb roots containing only a consonant and a vowel have only long vowels e.g. PIE *$d\bar{o}$- "give"; re-reconstructing PIH *deh_3- instead not only accounts for the patterns of alternation more economically than before, but brings the root into line with the basic consonant - vowel - consonant Indo-European type.

5. There are many variations of the Laryngeal theory. Some scholars, such as Oswald Szemerényi, reconstruct just one. Some follow Jaan Puhvel's reconstruction of eight or more (in his contribution to *Evidence for Laryngeals*, ed. Werner Winter). Most scholars work with a basic three:

- *$\boldsymbol{h_1}$, the "*neutral*" laryngeal
- *$\boldsymbol{h_2}$, the "*a-colouring*" laryngeal
- *$\boldsymbol{h_3}$, the "*o-colouring*" laryngeal

Many scholars, however, either insist on or allow for a fourth consonant, *h_4, which differs from *h_2 only in not being reflected as Anatolian *ḫ*. Accordingly, except when discussing Hittite evidence, the theoretical existence of an *h_4 contributes little. Another such theory, but much less generally accepted, is Winfred P. Lehmann's view that *h_1 was actually two separate sounds, due to inconsistent reflexes in Hittite. (He assumed that one was a glottal stop and the other a glottal fricative.)

Some direct evidence for laryngeal consonants from Anatolian:

PIE *a is a rarish sound, and in an uncommonly large number of good etymologies it is word-initial. Thus PIE (traditional) ***anti***, *in front of and facing* > Greek *antí* "*against*"; Latin *ante* "*in front of, before*"; (Sanskrit *ánti* "*near; in the presence of*"). But in Hittite there is a noun *ḫants* "*front, face*", with various derivatives (*ḫantezzi* "*first*", and so on, pointing to a PIH root-noun *h_2ent- "*face*" (of which *h_2enti would be the locative singular).

NOTE. It does not necessarily follow that all reconstructed PIE forms with initial *a should automatically be rewritten as PIH *h_2e**.**

Similarly, the traditional PIE reconstruction for *'sheep'* is *owi-, whence Skt *ávi*-, Latin *ovis*, Greek *óïs*. But now Luvian has *ḫawi*-, indicating instead a reconstruction *h_3ewi-.

But if laryngeals as consonants were first spotted in Hittite only in 1935, what was the basis for Saussure's conjectures some 55 years earlier? They sprang from a reanalysis of how the patterns of vowel alternation in Proto-Indo-European roots of different structure aligned with one another.

6. A feature of Proto-Indo-European morpheme structure was a system of vowel alternations christened ablaut (‘*alternate sound*’) by early German scholars and still generally known by that term, except in Romance languages, where the term *apophony* is preferred. Several different such patterns have been discerned, but the commonest one, by a wide margin, is **e/o/zero** alternation found in a majority of roots, in many verb and noun stems, and even in some affixes (the genitive singular ending, for example, is attested as ***-es***, ***-os***, and ***-s***). The different states are called ablaut grades; ***e***-grade or “*full grades*”, ***o***-grade and “*zero-grade*”.

Thus the root ***sed-***, “*to sit (down)*” (roots are traditionally cited in the *e*-grade, if they have one), has three different shapes: **sed-*, **sod-*, and **sd-*. This kind of patterning is found throughout the PIE root inventory and is transparent:

- **sed-*: in Latin *sedeō* “am sitting”, Old English *sittan* “to sit” < **set-ja-* (with umlaut) < **sed-*; Greek *hédrā* “seat, chair” < **sed-*.
- **sod-*: in Latin *solium* “*throne*” (Latin *l* sporadically replaces *d* between vowels, said by Roman grammarians to be a Sabine trait) = Old Irish *suide*^{n} /suð’e/ “a sitting” (all details regular from PIE **sod-jo-m*); Gothic *satjan* = Old English *settan* “*to set*” (causative) < **sat-ja-* (umlaut again) < PIE **sod-eje-*. PIE **se-sod-e* “*sat*” (perfect) > Sanskrit *sa-sād-a* per Brugmann’s law.
- **sd-*: in compounds, as **ni-* “*down*” + **sd-* = **nisdos* “*nest*”: English *nest* < Proto-Germanic **nistaz*, Latin *nīdus* < **nizdos* (all regular developments). The 3 pl. (third person plural) of the perfect would have been **se-sd-r̥* whence Indo-Iranian **sazdr̥*, which gives (by regular developments) Sanskrit *sedur* /*sēdur*/.

Now, in addition to the commonplace roots of consonant + vowel + consonant structure there are also well-attested roots like **dʰē-* “*put, place*”: these end in a vowel, which is always long in the categories where roots like **sed-* have full grades; and in those forms where zero grade would be expected, before an affix beginning with a consonant, we find a short vowel, reconstructed as ***ə**, or *schwa* (more formally, *schwa primum indogermanicum*). The cross-language correspondences of this vowel are different from the other five short vowels.

NOTE. Before an affix beginning with a vowel, there is no trace of a vowel in the root, as shown below.

Whatever caused a short vowel to disappear entirely in roots like **sed-*/**sod-*/**sd-*, it was a reasonable inference that a long vowel under the same conditions would not quite disappear, but would leave a sort of residue. This residue is reflected as *i* in Indic while dropping in Iranian; it gives variously *e, a, o* in Greek; it mostly falls together with the reflexes of PIE ****a*** in the other languages (always bearing in mind that short vowels in non-initial syllables undergo various adventures in Italic, Celtic, and Germanic):

- **dō-* "*give*": in Latin *dōnum* "gift" = Old Irish *dán* /dāṅ/ and Sanskrit *dâna-* (*â* = *ā* with tonic accent); Greek *dí-dō-mi* (reduplicated present) "*I give*" = Sanskrit *dádāmi*. But in the participles, Greek *dotós* "*given*" = Sanskrit *ditá-*, Latin *datus* all < **də-tó-*.
- **stā-* "*stand*": in Greek *hístēmi* (reduplicated present, regular from **si-stā-*), Sanskrit *a-sthā-t* aorist "*stood*", Latin *testāmentum* "testimony" < **ter-stā-* < **tri-stā-* ("*third party*" or the like). But Sanskrit *sthitá-*"*stood*", Greek *stasís* "*a standing*", Latin supine infinitive *statum* "*to stand*".

Conventional wisdom lined up roots of the **sed-* and **dō-* types as follows:

Full Grades	*Weak Grades*	
sed-, ***sod-***	***sd-***	"*sit*"
dō-	***də-***, ***d-***	"*give*"

But there are other patterns of "*normal*" roots, such as those ending with one of the six resonants (****j w r l m n***), a class of sounds whose peculiarity in Proto-Indo-Eruopean is that they are both syllabic (vowels, in effect) and consonants, depending on what sounds are adjacent:

Root **bʰer-/bʰor-/bʰr̥-* ~ bʰr- "*carry*"

- **bʰer-*: in Latin *ferō* = Greek *phérō*, Avestan *barā*, Old Irish *biur*, Old English *bera* all "I carry"; Latin *ferculum* "bier, litter" < **bʰer-tlo-* "*implement for carrying*".
- **bʰor-*: in Gothic *barn* "*child*" (= English dial. *bairn*), Greek *phoréō* "*I wear [clothes]*" (frequentative formation, **"carry around*"); Sanskrit *bhâra-* "*burden*" (**bʰor-o-* via Brugmann's law).
- **bʰr̥-* before consonants: Sanskrit *bhṛ-tí-* "*a carrying*"; Gothic *gabaurþs* /gaborθs/, Old English *gebyrd* /yebürd/, Old High German *geburt* all "*birth*" < **gaburdi-* < **bʰr̥-tí-*
- **bʰr-* before vowels: Ved *bibhrati* 3pl. "*they carry*" < **bʰi-bʰr-n̥ti;* Greek *di-phrós* "*chariot footboard big enough for two men*" < **dwi-bʰr-o-*.

Saussure's insight was to align the long-vowel roots like **dō-, *stā-* with roots like **bʰer-*, rather than with roots of the **sed-* sort. That is, treating "*schwa*" not as a residue of a long vowel but, like the **r* of **bʰer-/*bʰor-/*bʰr̥-*, an element that was present in the root in all grades, but which in full grade forms coalesced with an ordinary ***e/o*** root vowel to make a long vowel, with '*coloring*' (changed phonetics) of the *e*-grade into the bargain; the mystery element was seen by itself only in zero grade forms:

Full Grades	*Zero Grade*	
b^{h}er-, ***b^{h}or-***	***b^{h}r̥-*** / ***b^{h}r-***	"*carry*"
deX, ***doX-***	***dẊ-*** / ***dX-***	"*give*"

* **Ẋ** = syllabic form of the mystery element

Saussure treated only two of these elements, corresponding to our *h_2 and *h_3. Later it was noticed that the explanatory power of the theory, as well as its elegance, were enhanced if a third element were added, our *h_1. which has the same lengthening and syllabifying properties as the other two but has no effect on the color of adjacent vowels. Saussure offered no suggestion as to the phonetics of these elements; his term for them, "*coéfficiants sonantiques*", was not however a fudge, but merely the term in general use for glides, nasals, and liquids (i.e., the PIE resonants) as in roots like *b^h*er*-.

As mentioned above, in forms like **dwi-b^{h}r-o-* (etymon of Greek *diphrós*, *above*), the new "*coéfficiants sonantiques*" (unlike the six resonants) have no reflexes at all in any daughter language. Thus the compound PIH **mn̥s-d^{h}eh-* "*to 'fix thought', be devout, become rapt*" forms a noun **mn̥s-d^{h}h-o-* seen in Proto-Indo-Iranian **mazdha-* whence Sanskrit *medhá-* /*mēdha*/ "*sacrificial rite, holiness*" (regular development as in *sedur* < **sazdur*, above), Avestan *mazda-* "*name (originally an epithet) of the greatest deity*".

There is another kind of unproblematic root, in which obstruents flank a resonant. In the zero grade, unlike the case with roots of the *b^h*er*- type, the resonant is therefore always syllabic (being always between two consonants). An example would be *b^h*end^h*- "*tie, bind*":

- *b^h*end^h*-: in Germanic forms like Old English *bindan* "to tie, bind", Gothic *bindan;* Lithuanian *beñdras* "chum", Greek *peĩsma* "rope, cable" /pēsma/ < **phenth-sma* < *b^h*end^h*-*smn̥*.
- *b^h*ond^h*-: in Sanskrit *bandhá-* "bond, fastening" (*b^h*ond^h*-o-*; Grassmann's law) = Old Icelandic *bant*, OE *bænd;* Old English *bænd*, Gothic *band* "*he tied*" < *(b^h*e*)b^h*ond^h*-e*.
- *b^h*n̥d^h*-: in Sanskrit *baddhá-* < *b^h*n̥d^h*-tó-* (Bartholomae's law), Old English *gebunden*, Gothic *bundan*; German *Bund* "league". (English *bind* and *bound* show the effects of secondary (Middle English) vowel lengthening; the original length is preserved in *bundle*.)

This is all straightforward and such roots fit directly into the overall patterns. Less so are certain roots that seem sometimes to go like the *b^h*er*- type, and sometimes to be unlike anything else, with (for example) *long* syllabics in the *zero* grades while at times pointing to a two-vowel root structure. These roots are variously called "*heavy bases*", "*dis(s)yllabic roots*", and *"seṭ roots*" (the last being a term from *Pāṇini's grammar*. It will be explained below).

For example, the root "be born, arise" is given in the usual etymological dictionaries as follows:

A. PIE **gen-*, **gon-*, **gn̥-*

B. PIE **genə-*, **gonə-*, **gn̥̄-* (where n̥̄ = a long syllabic n̥)

The (A) forms occur when the root is followed by an affix beginning with a vowel; the (B) forms when the affix begins with a consonant. As mentioned, the full-grade (A) forms look just like the **bher-* type, but the zero grades always and only have reflexes of syllabic resonants, just like the **bʰendʰ-* type; and unlike any other type, there is a second root vowel (always and only **ə*) following the second consonant:

**gen(ə)-*

- PIE **genos-* neut *s*-stem "*race, clan*" > Greek (Homeric) *génos, -eos*, Sanskrit *jánas-*, Avestan *zanō*, Latin *genus, -eris*.
- Greek *gené-tēs* "*begetter, father*"; *géne-sis* < **genə-ti-* "*origin*"; Sanskrit *jáni-man-* "*birth, lineage*", *jáni-tar-* "*progenitor, father*", Latin *genitus* "*begotten*" < *genatos*.

**gon(e)-*

- Sanskrit *janayati* "*beget*" = Old English *cennan* /kennan/ < **gon-eje-* (causative); Sanskrit *jána-* "*race*" (*o*-grade *o*-stem) = Greek *gónos, -ou* "*offspring*".
- Sanskrit jajāna 3sg. "was *born*" < **ge-gon-e*.

**gn̥-/*gn̥̄-*

- Gothic *kuni* "*clan, family*" = OE *cynn* /künn/, English *kin*; Rigvedic *jajanúr* 3pl.perfect < **ge-gn̥n-* (a relic; the regular Sanskrit form in paradigms like this is *jajñur*, a remodeling).
- Sanskrit *jātá-* "*born*" = Latin *nātus* (Old Latin *gnātus*, and cf. forms like *cognātus* "*related by birth*", Greek *kasí-gnētos* "*brother*"); Greek *gnḗsios* "*belonging to the race*". (The *ē* in these Greek forms can be shown to be original, not Attic-Ionic developments from Proto-Greek **ā*.)

NOTE. The Pāṇinian term "seṭ" (that is, sa-i-ṭ) is literally "*with an /i/*". This refers to the fact that roots so designated, like *jan-* "*be born*", have an /i/ between the root and the suffix, as we've seen in Sanskrit *jánitar-, jániman-, janitva* (a gerund). Cf. such formations built to "aniṭ" ("without an /i/") roots, such as *han-* "*slay*": *hántar-* "*slayer*", *hanman-* "*a slaying*", *hantva* (gerund). In Pāṇini's analysis, this /i/ is a linking vowel, not properly a part of either the root or the suffix. It is simply that some roots are in effect in the list consisting of the roots that (as we would put it) '*take an -i-*'.

The startling reflexes of these roots in zero grade before a consonant (in this case, Sanskrti *ā*, Greek *nē*, Latin *nā*, Lithuanian *ìn*) is explained by the lengthening of the (originally perfectly ordinary) syllabic resonant before the lost laryngeal, while the same laryngeal protects the syllabic status of the preceding resonant even before an affix beginning with a vowel: the archaic Vedic form *jajanur* cited above is structurally quite the same (**ge-gn̥h₁-r̥*) as a form like **da-dṛś-ur* "*they saw*" < **de-dr̥k-r̥*.

Incidentally, redesigning the root as **genh-* has another consequence. Several of the Sanskrit forms cited above come from what look like *o*-grade root vowels in open syllables, but fail to lengthen to ***-ā-*** per Brugmann's law. All becomes clear when it is understood that in such forms as **gonh-* before a vowel, the **o* is not in fact in an open syllable. And in turn that means that a form like O.Ind. *jajāna* "*was born*", which apparently *does* show the action of Brugmann's law, is actually a false witness: in the Sanskrit perfect tense, the whole class of seṭ roots, en masse, acquired the shape of the aniṭ 3 sing. forms.

There are also roots ending in a stop followed by a laryngeal, as **pleth₂-*/**pl̥th₂-* "*spread, flatten*", from which Sanskrit *pṛthú-* "*broad*" masc. (= Avestan *pərəθu-*), *pṛthivī-* fem., Greek *platús* (zero grade); Skt. *prathimán-* "*wideness*" (full grade), Greek *platamṓn* "*flat stone*". The laryngeal explains (a) the change of **t* to **th* in Proto-Indo-Iranian, (b) the correspondence between Greek *-a-*, Sanskrit *-i-* and no vowel in Avestan (Avestan *pərəθwī* "*broad*" fem. in two syllables vs Sanskrit *pṛthivī-* in three).

Caution has to be used in interpreting data from Indic in particular. Sanskrit remained in use as a poetic, scientific, and classical language for many centuries, and the multitude of inherited patterns of alternation of obscure motivation (such as the division into seṭ and aniṭ roots) provided models for coining new forms on the "wrong" patterns. There are many forms like *tṛṣita-* "*thirsty*" and *tánima-n-* "*slendernes",* that is, seṭ formations to to unequivocally aniṭ roots; and conversely aniṭ forms like *píparti* "*fills*", *pṛta-* "*filled*", to securely seṭ roots (cf. the '*real*' past participle, *pūrṇá-*). Sanskrit preserves the effects of laryngeal phonology with wonderful clarity, but looks upon the historical linguist with a threatening eye: for even in Vedic Sanskrit, the evidence has to be weighed carefully with due concern for the antiquity of the forms and the overall texture of the data.

Stray laryngeals can be found in isolated or seemingly isolated forms; here the three-way Greek reflexes of syllabic ****h̥₁, *h̥₂, *h̥₃*** are particularly helpful, as seen below.

- ****h̥₁*** in Greek *ánemos* "wind" (cf. Latin *animus* "*breath, spirit; anger*", Vedic *aniti* "*breathes*") < **anə-* "*breathe; blow*" (now **h₂enh₁-*). Perhaps also Greek *híeros* "*mighty, super-human; divine; holy*", cf. Sanskrit *iṣirá-* "*vigorous, energetic*".
- ****h̥₂*** in Greek *patḗr* "*father*" = Sanskrit *pitár-*, Old English *fæder*, Gothic *fadar*, Latin *pater*. Also **megh₂* "*big*" neut. > Greek *méga*, Sanskrit *máhi*.
- ****h̥₃*** in Greek *árotron* "*plow*" = Welsh *aradr*, Old Norse *arðr*, Lithuanian *árklas*.

The Greek forms *ánemos* and *árotron* are particularly valuable because the verb roots in question are extinct in Greek as verbs. This means that there is no possibility of some sort of analogical interference, as for example happened in the case of Latin *arātrum* "*plow*", whose shape has been distorted by the verb *arāre* "*to plow*" (the exact cognate to the Greek form would have been **aretrum*). It used to be

standard to explain the root vowels of Greek *thetós, statós, dotós* "*put, stood, given*" as analogical. Most scholars nowadays probably take them as original, but in the case of "*wind*" and "*plow*", the argument can't even come up.

Regarding Greek *híeros*, the pseudo-participle affix *-*ro*- is added directly to the verb root, so *ish_1-*ro*- > **isero*- > **ihero*- > *híeros* (with regular throwback of the aspiration to the beginning of the word), and Sanskrit *iṣirá*-. There seems to be no question of the existence of a root **ejsh*- "*vigorously move/cause to move*". If the thing began with a laryngeal, and most scholars would agree that it did, it would have to be *h_1-, specifically; and that's a problem. A root of the shape *h_1ejsh_1- is not possible. Indo-European had no roots of the type **mem*-, **tet*-, *d^hred^h-, i.e., with two copies of the same consonant. But Greek attests an earlier (and rather more widely-attested) form of the same meaning, *híaros*. If we reconstruct *h_1ejsh_2-, all of our problems are solved in one stroke. The explanation for the *híeros/híaros* business has long been discussed, without much result; laryngeal theory now provides the opportunity for an explanation which did not exist before, namely metathesis of the two laryngeals. It's still only a guess, but it's a much simpler and more elegant guess than the guesses available before.

The syllabic ***$\underline{h}_2$** in PIH *$p\underline{h}_2ter$- "*father*" is not really isolated. The evidence is clear that the kinship affix seen in "*mother, father*" etc. was actually *-h_2ter-. The laryngeal syllabified after a consonant (thus Greek *patḗr*, Latin *pater*, Sanskrit *pitár*-; Greek *thugátēr*, Sanskrit *duhitár*- "*daughter*") but lengthened a preceding vowel (thus say Latin *māter* "*mother*", *frāter* "*brother*") — even when the "*vowel*" in question was a syllabic resonant, as in Sanskrit *yātaras* "*husbands' wives*" < *$j\underline{n}̥$t- < *$j\underline{n}̥$-h_2ter-).

LARYNGEALS IN MORPHOLOGY

Like any other consonant, Laryngeals feature in the endings of verbs and nouns and in derivational morphology, the only difference being the greater difficulty of telling what's going on. Indo-Iranian, for example, can retain forms that pretty clearly reflect a laryngeal, but there is no way of knowing which one.

The following is a rundown of laryngeals in Proto-Indo-European morphology.

***h_1** is seen in the instrumental ending (probably originally indifferent to number, like English expressions of the type *by hand* and *on foot*). In Sanskrit, feminine *i*- and *u*-stems have instrumentals in *-ī, -ū*, respectively. In the Rigveda, there are a few old *a*-stems (PIE *o*-stems) with an instrumental in *-ā;* but even in that oldest text the usual ending is *-enā*, from the *n*-stems.

Greek has some adverbs in *-ē*, but more important are the Mycenaean forms like *e-re-pa-te* "*with ivory*" (i.e. *elephantē? -ě?*)

The marker of the neuter dual was *-*ih*, as in Sanskrit *bharatī* "*two carrying ones* (neut.)", *nāmanī* "*two names*", *yuge* "*two yokes*" (< *yuga-i*? **yuga-ī*?). Greek to the rescue: the Homeric form *ósse* "*the (two) eyes*" is manifestly from **h₃ekʷ-ih₁* (formerly **okʷ-ī*) via fully-regular sound laws (intermediately **okʷje*).

*-***eh₁**- derives stative verb senses from eventive roots: PIE **sed-* "*sit (down)*": **sed-eh₁-* "*be in a sitting position*" (> Proto-Italic **sed-ē-je-mos* "*we are sitting*" > Latin *sedēmus*). It is clearly attested in Celtic, Italic, Germanic (the Class IV weak verbs), and Balto-Slavic, with some traces in Indo-Iranian (In Avestan the affix seems to form past-habitual stems).

It seems likely, though it is less certain, that this same *-*h₁* underlies the nominative-accusative dual in *o*-stems: Sanskrit *vṛkā*, Greek *lúkō* "*two wolves*". (The alternative ending *-āu* in Sanskrit cuts a small figure in the Rigveda, but eventually becomes the standard form of the *o*-stem dual.)

*-***h₁s**- derives desiderative stems as in Sanskrit *jighāṃsati* "desires to slay" < **gʷʰi-gʷʰn̥-h₂s-e-ti-* (root **gʷʰen-*, Sanskrit *han-* "*slay*"). This is the source of Greek future tense formations and (with the addition of a thematic suffix **-je/o-*) the Indo-Iranian one as well: *bhariṣyati* "*will carry*" < **bher-ḥ₁s-je-ti*.

*-***jeh₁**-/*-***ih₁**- is the optative suffix for root verb inflections, e.g. Latin (old) *siet* "*may he be*", *sīmus* "*may we be*", Sanskrit *syāt* "*may he be*", and so on.

h₂ is seen as the marker of the neuter plural: *-***ḥ₂** in the consonant stems, *-***eh₂** in the vowel stems. Much leveling and remodeling is seen in the daughter languages that preserve any ending at all, thus Latin has generalized *-*ā* throughout the noun system (later regularly shortened to *-a*), Greek generalized *-ă* < *-***ḥ₂**.

The categories "masculine/feminine" plainly did not exist in the most original form of Proto-Indo-European, and there are very few noun types which are formally different in the two genders. The formal differences are mostly to be seen in adjectives (and not all of them) and pronouns. Interestingly, both types of derived feminine stems feature **h₂:* a type that is patently derived from the *o*-stem nominals; and an ablauting type showing alternations between *-***jeh₂**- and *-***ih₂**-. Both are peculiar in having no actual marker for the nominative singular, and at least as far as the *-***eh₂**- type, two things seem clear: it is based on the *o*-stems, and the nom.sg. is probably in origin a neuter plural. (An archaic trait of Indo-European morpho-syntax is that plural neuter nouns construe with *singular* verbs, and quite possibly **jugeh₂* was not so much "*yokes*" in our sense, but "*yokage*; *a harnessing-up*".) Once that much is thought of, however, it is not easy to pin down the details of the "*ā*-stems" in the Indo-European languages outside of Anatolia, and such an analysis sheds no light at all on the *-***jeh₂**-/*-***ih₂**-

stems, which (like the ****eh₂***-stems) form feminine adjective stems and derived nouns (e.g. Sanskrit *devī-* "*goddess*" from *deva-* "*god*") but unlike the "*ā*-stems" have no foundation in any neuter category.

****-eh₂-*** seems to have formed factitive verbs, as in **new-eh₂-* "*to renew, make new again*", as seen in Latin *novāre*, Greek *neáō* and Hittite *ne-wa-aḫ-ḫa-an-t-* (participle) all "*renew*" but all three with the pregnant sense of "*plow anew; return fallow land to cultivation*".

****-h₂-*** marked the 1st person singular, with a somewhat confusing distribution: in the thematic active (the familiar *-ō* ending of Greek and Latin, and Indo-Iranian *-ā(mi))*, and also in the perfect tense (not really a tense in PIE): ****-h₂e*** as in Greek *oîda* "*I know*" < **wojd-h₂e*. It is the basis of the Hittite ending *-ḫḫi*, as in *da-aḫ-ḫi* "*I take*" < **-ḫa-i* (original **-ḫa* embellished with the primary tense marker with subsequent smoothing of the diphthong).

****-eh₃*** may be tentatively identified in a "*directive case*". No such case is found in Indo-European noun paradigms, but such a construct accounts for a curious collection of Hittite forms like *ne-pi-ša* "*(in)to the sky*", *ták-na-a* "*to, into the ground*", *a-ru-na* "*to the sea*". These are sometimes explained as *o*-stem datives in *-a* < **-ōj*, an ending clearly attested in Greek and Indo-Iranian, among others, but there are serious problems with such a view, and the forms are highly coherent, functionally. And there are also appropriate adverbs in Greek and Latin (elements lost in productive paradigms sometimes survive in stray forms, like the old instrumental case of the definite article in English expressions like *the more the merrier*): Greek *ánō* "*upwards*", *kátō* "*downwards*", Latin *quō* "*whither*?", *eō* "*to that place*"; and perhaps even the Indic preposition/preverb *â* "*to(ward)*" which has no satisfactory competing etymology. (These forms must be distinguished from the similar-looking ones formed to the ablative in **-ōd* and with a distinctive "*fromness*" sense: Greek *ópō* "*whence, from where*".)

PRONUNCIATION

Considerable debate still surrounds the pronunciation of the laryngeals and various arguments have been given to pinpoint their exact place of articulation. Firstly the effect these sounds have had on adjacent phonemes is well documented. The evidence from Hittite and Uralic is sufficient to conclude that these sounds were "guttural" or pronounced rather back in the buccal cavity. The same evidence is also consistent with the assumption that they were fricative sounds (as opposed to approximants or stops), an assumption which is strongly supported by the behaviour of laryngeals in consonant clusters.

The assumption that ****h₁*** is a glottal stop [ʔ] is still very widespread. A glottal stop would however be unlikely to be reflected as a fricative in Uralic borrowings, as appears to be the case, for example in the word *lehti* < **lešte* <= PIE **bhlh₁-to*. If, as some evidence suggests, there were two **h₁* sounds, then one may have been the glottal stop [ʔ] and the other may have been the h sound [h] of English "hat".

Rasmussen suggests a consonontal realization for *h_1 as [h] with a vocalic allophone [ɘ]. This is supported by the closeness of [ɘ] to [e] (with which it coalesces in Greek), its failure (unlike *h_2 and *h_3) to create an auxiliary vowel in Greek and Tocharian when it occurs between a semivowel and a consonant, and the typological likelihood of a [h] given the presence of aspirated consonants in PIE.

From what is known of such phonetic conditioning in contemporary languages, notably Semitic languages, ***h_2** (the "a-colouring" laryngeal) could have been a pharyngeal or epiglottal fricative such as [ħ], [ʕ], [ʜ], or [ʢ]. Pharyngeal/epiglottal consonants (like the Arabic letter ح (ħ) as in Muħammad) often cause a-coloring in the Semitic languages.

Rasmussen suggests a consonontal realization for *h_2 as [x], with a vocalic allophone [ɐ].

Likewise it is generally assumed that ***h_3** was rounded (labialized) due to its o-coloring effects. It is often taken to be voiced based on the perfect form *pi-bh_3- from the root *peh_3 "drink". Based on the analogy of Arabic, some linguists have assumed that *h_3 was also pharyngeal/epiglottal [ʕʷ ~ ʢʷ] like Arabic ع (ayin, as in Arabic muʕallim = “teacher”) plus labialization, although the assumption that it was velar [ɣʷ] is probably more common. (The reflexes in Uralic languages could be the same whether the original phonemes were velar or pharyngeal.)

Rasmussen suggests a consonantal relization for *h_3 as [ɣʷ], with a vocalic allophone [ɵ]

APPENDIX III. PIE REVIVAL FOR A COMMON EUROPE

***Carlos Quiles**, Chair, Last year student of Law and Economics, University Carlos III of Madrid.*

***María Teresa Batalla**, Vice-Chair, Doctorate Student, Library Science and Documentation.*

***Neil Vermeulen**, International Director, DPhil in English, expert in modern linguistics, English professor.*

***Fatima Calvin**, Executive Secretary, English Philologist, specialized in Old English and mediaeval languages, English professor.*

Supporters:

- ***Theoretical Foundations:***

***Department of Classical Antiquity**, University of Extremadura.*

***Antonio Muñoz**, Vice-Dean of Administrative Affairs and Prof.Dr. in UEx, Faculty of Library Science, expert in Administration and e-Administration.*

***University of Extremadura**, supporter of the project under the first competition of Entrepreneurial Innovation in the Imagination Society, 2006.*

- ***Economic Foundations:***

***Luis Fernando de la Macorra**, Prof.Dr. in Economics, University of Extremadura, expert in interregional economy, especialized in the concept of Eurocity Badajoz(Es)-Elvas(Pt).*

***Regional Government of Extremadura,** supporter of the project under the first competition of Entrepreneurial Innovation in the Imagination Society, 2006.*

- ***Practical Implementation:***

***Cabinet of Young Initiative**, supporter of the project under the first competition of Entrepreneurial Innovation in the Imagination Society, 2006.*

***Academia Biblos, S.L.,** which supports our private research with continuated donations.*

NOTE. The full project was published in Spanish in 2006, and corrected in 2007. This is a translated selection of the original Spanish version.

III.1. MODERN INDO-EUROPEAN OR THE REVIVED PIE LANGUAGE

The idea arose in Easter 2004. I was studying at the Public Library of Badajoz with Mayte and some friends, and I kept reading some books about the Pre-Roman peoples of the Iberian Peninsula. The Lusitanians draw my attention, not only because they lived in our south-western Iberian lands some millennia before us, but also because their old inscriptions were easily understood for somebody with little knowledge of Latin, and still it was classified as a "*Celtic-like Indo-European dialect*" by the author. I took some more books about Proto-Indo-European history, culture and language, and made my first notes about how could it be to inflect nouns and conjugate verbs in such an old language… and it didn't sound that strange.

European Union depicted as a single country.

Two years later, after months of (irregular) study and work, the enterprise I eventually decided to undertake is finished, the basis for a complete grammatical system is more or less done, and the websites are working. It doesn't matter whether Indo-European revival succeeds or not, my personal objective is achieved; at least the farthest I've been able to carry it.

However, I can't stop thinking about how to make good use of this work, how to benefit those who worked, work and will work on this project, as well as the European Union, turning this personal project into different not-for-profit businesses (*job-maker* corporations, so to speak), e.g. in the Badajoz-Elvas Eurocity, mainly for specialized workers, philologists, translators and interpreters, computer engineers, etc. I can only imagine two possible situations of success for the Indo-European language revival: either some regional, national or European public or private institutions support the project, and it is implemented and institutionalized in order; or, as it was originally planned, this turns to be an Open Source social movement, and consequently everyone tries to make a better project, with many different independent groups – institutions or individuals with limited resources –, which somehow manage to lead a disorderly revival.

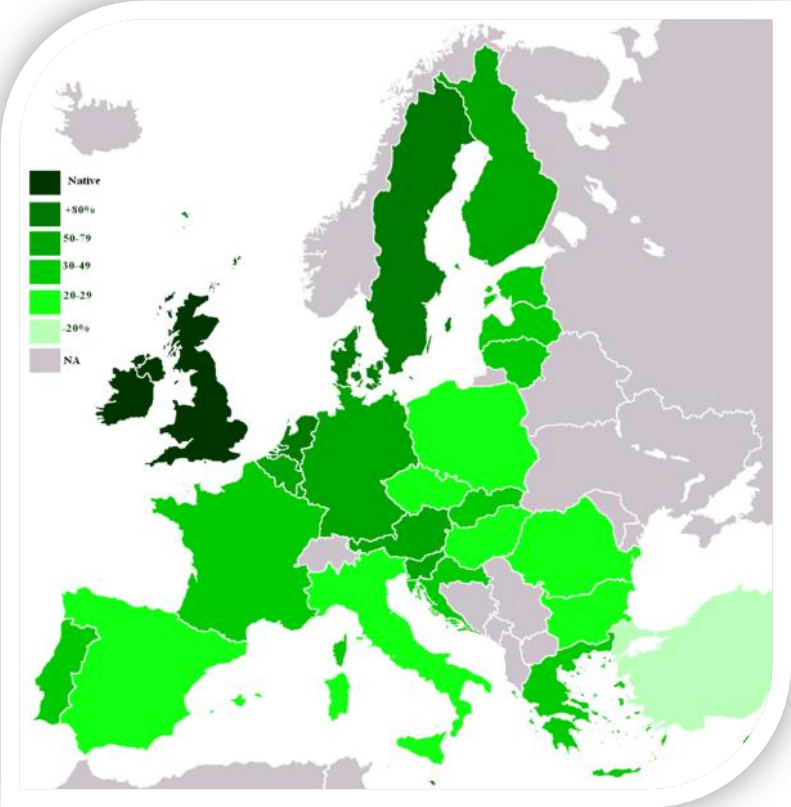
I think that, if it eventually succeeds, and if Europe manages to profit from these first confusing moments to keep all possible niches of this future market of Modern Indo-European, the output could be a radical change in the situation of the European economy in relation with the United States and other English-speaking countries, and especially a change in the perception that Europeans have of their Community and its peoples.

If we had to compare this project with traditional investments, we should say that, while the investment of public institutions in agrarian and industrial projects – or the investing of time and efforts of an individual in public competitions to become a civil servant – is like a guaranteed fixed deposit; to bet on this project – as an individual or an institution – is like investing in tiny and risky securities of a local Asian Stock Exchange. In the first case, the benefit is certain and well-known, whilst the second is a lottery, in which the amount invested can be completely lost or doubled with – apparently – the same probability.

The only reason why people would invest in such a lottery is because it is not only a matter of chance. We at Dnghu have believed in it, and still believe, investing a lot of time and money. I hope you believe in it too.

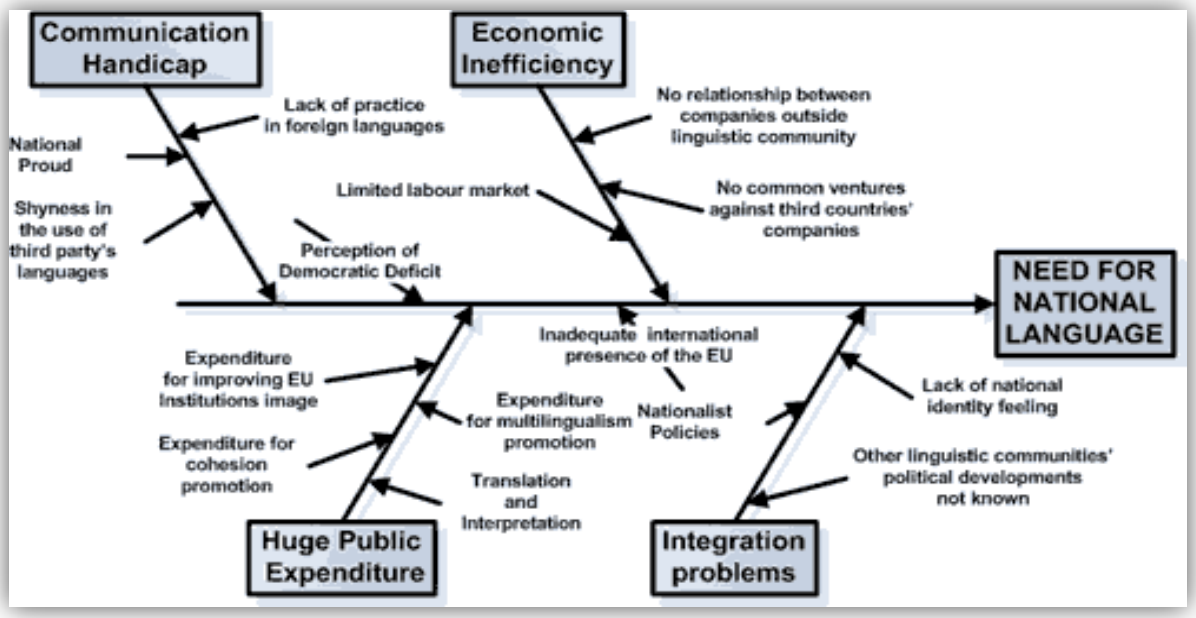
Carlos Quiles

Co-founder of Dnghu



Real knowledge of English within the European Union. Differently as what happens in Israel or the United States, the "common" language studied in almost every school and high school within the EU, English, is not learned as well as the own language. Whatever the sociological, cultural, anthropological, political and/or psychological reasons behind such behaviour, it is clear that Latin or artificial languages as Esperanto couldn't solve this situation, either. Modern Indo-European, on the other hand, is a new possibility which could change completely our concept of a united Europe.

III.2. EUROPEAN UNION INEFFICIENCIES



Simplified Cause and Effect Diagram of Present-Day European Union Problems'

Some of the problems derived from the lack of one national language for the EU can be seen in this cause and effect diagram. This inefficient situation, already pointed out long ago, hadn't until recently any stable solution.

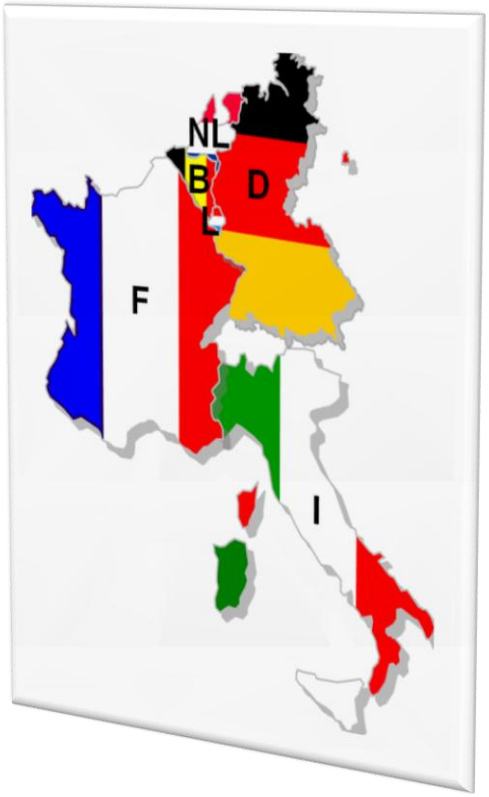
The revival of the Proto-Indo-European language makes it possible, with adequate linguistic policy and planning, to put an end to many of these problems and to open a new horizon for integration and collaboration between the citizens and regions of the European Union.

Since the very beginnings of the EEC, the three main languages (*working languages*), English, French and German, were used for every communication, while English was unofficially the *lingua franca* used by all in direct conversations and other immediate communication needs.

This model, the most logical and simple in the initial small European Community after WWII, has become obsolete, with the increase in the number of official languages and, at the same time, the growth of political demands for more presence in European institutions among defenders of national and regional or co-official languages.

It seems today that every hope of achieving a USA-like system – where English is the only official language for the Federation – is discarded: while in US history English has won in every Federal State

– although there is also co-officiality in some of them, like Spanish in New Mexico or French in Louissiana –, in Europe the Union does not lay its foundations on some English-speaking colonies of immigrants. On the contrary, the only reason why English is spoken as the European Union *lingua franca* is the predominant position of the United States within the international community since the foundation of the ECSC until today.



In the beginnings of the EEC, English as a lingua franca was the best linguistic policy.

The choice of English as the only official language for a future EU Federation is discarded; countries like France or Germany – and possibly Spain, Italy or Poland –, among others, would not accept it, as it would mean to abandon legitimate lingusitic rights in favour of other States, without a sufficient justification in terms of population, political or economical relevance. The existence of a Nation with at least 25 official languages where none is over the others is a beautiful idea, and also an obvious utopia. At present, 23 languages – and four at least to come – are official, some semi-official (like Basque or Catalan), 3 of them *working languages* - i.e., *officiously more important than the rest*-, and one, English, serves (unofficially) for general communication. This does not seem the best of the possible solutions: it lacks the European spirit necessary for correct integration between the different nations in a common country, and is clearly inefficient.

To date, only some isolated proposals had claimed to be intermediate solutions, as the adoption of Latin, or the use of supposedly 'neutral' invented languages (as Esperanto, Ido, Interlingua, etc.). In both cases, the main supposed advantage consists in not being any of the present European Union languages and, because of that, not having theoretical cultural barriers for its acceptance. Latin has been Europe's *lingua franca* for centuries – before being substituted by French in the 18th century –, while Volapük and its following clones and remakes (as Esperanto and the like) were invented by individuals with an international vocation, aimed at (above all) being easy to learn. However, as both solutions are not living languages, and because they are obviously unable to become EU's national language, the Europeans' answer has been at best of indifference to such proposals, thus accepting the defficient linguistic *statu quo*.

MODERN HEBREW AND THE LAND OF ISRAEL

The language of Israel is Modern Hebrew: it is not their only language, as many old Israelis still speak better their old languages – like Judeo-Spanish or Yiddish (Judeo-German) – than modern Hebrew, and it is certainly not a very practical language from an international point of view. However, the Land of Israel needed a language, and even though they also had the possibility of choosing between different alternatives, as international languages (like French, English or Turkish), death languages (like Latin or its *equivalent*[i] to Hebrews, Aramaic), or even artificial language systems (as Volapük or Esperanto), they chose the historical language of Israel, Hebrew, a language dead 2.500 years before – after the conquest of Jerusalem by the Babilonians under Nebuchadnezzar II –, and whose texts, mainly orally transmitted and very formal religious writings, are deemed 500 years older. Hebrew could only be reconstructed with limited exactitude, and at first opposition to the language was generalized, mainly because of religious concerns; but, in practice, it was a language that united tradition and ease of use and learning, as many jews learned (and still learn today) the sacred texts in old Hebrew, just as many European countries still have Latin and Greek as obligatory subjects in High School.

11th century Targum. Mediaeval remains are the oldest writings of Old Hebrew.

Europe faces today a similar decision. We don't have to defend more European integration; the current customs union is maybe all we can achieve in our Union of countries, just a supranational entity with some delegated legislatory powers. But if we want, as it seems, to achieve a Confederation-like State (like Switzerland) or even a European Federation (as the US or Germany), then the only linguistic non-utopic solution, which unites tradition and ease of use and learning, is Modern Indo-European or the revived Proto-Indo-European language, because it is the *grandmother* of the languages of almost all citizens of the EU. Modern Indo-European is free of regional meaning –that could hurt the national proud of the others –, and, at the same time, full of European common significance.

[i] Before the Jews were expelled from their homeland, they spoke Aramaic, which substituted Old Hebrew after the fall of Jerusalem.

III.3. MORE THAN JUST A *LINGUA FRANCA*, EUROPE'S NATIONAL LANGUAGE

The game theory is a branch of applied mathematics that studies strategic situations where players choose different actions in an attempt to maximize their returns. It studies optimal strategies of foreseen and observed behaviour of individuals in such games; it studies, then, the choice of the optimal behaviour when costs and benefits of each option are not fixed, but depend on the choice of the other players.

The following table is based on "Special Eurobarometer 243" of the European Commission with the title "Europeans and their Languages", published on February 2006 with research carried out on November and December 2005. The survey was published before the 2007 Enlargement of the European Union, when Bulgaria and Romania acceded. This is a poll, not a census. 28,694 citizens with a minimum age of 15 were asked in the then 25 member-states as well as in the then future member-states (Bulgaria, Romania) and the candidate countries (Croatia, Turkey) at the time of the survey. Only citizens, not immigrants, were asked.

The first table shows what proportion of citizens said that they could have a conversation in each language as their mother tongue and as a second language or foreign language (only the languages with at least 2% of the speakers are listed):

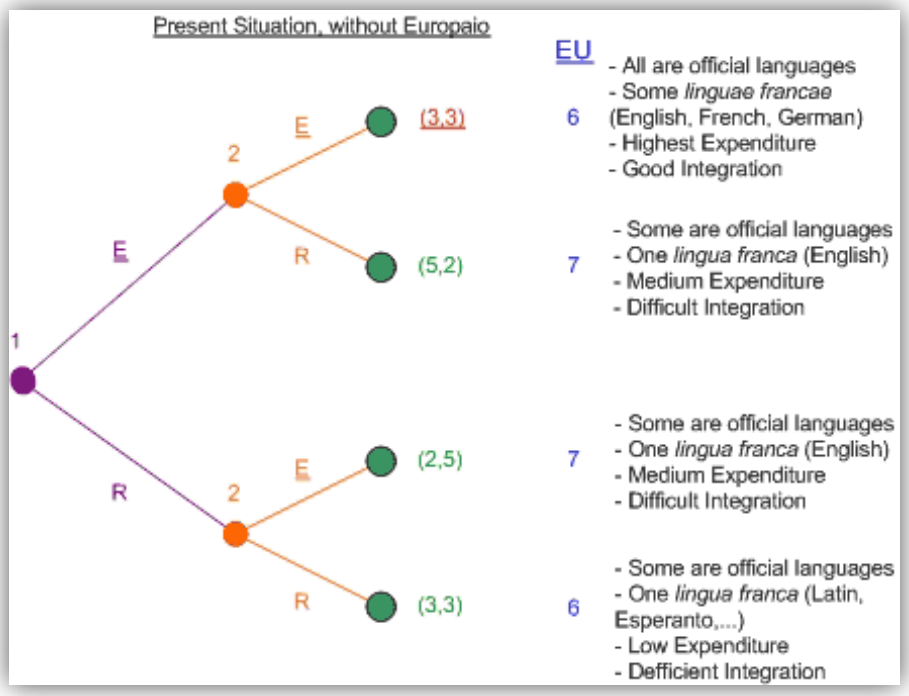
Language	Mother Tongue	Not Mother Tongue	Total Proportion
English	13%	38%	51%
German	18%	14%	32%
French	12%	14%	26%
Italian	13%	3%	16%
Spanish	9%	6%	15%
Polish	9%	1%	10%
Dutch	5%	1%	6%
Russian	1%	6%	7%
Swedish	2%	1%	3%
Greek	3%	0%	3%
Czech	2%	1%	3%
Portuguese	2%	0%	2%
Hungarian	2%	0%	2%
Slovak	1%	1%	2%
Catalan	1%	1%	2%

Languages spoken within the European Union (more than 2%). Data for EU25.

The European Union's Linguistic Policy game is depicted here in extensive form, with a decision tree, where each vertex (or node) represents a point of choice for a player. The player is specified by a number listed by the vertex. The lines out of the vertex represent a possible action for that player. The payoffs are specified at the bottom of the tree.

In this simplified game there are 2 players. Player 1, who represents any linguistic community within the EU, moves first and choose between two options; one, (E) *Egoistical*, consists in favouring the own language, and the other (R), consists in *Renouncing* the own language in favor of any other option. Player 2, who represents other linguistic community within the EU, sees the move of player 1 and choose in turn E or R. For example, if player 1 chooses E and then player 2 chooses R, player 2 obtains 2 points and player 1 obtains 5 points; if he chooses E, both obtain 3 points each. The payoff of being able to speak the own language with better status than the other is then 5 -due to, say, national proud-, and the contrary -for the same reason- has a value of 2, while speaking both languages at the same level has a payoff of 3.

This – simplistically depicted – game is constantly played within the EU by the different linguistic communities: UK and Ireland for English, Germany and Austria mainly for German, France and Belgium for French,etc.

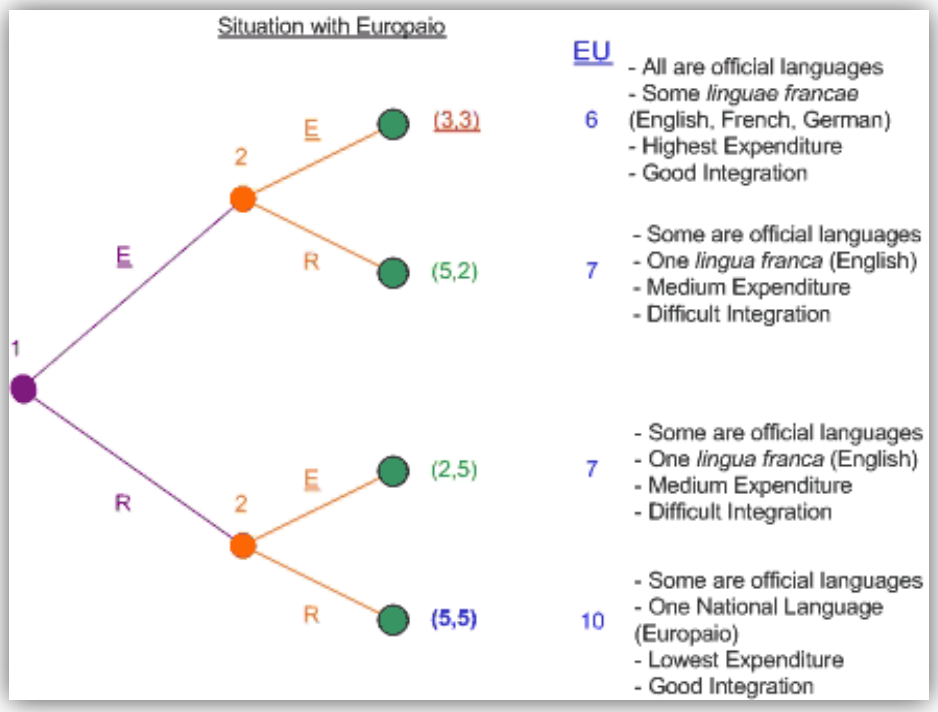


Present Situation of the linguistic policy in the EU, without Modern Indo-European.

The equilibrium obtained in this game is always the same, as every pair of players has in the *Egoistic* the best of their possible decisions. Player 1, which is the first to decide – let's say he decides first because he represents an important linguistic community, like the English, or a majority, like the German – obtains 5 or 3 points if he behaves *Egoistically*, but 3 or 2 points if he *Renounces* his linguistic rights. The first option (underlined) is the best in any of the possible events. For the second player, the payoff of behaving *Egoistically* is 3 or 5, while *Renouncing* his rights would give him 2 or 3 points. Again, the *Egoistical* behaviour is the best.

It is obvious, however, that this output (3,3) is inefficient for the EU, which would benefit from the sacrifice of some linguistic communities to obtain a better situation, although none is prepared to give up. Hence the unstable equilibrium, where everybody has an interest in changing the final output, in negotiations where the EU looks for the optimal punctuation of the scheme (7 points), with less languages – in the real world the EU chooses unofficially English as *lingua franca* and French and German for some other *working issues* –, while every community has an incentive to behave *Egoistically* to be, in a hypothetical situation, the one to enjoy the maximum output of 5 points.

After the introduction of Modern Indo-European (a systematized Proto-Indo-European), the payoff of the option in which both players renounce their linguistic rights change, but the solution of the game (at



European Union linguistic policy after the introduction of Modern Indo-European

least in theory), paradoxically, not.

The payoff of behaving *Egoistically* for both players is 3 or 5 points, while that of *Renouncing* is 2 or 5. Then, even after the introduction of *Europaio* as the alternative, the output of the game will still be the *Egoistic* one.

The global situation is completely different, though, as the equilibrium sought by the European Union is that which will give the maximum global payoff, 10; once obtained this equilibrium, no player will have incentives to change his decision, because his situation will not be better off. The game has, then, only one Nash Equilibrium, Pareto optimal, and the players (which are, in general, rational) will choose the strategies that agree with it.

The European Parliament. Can you imagine how European Parliamentary sessions are driven and followed by its multilingual members without a common national language? How can we expect a more democratic Europe without a common language for the Legislative, for the Executive, for Justice, for the Administration?

III.4. DNGHU, THE INDO-EUROPEAN LANGUAGE ASSOCIATION

Language planning refers to the deliberate efforts to influence the behaviour of others with respect to the acquisition, structure, or functional allocation of language. Typically it will involve the development of goals, objectives and strategies to change the way language is used. At a governmental level, language planning takes the form of language policy. Many nations have language regulatory bodies which are specifically charged with formulating and implementing language planning policies.

Language planning can be divided into three sub-dimensions:

Corpus planning refers to intervention in the forms of a language. This may be achieved by creating new words or expressions, modifying old ones, or selecting among alternative forms. Corpus planning aims to develop the resources of a language so that it becomes an appropriate medium of communication for modern topics and forms of discourse, equipped with the terminology needed for use in administration, education, etc. Corpus planning is often related to the standardization of a language, involving the preparation of a normative orthography, grammar, and dictionary for the guidance of writers and speakers in a speech community. Efforts at linguistic purism and the exclusion of foreign words also belong to corpus planning, and for a previously unwritten language, the first step in corpus planning is the development of a writing system.

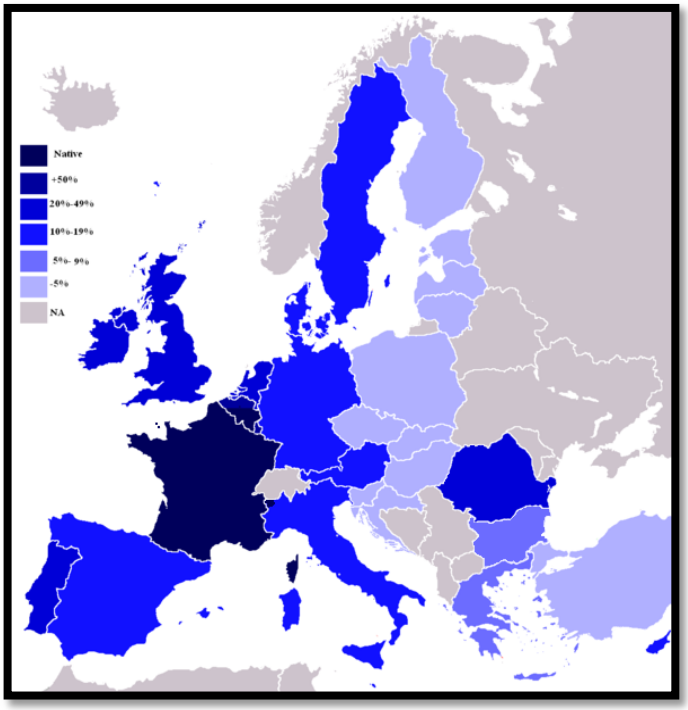
Status planning refers to deliberate efforts to allocate the functions of languages and literacies within a speech community. It involves status choices, making a particular language or variety an 'official language', 'national language', etc. Often it will involve elevating a language or dialect into a prestige variety, which may be at the expense of competing dialects. Status planning is part and parcel of creating a new writing system since a writing system can only be developed after a suitable dialect is chosen as the standard.

Acquisition planning concerns the teaching and learning of languages, whether national languages or second and foreign languages. It involves efforts to influence the number of users and the distribution of languages and literacies, achieved by creating opportunities or incentives to learn them. Such efforts may be based on policies of assimilation or pluralism. Acquisition planning is directly related to language spread. While acquisition planning is normally the province of national, regional, or local governments, bodies such as the British Council, Alliance française, Instituto Cervantes and Goethe-Institut are also very active internationally promoting education in their respective languages.

The main objective of the Dnghu Association is exactly to make use of its pioneering role in reviving the Indo-European language to become the reference institution for the development of Modern Indo-European or the revived Proto-Indo-European language, a set of grammatical rules necessary for proper communication in present-day Europe. This role includes:

A. Administering a group of experts in Indo-European linguistics, who should develop thoroughly the Corpus linguistics of Modern Indo-European, through a Consortium of universities and other renowned linguistic institutions, establishing guidelines and recommendations to be accepted by all. The Consortium should be located in some clearly Europeanist city, like Brussels, Strasbourg, Bologna, or otherwise where the first important university of Central Europe joins.

B. Also, as many resources as possible should be used to promote the birth of a social movement for revival: we called those projects "**Europaio**" – which is the easily recognizable name of the language system –, comprising Open Source software and other works and Wiki websites' content under *Copyleft* licenses, to attract everyone to participate and join; and also – being consistent with real *Copyleft* premises – allowing everyone to develop their own projects in case they don't like ours. This way, Indo-European revival is the only secured beneficiary of the community efforts (whether united or dispersed), and Indo-European has a bigger chance to become the future official language of the EU.



Knowledge of French in the European Union. Along with the knowledge of German, Spanish or Russian, all those who know at least English and French have it easier to learn the reconstructed Proto-Indo-European. If they learn Latin and Greek, they will have it still easier.

C. Lastly, incorporating a legal framework, the **Indo-European Language Association**, to manage and administer the aforementioned projects of language planning, dividing its activities into different zones, and trying to:

1. Publish grammars, referente guides, dictionaries, specialized reviews in Indo-European linguistics, collaborating with experts in Proto-Indo-European, and also arranging conferences and workgroups. Dnghu would be, then, a reference for works in or about the Indo-European language.

2. Publish learning methods, whether official or not, either free or proprietary, like manuals for school, high school or university students; CD-ROMs and other multimedia learning tools; distance courses through e-learning; translation software for individuals and professionals, etc.

3. Translate literary works, promote literary or general artistic creations, work in subtitles and dubbing of films, and all kinds of promotional activities addressed to the public, with a market of more than 400 million Europeans.

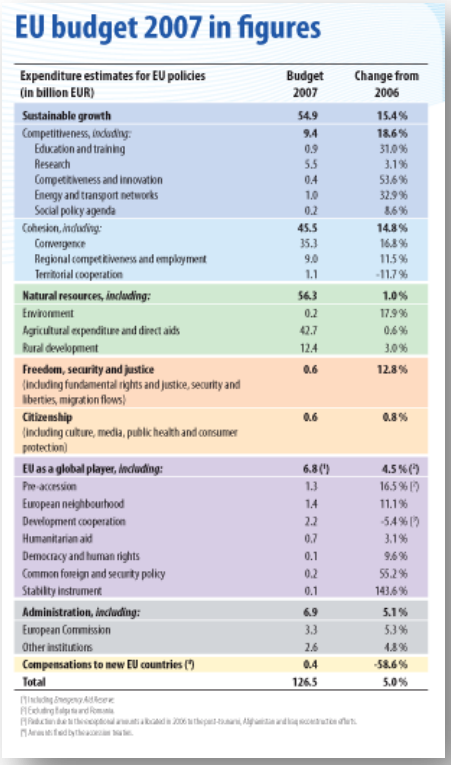
4. Organize language courses for individuals and companies, taught in every Dnghu center, with some special locations for intensive and summer courses under a only-Indo-European-spoken-here rule.

5. Broadcasting of news, television and radio programs in Indo-European, making use of the Internet and new multimedia technologies, trying to become a reference source for independent news, the way the BBC and the Deutsche-Welle are in their languages.

6. Receive public subsidies from the EU and the regions that host the Indo-European revival projects. Promote donations of individuals as a logical means to fund new technologies and free licences.

7. Function as Think Tank in Brussels, influencing the policies of the European Union with legal and legitimate means, pushing for a more pro-Europeanist approach and the Indo-European language adoption as the national language.

However detailed the European Union budget is, one cannot actually calculate the annual costs of not having a common national language as Modern Indo-European.



EU budget 2007 in figures

Expenditure estimates for EU policies (in billion EUR)	Budget 2007	Change from 2006
Sustainable growth	**54.9**	**15.4 %**
Competitiveness, *including:*	**9.4**	**18.6 %**
Education and training	0.9	31.0 %
Research	5.5	3.1 %
Competitiveness and innovation	0.4	53.6 %
Energy and transport networks	1.0	32.9 %
Social policy agenda	0.2	8.6 %
Cohesion, *including:*	**45.5**	**14.8 %**
Convergence	35.3	16.8 %
Regional competitiveness and employment	9.0	11.5 %
Territorial cooperation	1.1	-11.7 %
Natural resources, *including:*	**56.3**	**1.0 %**
Environment	0.2	17.9 %
Agricultural expenditure and direct aids	42.7	0.6 %
Rural development	12.4	3.0 %
Freedom, security and justice (including fundamental rights and justice, security and liberties, migration flows)	**0.6**	**12.8 %**
Citizenship (including culture, media, public health and consumer protection)	**0.6**	**0.8 %**
EU as a global player, *including:*	**6.8 (1)**	**4.5 % (2)**
Pre-accession	1.3	16.5 % (2)
European neighbourhood	1.4	11.1 %
Development cooperation	2.2	-5.4 % (3)
Humanitarian aid	0.7	3.1 %
Democracy and human rights	0.1	9.6 %
Common foreign and security policy	0.2	55.2 %
Stability instrument	0.1	143.6 %
Administration, *including:*	**6.9**	**5.1 %**
European Commission	3.3	5.3 %
Other institutions	2.6	4.8 %
Compensations to new EU countries (4)	**0.4**	**-58.6 %**
Total	**126.5**	**5.0 %**

(1) Including Emergency Aid Reserve.
(2) Excluding Bulgaria and Romania.
(3) Reduction due to the exceptional amounts allocated in 2006 to the post-tsunami, Afghanistan and Iraq reconstruction efforts.
(4) Amounts fixed by the accession treaties.

EUROPEAN UNION EXPENDITURE

The actual costs that the European Union bears because of not having a common national language (apart from some officiously selected *lingua franca*) is incalculable; just compare how businesses, politics, students and people behave within the United States, and how they function within the EU. Without a common language, the Union is nothing more than a customs union, whatever the intention of its member states. There are some limited and intentionally obscure statistics, though, as to how the direct expenditure of the EU institutions are:

Beginning with the *Lingua programme* in 1990, the European Union invests more than €30 million a year (out of a €120 billion EU budget) promoting language learning through the *Socrates* and *Leonardo da Vinci* programmes in: bursaries to enable language teachers to be trained abroad, placing foreign language assistants in schools, funding class exchanges to motivate pupils to learn languages, creating new language courses on CDs and the Internet and projects that raise awareness of the benefits of language learning.

Expenses related to the lack of a common language are impossible to ascertain.

Also, 13% of the annual budget for administration (6% of the European Union total) is dedicated to translation and interpretation, with more than 2.000 public employers working to translate and interpret – whether immediatly or not – the most they can to every language pair. Recent statistics talk about 1.123 million euros invested in translation and interpretation, a total of 1% of the total budget, "2,28 euros per capita", as the European Union likes to point out, i.e., 1 of each 100 euros that we pay in taxes for the Union is dedicated exclusively to the translation of papers, websites, to the Europarliament sessions, etc. Furthermore, we are paying 25 million euros for each language made official; however, only English is really promoted within the institutions, French is sometimes also used, and Germans complaint because they want their language to be at least as important as French... And all this for "just 2,28 euros per capita" annually; wow, what a bargain!

François Grin, specialist in economics of linguistics and linguistic policy, published in 2005 a report in which he pointed out that Great Britain, because of the predominance of its language within the Union, had between 17.000 y 18.000 million euros a year for language learning, thus profiting from the need of the other member states (imposed by our public institutions) to learn English. Not to talk about the

other English-speaking countries (as the US, Canada, Australia, South Africa, etc.), which profit from Europeans because of our own choice.

Both especialized industries, of translating-interpreting in Brussels, and of language teaching and learning in the UK, could adapt themselves and profit from the increase of businesses and jobs based on Indo-European language translation and learning needs.

The loss of thousands of jobs of EU's translators and interpreters, as well as the decrease in UK's GDP because of the adoption of MIE, are then not only avoidable, but even just another excuse – they are in fact in a better position to handle such a change than other national companies and institutions within the EU. It is, then, a question of willingness (of Brussels and England) to adopt a common natural language, beyond almost every other consideration.

III.5. CONCLUSION

As a conclusion, we can only say that, paradoxically, even if this simple study was correctly made, there are three main factors which have determined the success of the Hebrew language revival, whilst other revival attempts, as that of Latin or Coptic, or artificial language adoptions (as Esperanto, Ido, Interlingua, Lojban, etc.) have completely failed:

1. The **real necessity** of a common language (not just a *lingua franca*) among tiny workgroups – as in the first schools of Israel, which needed a common language other than English or French to teach to multilingual pupils. Such immediate necessity could show the real need for a common language in Europe, and help boost the Indo-European language revival. As an example, compare that, even if mobile phones seem to be now a need for most people, fifteen years ago it was a luxury good, only owned by those who needed it the most, as brokers; it was because of that first step – with big economic efforts for a then still inaccurate technology – of those who needed it the most, that the rest of us realized the advantages of the new technology, and that it spread to reach everyone.

NOTE. As a first step toward the realizing of such actual need, we are currently implementing a change in European education for the next years – beginning with the Spanish education system in the 11th and 12th year –, namely the promotion of the teaching of a more general subject in the high school, "European Languages", to substitute the current traditional optative/obligatory subjects "Latin", "Greek" or "Classical Culture", as well as third languages like "French", "German", "Russian", "Italian", etc.

The learning of such a subject (which would mainly give general notions on Proto-Indo-European and IE dialects of Europe like Latin, Germanic, Greek, Balto-Slavic, Celtic and Albanian) could easily demonstrate how those students who have passed it show 1) a greater understanding of foreign Indo-European languages of Europe, and especially 2) how they learn other European languages more easily, compared to those students who have

learnt merely a third IE language (either dead or alive), apart from the obligatory national and/or co-official and the second language.

2. The **individual will** of people to learn such a language. Unlike Esperanto, Latin, French or English, the Jews of Palestine learnt the reconstructed Modern Hebrew as an own language, not because of some external imposition, but mainly because of the thousands who (one-by-one or group-by-group) decided freely to learn it and use it openly with others. After more than a century of unending invented languages, there are still people who think that a language can be imposed by way of asserting the social advantages of its adoption – *viz.* ease of use, cultural 'neutrality', or even supposed "number of speakers". However, their obvious lack of success, along with the boom of national and regional languages' revival during the same period, shows that – whatever the underlying sociological and psychological foundations for such a behaviour –, it is not only cold reason and perfect philosophy what makes people learn and adopt a language as an own one, but also passion and desire, love for the own, interest for the old, maybe also fear for the foreign, etc.

3. The **support of public institutions**, from some point on, will also be necessary. However, we are convinced about its secondary role in the adoption of Modern Indo-European in Europe. With the television, the Internet, and other modern technologies, as well as *libre* culture and licences – and maybe also the growing culture of small private donations –, the support of the institutions of the European Union is not necessary in these first steps of the linguistic revival, until it becomes a language really used by young people within the Union.

ETYMOLOGICAL NOTES

Vocabulary is one of the best reconstructed parts of the Late Proto-Indo-European language. Indo-European studies have extensively dealt with the reconstruction of common PIE words and its derivatives, and lots of modern dictionaries of IE languages as Latin, English, German, Greek, Sanskrit, etc. already give etymologies in PIE roots apart from the oldest forms in their languages.

NOTE. There are some excellent free databases on IE etymologies, which make printed works unnecessary, as they become quicly outdated by the continuated corrections and additions. Links to online databases on PIE and IE languages are available at our website, where Pokorny's Etymological Dictionary might be downloaded in PDF <http://dnghu.org/en/Indo-European%20etymological%20dictionary/> or directly consulted in HTML format at <http://dnghu.org/indoeuropean.html>. Common Proto-Indo-European words to be used in MIE can be looked for with the PDf or Excell document at http://dnghu.org/en/proto-indo-european-language/, and our Indo-European translator-dictionary <http://indo-european.info/> allows translation of whole sentences and contains a Wiki Etymology Dictionary.

Good resources might also be found at <http://www.indo-european.nl/>, managed by the Department of Comparative Indo-European Linguistics at Leiden University, and in The Tower of Babel <http://starling.rinet.ru/>, a project oriented to Eurasiatic, Nostratic and the like, less focused on PIE proper, but sharing downloadable software and PDFs for quick offline queries.

These notes are not intended to substitute the existing reference works, and indeed not to substitute the common PIE vocabulary to be used in Modern Indo-European, but just to facilitate the comprehension of Proto-Indo-European roots in light of their derivatives (and related to the vocabulary used in this grammar), showing also reconstructed IE forms based on the common English vocabulary.

Many reconstructed derivatives are then from Germanic or from international words of Graeco-Latin origin, but this doesn't imply we recommend their use over other common PIE words: for example, Latin loans ***gnātionālís**, *national*, or ***gnātionálitā**-, *nationality*, are not used in some Germanic and most Slavic languages, and should be substituted by other, 'purer' or 'less biased' Proto-Indo-European terms (see notes 41 and 77). Also, non-IE suffixes Lat. *aiqi*-, "*aequi*-", Gmc. *iso*-, "*ice*-", Gk. *geo*-, could be substituted by common PIE formations, and secondary formations as e.g. Lat. *re*-, "*again*", could be replaced by a 'purer' IE ***ati***-, and suffix ***-ti*** could be used instead of secondary Ita., Arm. ***-tio(n)***, etc.

NOTE. For Modern Indo-European **ār**- (PIH *arH*-), compare Hitt. *arha*, "*border*" (cf. *arha kisai*, "*dismantle*"), Gk. *ορος*, O.Ind. *āre*, "*far*", etc. However, its original meaning as a prefix was probably not "*(do) again*" as in Lat. *re*-, but instead "*get back to the original situation*" (a use replaced in Latin by prefix *dis*-), cf. Lat. *resuō*, "*unstitch*", *respiciō*, "*look back*", *reiciō*, "*reject*", etc.

1. *Carlos Quiles*, translated as Modern Indo-European ***Górilos Kūriakī***, lit. *Old-man (Son-)of-"of-the-Lord"*:

a. *Carlos* is a popular Spanish name derived from Germanic **karilaz*, whose basic meaning is "old man". In Finnish, the Germanic word was borrowed and survives almost unchanged as *karilas*. The Old Norse descendant of the Germanic word, *karl*, means "old man, servant", and the Old High German equivalent, *karal*/*keral*, meaning "man, lover, husband", has become the name *Karl* and noun *Kerl*, and appears also as O.Eng. *Ceorl* (Eng. *churl*), "freeman of the lowest class". Middle High German *karl*, "freeman", was adopted into northern French as *Charles*, from which we have the name Charles. The Medieval Latin form *Carolus* is based on the Old High German *karal*. The fame of *Carolus Magnus*, "Charles the Great", or Charlemagne, added luster to the name Carolus and explains why the Slavic languages borrowed the name as their general word for "king", *korol'* in Russian. Gmc. *karilaz*/*kerilaz* should thus be translated as proper PIE adjective **gorilós**/**gerilós**, and therefore as proper MIE name m. **Górilos**, f. **Górilā**, cf. Gk. *γηραλέος*, "*old*", *γέρων* (as in Eng. *geriatrics*), O.C.S. *zьrělъ*; also, cf. O.Ind. *járant*, Lat. *glarea*, etc.

Compare also with the etymology for *gorilla*, MIE **gorillā**, coming from Gk. pl. *goríllai* (MIE **gorillās**), pl. of name given to wild, hairy women in Gk. translation of Carthaginian navigator Hanno's account of a tribe seen in his explorations along the N.W. coast of Africa (Sierra Leone), c. 500 B.C. Knowing that story, U.S. missionary Thomas Savage applied that name to the apes (Troglodytes gorills) he saw in that region in 1847.

b. *Quiles* is a genitive, and means "*(son) of quili*" (cf. Spa. *Quílez*, Cat. *Quilis*, Ast. *Quirós*, Gal-Pt. *Quiris*). It comes, from mediaeval noun *Quirici->Quili* (shortened and with *r->l*), a loan word from Gk. *Κυριακος* (Indo-European **kūriakos**), "*of the Lord*", from which It./Spa. *Quirico*, Gl.-Pt. *Queirici*, Cat. *Quirce*, Fr. *Quirice*, O.N. *kirkja*, Eng. *church*, Scots *kirk* or Ger. *Kirche*. PIE root **keu-** means *swell*. IE **kūrios** means *master*, *lord*, as Gk. *κυριος*, and adjective *Kyriakos* was used as Roman cognomen *Cyriacos*. **Kūriakī** should then be the proper genitive of the MIE loan-translated Greek term, meaning.

2. For PIE root **bhā-** (PIH $*b^heh_2$ colored into $*b^hah_1$) compare modern derivatives: zero-grade (***bha-***) suffixed **bhauknos**, *beacon*, *signal*, as Gmc. *bauknaz* (cf. O.E. *beacen*, O.Fris. *bacen*, M.Du. *bokin*, O.H.G. *bouhhan*, O.Fr. *boue*, "*buoy*"), **bhasiā**, *berry* ("*bright-coloured fruit*"), as Gmc. *bazjo* (cf. O.E. *berie*, *berige*, O.H.G. *beri*, Frank. *bram-besi* into O.Fr. *framboise*, "*raspberry*", MIE ***bhrambhasiā***); **bhanduos**, *banner, identifying sign, standard*, hence "*company united under a particular banner*" as Gmc. *bandwaz* (cf. Goth. *banwa*, also L.Lat. *bandum* into Sp. *banda*); suffixed zero-grade **bhauōs**, ***bhauotós***, *light*, as Gk. φῶς, φωτός, (MIE **bhauōs**, **bhauesós**), as in common borrowings ***bhauotogrbhíā***, MIE **bhauesogrbhíā**, (see **gerbh**-), *photography*, or **bhauōsbhoros**, "*bearing light", morning star, phosphorus*. See **bhā**- for more IE derivatives.

3. Modern derivatives from IE **dn̥ghūs**, *language*, are usually feminine (as general **dn̥ghwā**), but for extended in **-i** Bal.-Sla. **dn̥ghwis**, cf. Baltic *leĩ̯uwis*, *in̯uwis*, and further extended in **-k**-, Sla. jęzьkъ (cf. Russ. *язык*, Pl. *język*, Cz. *jazik*, Sr.-Cr.,Slo. *jezik*, Bul. *език*). Compare, for the noun of the English (language), modern Indo-European words: neuter O.E. *Englisc*, Ger. *Englisch*, Du. *Engels*, Gk. n.pl. *Αγγλικά*; masculine is found in Scandinavian *engelsk*, in Romance – where the neuter merged with the masculine – Fr. *anglais*, It. *inglese*, Spa. *inglés*, Pt. *inglese*, as well as alternative Lat. *sermō latīnus*, and Slavic (following the masculine of the word "*language*"), Russ. *английский* [*язык*], Pol. *język angielski*, Bul. *английски* [*език*], Sr.-Cro. *engleski* [*jezik*] etc.);

feminine (following the gender of "*language*") Lat. *anglica* [*lingua*], Rom. [*limba*] *engleză*, or Slavic Cz. *angličtina*, Slo. *angleščina*, Bel. *англійская*; or no gender at all, as in Arm. *angleren [lezu]*.

4. PIE root **wer-**, *speak*, (PIH *werh₃*), gives MIE **wṛdhom**, *word*, as Gmc. *wurdam*, (cf. Goth. *waurd*, O.N. *orð*, O.S., O.Fris., O.E. *word*, Du. *woord*, O.H.G., Ger. *wort*), and **werdhom**, *word*, *verb*, as Lat. *uerbum*, as in **adwerdhiom**, *adverb*, or **prōwerdhiom**, *proverb*; also **weriō**, *say*, *speak*, metathesized in Greek, as in **werioneíā**, as Gk. εἰρωνεία; also, suffixed variant form **wrētṓr**, *public speaker, rhetor*, as Gk. ῥήτωρ, and **wrḗmn̥**, *rheme*. Compare also Umb. *uerfalem*, Gk. ειρω, Skr. *vrata*, Av. *urvāta*, O.Pruss. *wīrds*, Lith. *vardas*, Ltv. *vārds*, O.C.S. *vračĭ*, Russ. врать, O.Ir. *fordat*; Hitt. *ueria*.

5. PIE base **jeug-**, *join* (probably from a root **jeu-**), evolved as O.H.G. [*untar*]*jauhta*, Lat. *jungō*, Gk. ζεύγνῡμι O.Ind. *yunáḱti*, *yōjayati* (<***jeugeieti***), Av. *yaoj-*, *yuj-*, Lith. *jùngiu*, *jùngti*; gives common derivatives **jugóm**, *joining*, *yoke*; cf. Gmc. *jukam* (cf. Goth. *juk*, O.N. *ok*, O.S. *juk*, O.E. *geoc*, Dan. *aag*, M.Du. *joc*, Du. *juk*, O.H.G. *juch*, Ger. *Joch*), Lat. *iugum*, Gk. *ζυγον*, O.Ind. *yugám*, Skr. *yogaḥ*, Arm. *luc* (with *–l* influenced by *lucanem*, "*unyoke*"), Toch. *yokäm*, O.C.S. *igo*, Russ. *obža*, Cz. *jho*, Welsh *iau*, O.Cor. *ieu*, Bret. *ieo*; Hett. *yugan*; **jeugos**, *yoke*, as Goth. *jukuzi*, M.H.G. *jiuch*, Lat. *jūgerum* (from Lat. *jūgera*, IE ***jóugesa***), Gk. ζεῦγος, O.C.S. *ižesa*;

6. PIE adjective **newos**, **-ā**, **-om**, gives Germanic *newjaz*, (cf. Goth. *niujis*, O.N. *nýr*, O.Eng. *niowe*, O.Fris. *nie*, O.H.G. *niuwi*, Du. *nieuw*, Dan., Swed. *ny*), Lat. *nouus*, Osc. *núvellum*, Gk. *νέος*, O.Ind. *návas, návyas*, Skr. *navaḥ*, Av. *nava-*, O.Pers. *nau*, Toch. *ñu/ñuwe*, Thrac. *neos*, Arm. նոր, O.Pruss. *nauns* (due to analogy with *jauns*), O.Lith. *navas*, Lith. *naũjas*, Ltv. *nàujš*, O.C.S. *novŭ*, O.Russ. *новъ*, Polish *nowy*, Gaul. *Novio-*, O.Ir. *nūë*, Welsh *newydd*, O.Bret. *neuued*, Kamviri *nuī*, Kashmiri *nōv*, O.Osset. *nog*; Hitt. *newash*, Luw. *nāw*.

It was probably a full grade of **nu**, *now*, as Gmc. *nu* (cf. Goth. *nu*, O.N. *nū*, O.E. *nū*, O.Fris. *nu*, O.Ger. *nu*, Du. *nu*, Ger. *nun*), Lat. *nunc*, Gk. *νυ*, *νυν*, O.Ind. *nū*, Av. *nu*, O.Pers. *nūram*, Toch. *nuṃ/nano*, O.Pruss. *teinu*, Lith. *nū*, Ltv. *nu*, O.C.S. *nune*, O.Ir. *nu-*, Alb. *tani*; Hitt. *nuwa*, Luw. *nanun*.

7. Indo-European **medhjos** (from PIE **me**, v.i.) gives Gmc. *medjaz* (cf. Goth. *midjis*, O.N. *miðr*, O.S. *middi*, O.E. *midd*, O.Fris. *midde*, O.H.G. *mitti*), Lat. *medius*, Osc. *mefiaí*, Gk. *μέσσος*, O.Ind. *mádhjam*, Skt. *mádhjaḥ*, Av. *maidja-*, Pers. *mēān*, Illyr. *metu*, O.Arm. *mēj*, O.Pruss. *median*, Lith. *medis*, Ltv. *mežs*, O.C.S.. *mežda*, O.Russ. *межу*, Polish *między*, Gaul. *Mediolānum*, O.Ir. *mid*, Welsh *mewn*, Kamviri *pâmüč*. West Germanic dialects have a common dimminutive **medhjolós**, *middle*, as Gmc. *middilaz* (cf. O.E. *middel*, M.L.G., Du. *middel*, Ger. *Mittel*); Latin derivatives include **medhjālís**, *medial*, **medhjāliā**, *medal*, **medhjā**, *mediate*, **medhjom**, *medium*, **entermedhjā**, *intermediate*, **medhjaiwālís**, *medieval*, **medhitersaniós**, *mediterranean*, etc.

PIE **me**, *in the middle of*, gives suffixed formes **medhi-**, *among*, *with*, as Gmc. *mid-*, and **meta-**, between, *with*, *beside*, *after*, as Gk. *meta*.

For PIE **aiw-**, also **ajus**, *vital force*, *life*, *long life*, *eternity*, compare Gmc. *aiwi* (as in O.N. *ei*, Eng. *aye*, *nay*), suffixed **aiwom**, *age*, *eternity*, in **medhjaiwom**, Middle Ages, **medhjaiwālís**, *mediaeval*, **prwimaiwālís**, *primeval*, **dhlongháiwotā**, *longevity*; further suffixed **áiwotā**, *age*, and **aiwoternós**, *eternal*, as Lat. *aeternus*, in **aiwoternitā**, *eternity*; suffixed **aiwōn**, *age*, *vital force, eon*, Gk. *aiōn*; zero-grade compound **jucjḗs**, "*having a vigorous life", healthy* (from **cei-**, *live*), as Gk. *hugiēs*, in **jucjésinā** (***teksnā***), *"(art) of health*", *hygiene*, as Gk. *hugieinē (tekhnē*); o-grade **ojus**, *life*, *health*, as Skr. *āyuḥ*, or Gk. *ouk*, from (***ne***) ***ojus*** (***qid***), "(*not on your*) *life*", in ***ojutopiā***, from Gk. οὐ, *no*, and τόπος, a place that doesn't exist. See also **jeu-**, *vital force, youthful vigor*.

8. PIE **agros**, *field*, also *pasture*, *land*, *plain*, gives Gmc. *akraz* (cf. Goth. *akrs*, O.N. *akr*, O.E. *æcer*, O.Fris. *ekkr*, O.H.G. *achar*. Eng. *acre*), Lat. *ager*, Umb. *ager* (both from earlier Italic *agros*, *district*, *property*, *field*), Gk. *αγρός*, Skr. *ajras*, O.Arm. *art*.

9. Indo-European **sqalos**, *squalus*, *shark*, (cf. Lat. *squalus*) is probably cognate with **qalos**, *whale*, as in Gmc. *khwalaz* (cf. O.S. *hwal*, O.N. *hvalr*, O.E. *hwæl*, M.Du. *wal*, O.H.G. *wal*), possibly from an original ***(s)qalos***, with a general meaning of "*big fish*", then constrained in its meaning in individual dialects. See s-Mobile in § 2.8 for more on such related words.

10. Indo-European **aqiā**, "*thing on the water*", "*watery land", island*, is the source for Gmc. *aujō*, *island* (cf. Goth. *ahwa*, O.N. *á*, O.E. *īeg*, O.H.G. *aha*, O.Is. *ey*, M.H.G. *ouwe,* Eng. *is*[*land*]), as may be seen on **Skandinaqiā**, *Scandinavia* L.Latin mistaken form of **Skadinaqiā**, *Scadinavia*, "*south end of Sweden*", loan-translation of Gmc. *skadinaujō*, "*danger island*" (cf. O.E. *Scedenig*, O.N. *Skaney*); first element is usually reconstructed as IE **skatom**, as in Gmc. **skathan*, meaning *danger, scathe, damage* (Goth. *scaþjan*, O.N. *skaða*, O.E. *sceaþian*, O.Fris. *skethia*, M.Du. *scaden*, O.H.G. *scadon*), which could be related to Greek α-σκηθης (*a-skēthēs*), *unhurt*. The source for **aqiā** is PIE root **aqā**, *water*, cognate with Lat. *aqua*, Russ. *Oká* (name of a river) and, within the Anatolian branch, Hitt. *akwanzi*, Luw. *ahw-*, Palaic *aku-*.

English writing "*island*" was influenced by French *isle*, from Lat. *insula*, itself from MIE **énsalā** (from ***en-salos***, "*in the sea*", from **salom**, sea, v.i.), giving derivatives **ensalarís**, *insular*, **ensalanós**, *islander*, **ensalinā**, *insuline*, etc.

11. IE **lendhom**, *land*, *soil*, *country*, *region*, gave Gmc. *landom* (cf. Goth.,O.N., O.E., O.Fris., Du., Ger. *land*), and is derived from PIE **lendh-**, with the meaning of *land*, *steppe*; compare O.Pruss. *lindan*, O.C.S. *ledina*, Russ. *ljada*, Polish *ląd*, Gaul. *landa*, O.Ir. *land*, Welsh *llan*, Bret. *lann*.

12. For PIE root **ámbhi, ḿbhi**, *around*, *about*, compare Gmc. (*um*)*bi* (cf. O.N. *um*/*umb*, O.E. *be*/*bi*, *ymbe*, M.Du. *bie*, O.H.G. *umbi*, *bi*, Du. *bij*, Ger. *um*, *bei*), Lat. *ambi*, *amb*, Gk. ἀμφι, Skr. *abhi*, Celt. *ambi*. It is probably derived from **ant(i)-bhi**, lit. "*from both sides*", hence older PIH *-ŋ̍bʰi*. For PIE **ánti**, *front*, *forehead*, compare Gmc. *andja* (*end*, originally "*the opposite side*", cf. Goth. *and*, O.N. *endr*, O.E. *ende*, O.Fris. *enda*, O.H.G. *endi*), Lat. *antiae*, Osc. *ant*, Gk. ἀντι, Toch. *ānt*/*ānte*, Lith. *ant*, O.Ir. *étan*. Anatolian Hitt. *ḫanta*, Luw. *hantili*, Lyc. *xñtawata* support the hypothesis of an earlier PIH locative *h₂ént-i* – see **ant** and **ambhi**.

13. Proto-Indo-European **ag-**, *drive*, *draw*, *move*, *do*, *act*, *compare* Lat. *agere*, Gk. *αγειν*, O.Ir. *Ogma*, from which **agtiós**, *weighty*, as Gk. αξιος, **agrā**, *seizing*, as Gk. αγρα, and **agtos**, in **ambhagtos**, *one who goes around*, from Lat. *ambactus*, a loan word from Celtic. Other common derivatives include **agtēiuós**, *active*, **agtuālís**, *actual*, **agtuariós**, *actuary*, **agtuāiō**, *actuate*, **agénts**, *agent*, **agilís**, *agile*, **agitā**, *agitate*, **ambhaguós**, *ambiguous*, **komágolom**, *coagulum*, **ekságiom**, *essay*, **eksagtós**, *exact*, **eksagō**, *demand*, **ekságmn̥**, *swarm*, later *exam*, **eksagmn̥āiō**, *examine*, **eksagénts**, *exigent*, **eksaguós**, *exiguous*, **nawagāiō**, *navigate* (from **nā́us**), **dhūmagāiō**, *fumigate*, (from **dhumós**, *smoke*) **fustagāiō**, *fustigate* (from Lat. *fustis*, "*club*"), **transagō**, *compromise*, **n̥transagénts**, *intransigent* (from **n̥-**, *un-*, see **ne**), **litagāiō**, *litigate* (from Latin loan ***litágiom***, *litigation*), **prōdagō**, *drive away, to squander*, (from **prō-*d*-es**, *be good*), **prōdagós**, *prodigal*, **redagō**, *redact*, **retrōagō**, *drive back*, **retrōagtēiuós**, *retroactive*, **transagō**, *transact*; Greek **agogós**, *drawing off*, in **-agogos**, *-agogue* ("*leading*, *leader*"), as in **dāmagogos**, "*popular leader*", *demagogue*

(from **dā́mos**, *people*), **supnagogikós**, *hypnagogic* (from **swep-**, *sleep*), **pawidagogos**, *pedagogue*, **protagonistā**, *protagonist* (Gk πρωταγωνιστής), **komagogā**, *synagogue*; suffixed **agtiós**, "*weighty*", *worth*, *worthy*, *of like value, weighing as much*, as in **agtiomā**, *axiom*, Gk. ἀξίωμα, **agtiologíā**, *axiology*; suffixed **agrā**, *driving*, *pursuing*, *seizing*, as in Gk. *agrā*, in **podagrā**.

For PIE **dhūmos** or **dhūmós**, *smoke*, also *spirit*, Lat. *fūmus*, Gk. *thymos*, Skt. *dhūmaḥ*, O.Prus. *dumis*, Lith. *dumai*, O.C.S. *dymu*, M.Ir. *dumacha*, etc. The verb **dhūmāiō**, *smoke* (intr.), *steam*, is attested in Latin, Old Indian and (slightly different) in Greek, but used as transitive only in Late Latin. **Dhūmopōnom**, *smoke drinking*, (from **dhūmóm pibō**, from **pōi-**, *drink*), is used in Old Indian, hence usable for 'medicinal' smoking. For MIE transitive "*smoke*", a common **smeughō** (also **smūghō**) is found, cf. Gmc. *smūk-a-*, *smauk-ia-*, Bal. *smaug-*(*-ja*), tr., *smaug-a-* c., Sla. *smūglъ*(*jь*), Gk. smūkhō, etc.

*NOTE. About the accent, cf. Lat. fūmus, O.Ind. dhūmás, Dybo and Kortlandt defend the tone on the first syllable, while Illyc-Svityc and others defend the tone found in Greek and Old Indian. The question is difficult to solve, in light of the situation found in Germanic, and the new (Late PIE) differentiation of nouns with initial accent and adjectives with final one. Maybe with full vowel the tone is on the root, and with zero vocalism it isn't, cf. Lat. famulus <*dʰHmó, Gk. ἅτῑμος <*n̥qiHmos, etc.*

Indo-European **swep-**, *sleep*, gives verb **swopiō**, as Lat. *sōpīre*, Gmc. *swab-ja*, **swepōs**, *deep sleep*, as Lat. *sopor*, in compound **sweposidhakós** (from ***–dha-k-***), *soporific*; **swepnos**, *sleep*, as Lat. *somnus*, Gmc. *swi[f]-n-am.*, Av. *khun*, Bal. *sap-n-i-, sap-n-a-*, O.Ir. *sūan*, Sla. *sъnǭtī*, *sъnъ*, Toch.B *ṣpane*, **swepnolénts**, *somnolent*, or **n̥swepniom**, *insomnia*; zero-grade suffixed **súpnos**, Gk. *hypnos*, and in **supnotis**, *hypnosis*, **supnotikós**, *hypnotic.*

For Indo-European **pau**, *few*, *little*, compare derivatives **pawós**, Gmc. *fawaz* (cf. Goth. *fawai*, O.N. *far*, O.E. *feawe*, Dan. *faa*, O.Fris. *fe*, O.H.G. *foh*) or **paukós**, as Lat. *paucus*; suffixed metathesized form parwós, little, small, neuter parwom, little, rarely; compound **pauparós**, *producing little, poor* (IE **parós**, *producing*), as in **depauparāiō**, *depauparate*, and **enpauparāiō**, *impoverish*; suffixed zero-grade **púlā**, *young of an animal*, as Gmc. *fulōn* (cf. Goth.,O.E. fula, O.N. foli, O.H.G. folo, O.Fris. fola, M.H.G. vole, Eng. foal, Ger. *Fohlen*); extended suffixed **putslos**, *young of an animal, chicken*, as Lat. *pullus*, and diminutive **putslolós**, Lat *pusillus*, in **putslolanamós**, *pusillanimous*; also, for words meaning "*boy, child*", compare suffixed **póweros**, as Lat. *puer*, **putos**, as Lat. *putus*, and **pawids**, as Gk. παις (stem *paid-*), in **pawideíā**, *education*, Gk. παιδεία, in **enquqlopawideiā**, *encyclopaedia*, from Modern Latin, itself from **enquqlios pawideíă**, Greek "ἐγκύκλιος παιδεία" "[*well-*]*rounded education*" (see IE **en**, **q'qlos**) meaning "*a general knowledge*".

For IE **per-**, *produce*, *procure*, PIH *perh₂* (closely related to **per-**, *grant*, *allot*, both from **per-**, *traffic in, sell*), compare Latin *par-* (from zero-grade), in **parāiō**, *try to get, prepare, equip*, in **adparāiō**, *prepare*, **adpáratos**, *apparatus*, *apparel*, **enparāiō**, *command*, **enparātŏ́r**, *emperor*, *imperator*, **enparatēiuós**, *imperative*, **preparāiō**, *prepare*, **reparāiō**, *repair*, **separāiō**, *separate*, *sever*; suffixed **pariō**, *get*, *beget*, *give birth*, p.part. **partós**, in **partosiénts**, *parturient*, **partom**, *birth*, **repariō**, *find out*, **repartoriom**, *repertory*; parallel suffixed participial form **parénts**, *parent*, as Lat. *parēns*; suffixed form **-parós**, *producing*.

Indo-European **per-**, *grant*, *allot* (*reciprocally*, *to get in return*), gives derivatives as **partis**, *a share, part*, as Lat. *pars* (stem *part-*), in **partiō**, *divide up, share*, **partitós**, *divided, share*, **partitos**, *division*, *party*,

partíkolā, *particle* (with dim. ***partikillā***, *parcel*), **dwipartitós**, *bipartite*, **kompartiō**, *compart*, **enpartiō**, *impart*, **repartiō**, *repart*, **partiōn**, *portion*, *a part*, Lat. *portiō*, in **prō partioní**, *in proportion, according to each part*, into **prōpartiōn**, *proportion*; **pār**, *equal*, as in **pā́ritā**, *parity*, **kompārāiō**, *comapare*, **n̥pā́ritā**, *imparity*, etc.

14. PIE **mātḗr** (also ***mā́tēr***, from PIH PIH *meh₂-ter-*) gave Gmc. *mōdar*, (cf. ON *móðir*, O.E. mōdor, O.S. *modar*, O.H.G. *muoter*, M.Du. *moeder*), Lat. *māter*, Osc. *maatreís*, Umb. *matrer*, Gk. *μήτηρ*, O.Ind. *mātā*, Skr. *mātár-*, Av. *mātar-*, Pers. *mādar*, Phryg. *mater*, Toch. *mācar*/*mācer*, Arm. մայր (*mair*), Alb. *motër*, O.Pruss. *mūti*, Lith. *mótė*, Ltv. *māte*, O.C.S., O.Russ. *мати*, Polish *matka*, Gaul. *mātir*, O.Ir. *máthir*, Welsh *modryb*, Kamviri *motr*, Osset. *madæ*.

IE ending ***-ter*** usually indicates kinship (see also ***pa-ter***, ***bhrā-ter***, ***dhuga-ter***, ***jena-ter***), whilst ***mắ-*** is a baby like sound found in the word for "*mother*" in non-Indo-European languages; as, Estonian *ema*, Semitic *ᶜumm*, Chinese *māma*, Apache, Navajo *-ma*, Vietnamese *ma*, Korean *eomma*, Malayalam *amma*, Zulu *umama*, Basque *ama*, Hawaiian *makuahine*, etc.; also, compare IE-related Hitt. *anna*, Hung. *anya*.

Compounds include **māternós** (or Lat. ***māternālís***), *maternal*, **mātérnitā**, *maternity*, **mātríkolā**, *list*, *register*, and verb **mātríkolāiō**, *matriculate*, **mātrīks**, *matrix*, **mātrimōniom**, *matrimony*; also, **māteriā**, *tree trunk* (<"*matrix*", the tree's source of growth), hence "*hard timber used in carpentry*", hence (calque of Gk. *hūlē*, "*wood, matter*"), *substance, stuff, matter*, as in **māteriālis**, *material*; **mātrópolis** (from **polis**), *metropolis*, as Gk. μητρόπολις, as well as Greek goddess of produce (especially for cereal crops) *Demeter*, from **dē-māter** , which have been related to IE ***de***, ***da***, or ***don***.

English "*wedding*" comes from O.E. *weddian* "*pledge, covenant to do something*" from Gmc. *wadjan* (cf. Goth. *ga-wadjon*, O.N. *veðja*, O.Fris. *weddia*, Ger. Wette), from PIE base **wadh-** "*to pledge, to redeem a pledge*", as Lat. *vas* (gen. *vadis*), "*bail, security*", Lith. *vaduoti* "*to redeem a pledge*". Development to "*marry*" is unique to the English language.

15. PIE root **leuk-** means *bright, light, brightness*. Compare **leukis**, *light, flame*, as Lat. *lūx*, Gmc. *leukiz* (cf. *O.Ice. logi, M.H.G. lohe*), O.Ind. *rōcí́-*, O.Pruss. *luckis*, Slav. *lučь*, Arm. *lois*, as in **leukíbheros**, "*light-bearer*", *Lucifer* (from **bher-**, *carry*, as Greek **bhoros**, by *samprasarana* the initial desinence is lost, cf. Lat. *uir*<**wiros*, Lat. *sacer*<**sakros* in *lapis níger*, etc.); suffixed **leukmōn**, Gmc. *liukmon* (cf. O.Ice. *ljōmi* m., O.S. *liomo*, O.E. *lēoma* "*radiance*", Goth. *lauhmuni* "*lightning*, *flame*"), and **leuksmen**, *light, opening*, as Lat. *lūmen*, for common derivatives adj. **leuksmenónts**, *luminous*, **enléuksmenā**, *illuminate*, etc.; **louksnā**, *moon*, as Lat. *lūna*, Praen. *Losna*, O.Pruss. *lauxnos*, Av. *raoxšnu̯*, M.Ir. *lūan*, O.Bulg. *luna*; as in **louksnālís**, *lunar*, **louksnātikós**, *lunatic*, etc.; suffixed **loukstrom**, *purification*, as Lat. *lūstrum*; **leukstrāiō**, *purify*, *illuminate*, as Lat. *lustrare*, as in **enleukstrāiō**, *illustrate*; **leukodhrāiō**, *work by lamplight*, hence *lucubrate*, as Lat. *lūcubrāre*, as in **eghleukodhrāiō**, *lucubrate*, (see **eghs**) and **eghleukodhrā́tiōn**, *elucubration*; suffixed **leukós**, *clear, white*, as Gk. λευκός; o-grade **loukēiō**, *shine*, as Lat. *lūcēre*, O.Ind. *rokáyati*, Av. *raočayeiti*, in **loukénts**, *lucent*, **loukeitós**, *lucid*, **ekloukeitāiō**, *elucidate*, **reloukēiō**, *shine*, **reloukénts**, *relucent*, **transloukénts**, *translucent*; zero-grade suffixed **luksnos**, *lamp*, as Gk. *lukhnos*; and also attributed by some to this root nasalized zero-grade Gk. λύγξ, -γκός, "*lynx*", in any case MIE **lunks**. Common IE derivatives include Lat. *lux*, *lucere*, Osc. *lúvkis*, Umb. *vuvçis*, Gk. *λευκός*, O.Ind. *roká-*, Av. *raočant*, Toch. *luk*, Arm. *lois*, *lusin*, Lith.

laukas, Ltv. *lauks*, O.C.S. *luci*, Russ. *lug*, Gaul. *leux*, O.Ir. *luchair*, Welsh *llug*, Kamviri *luka*; Hitt. *lukezi*, Lyc. *luga*, Luw. *luha-*. Other common Germanic forms come from -t suffixed **léuktom**, *light*, as Gmc. *leukhtam* (cf. Goth. *liuhaþ*, O.N. *leygr*, O.E. *lēoht*, O.Fris. *liacht*, M.Du. *lucht*, O.H.G. *lōh*, O.Ice. *lōn*), or **léuktiō**, *make light*, as Gmc. *leukhtjan* (cf. O.E. *līhtan*).

For PIE root **lech-**, *light*, *having little weight*, **lechús**, *light* (also found extended in **-*is***) compare Lat. *levis*, Gk. ἐλαχύς, Skr. *laghúṣ*, *raghúṣ*, Av. *raghu-*, *rəvī* (from **raghvī*), Kashmiri *lo.t*, Toch. *-/lankŭtse*, O.Pruss. *lāngiseilingins*, Lith. *lengva*, Ltv. *liegs*, Sla. *lьgъkъ* (cf. O.C.S., O.Russ. *льгъкъ*, Russ. *лёгкий*, Pol. *lekki*, Cz. *lehký*, Sr.-Cr. *лаȁк*), O.Ir. *lugu*, *laigiu* (from **lagiōs*), Welsh *llai*, Alb. *lehtë*. Other IE derivatives include suffixed **lechtós**, Gmc. *likhtaz* (cf. Goth. *līhts*, O.N. *léttr*, O.E. *lēoht*, O.H.G. *līht*, Swed. *lätt*, O.Fris., M.Du. *licht*, Ger. *leicht*, Eng. *light*), *light*, and **lechtiō**, *lighten*, as Gmc. *likhtjan*; also from Latin **lechuāiō**, *lighten*, *raise*, Lat. *leuāre*, as in **léghuitā**, *levity*, **adlechuāiō**, *alleviate*, **eklechuāiō**, *elevate*, **relechuāiō**, *relieve*, **relechuánts**, *relevant*; variant **lachs**, *small*, as O.Ir. *lū-*; nasalized zero-grade ***lṇch-***, *lung*, "*light organ*", as Gmc. *lungan* (cf. O.N. *lunge*, O.E.,O.Fris. *lungen*, M.Du. *longhe*, Ger. *lunge*), but note that lung is said **pleumōn** in PIE, cf. Lat. *pulmon-*, Gk. *pleumon*, O.Ind. *kloman*, Bal. *plaũtia-*, Sla. *pl(j)ūtje*.

16. Adjective **cl̆wós** (zero-grade PIH *g^{w}iH-*), *alive*, is the source for Gmc. *kwikwaz* (cf. Goth. *quis*, O.N. *kvikr*, O.E. *cwicu*, O.Fris. *quik*, O.H.G. *quec*, Ger. *keck*, possibly also O.E. *cwifer*, Eng. *quiver*), lat. *uīus*, Osc. *bivus*, O.Ind. *jīvati*, Av. ǰvaiti, O. Pruss. *giwa*, Lith. *gyventi*, Ltv. *dzīvs*. It comes from PIE root **cei-**, *live*, compare Gk. *βίος* (*bios*), *ζωή* (*zoé*), Pers. *gaithā*, Toch. *śo/śai*, O.Arm. *keam*, O.C.S. *жити*, Russ. *жить*, Polish *żyć*, Gaul. *Biturīges*, O.Ir. *bethu*, Welsh *byd*.

17. PIE root **leus-**, *loosen*, *divide, cut apart*, gives extended verb **lusō**, *lose*, *forfeit*, Gmc. *lausan* (cf. O.N. *los*, O.E. *losian*, O.Is. *lyja*, Swe. *sofve*), with zero-grade part. **lusonós**, Gmc. *luzanaz*, (O.E., Du. *loren*, Ger. [*ver*]*loren*), **leusós**, *loose*, *untied*, Gmc. *lausaz* (cf. Goth. *laus*, O.N. *lauss*, O.E. *leas*, Dan. *løs*, M.Du., Ger. *los*). Compare also Lat. *luēs*, Gk. *λύω*, Skr. *lunáti*, Toch *lo/lau*, O.Ir. *loë*, Alb. *laj*; Hitt. *luzzi*. It is derived from PIE **leu-**.

18. For MIE **ṛtkos**, *bear*, *big animal*, from older **h$_2$(e)rtkos*, compare Lat. *ursus* (from Ita. *orcsos*), Gk. *αρκτος*, Skr. *ṛkṣa*, Av. *aršam*, Pers. *xers*, Arm. *arj*, Gaul. *Artioni*, Welsh *arth*, Alb. *ari*, Kamviri *ic*, Osset. *ærs*. Common Modern borrowings include Latin **rtkinós**, *ursine*, **Artkikós**, *Arctic* (from metathesized ****Arktikós***), **Antartkikós**, *Antartic* (see **anti**, *opposite*, *in front*), Welsh **Artkor(i)os**, *Arthur*.

19. Modern Indo-European **nŏ́mn̥**, *name*, from an older IE II *h$_1$noh$_3$mn̥*, compare Gmc. *namōn* (cf. Goth. *namō*, O.N. *nafn*, O.E. *nama*, O.Fris. *nama*, O.H.G. *namo*, Du. *naam*), Lat. *nōmen*, Umb. *nome*, Gk. *ονομα*, O.Ind. *nā́ma*, Skr. *nāman*, Av. *nąman*, O.Pers. *nāma*, Toch. *ñom/ñem*, Arm. անուն (*anun*), O.Pruss. *emmens* (from *emnes*), Sla. *jьmę-jьmene* (cf. O.C.S. *imę*, Rus. *имя*, Polish *imię*) Alb. *emër/emën*, O.Ir. *ainmm*, O.Welsh *anu*, O.Corn. *hanow*, Bret. *ano*, Kamviri *nom*; Hitt. *lāman*. Common modern words include Latin (from *nomen*, "*name, reputation*"), **nomn̥ālís**, *nominal*, **nomn̥āiō**, *nominate*, **dwinomn̥iālís**, *binomial*, **komnṓmn̥**, *cognomen*, **denomn̥āiō**, *denominate*, **n̥nomn̥iā**, *ignominy*, **nomn̥klatṓr**, *nomenclator*, **prāinṓmn̥**, *praenomen*, **prōnṓmn̥**, *pronoun*, **renṓmn̥**, *renown*; from Greek are **onomn̥stikós**, *onomastic*, **-onomn̥**, *-onym*, **n̥nomn̥ós**, *anonymous*, **antonomn̥síā** (from **anti**), *antonomasia*, **eponomn̥ós**, *eponymous*, **suonomn̥ós**, *euonymus*, **snteronomn̥ós**, *heteronymous*, **somonomn̥ós**, *homonymous*, **mātronomn̥ikós**,

matronymic, **patronomn̥ikós**, *patronymic*, **onomn̥toqoiweíā**, *onomatopoeia*, **paronomn̥ós**, *paronimous*, **pseudonómn̥**, *pseudonym* (from Gk. *pseudes*, "*false*") **komonómn̥**, *synonym*. Compare also, for a Germanic dialectal lengthened verb **nōmiō**, *name*, O.Fris. *nōmia*, O.H.G. *be-nuomen*, possibly not reconstructible for PIE.

For PIE **qei-**, *pile up, build, make*, compare o-grade **qojos**, *body* (as in Eng. *cheetah*), as Skr. *kāyaḥ*; suffixed **qoiwós**, *making*, (after Pokorny Gk. *ποι-ϝό-ς) in verb **qoiweiō**, *make*, *create*, as Gk. ποιεῖν, **qoiweitis**, *making*, and as Greek suffix **-qoiweitis**, *-poiesis*, Gk. ποίησις, also from Lat. **qoiweitíă̆**, *poesy*, **qoíweimn̥**, *poem* (Gk. ποίημα), **qoiweitā**, *poet* (Gk. ποιητής), **qoiweitikós**, *poetic*, **epoqoiwéiā**, *epopee*, etc..

Similar root PIE **qei-**, *pay*, *atone*, *compensate*, gives Gk. *time*, Skr. *cinoti*, Av. *kaena*, O.C.S. *cena*, Lith. *kaina*, as well as common MIE o-grade **qoiná́**, *fine*, *penalty*, as Gk. *poinē* into Lat. *poena*, as in **qoinālís**, *penal*, **qoiná́litā**, *penalty*, **n̥qóinitā**, *impunity*, **qoinologíā**, *penology*, **qoinitosiós**, *punitory*, **supqoiná́**, *subpoena*.

20. For **-qe**, enclitic "*and*", compare Goth, O.N. *-u*(*h*), Lat. *-que*, Gk. *-τε*, Messap. *ti*, *si*, O.Ind., Ira. *-ca*, Phryg. *ke*, Ven. *kve*, Gaul. *-c*, O.Ir. *-ch-*; Hitt., Luw. *-ku*, Lyc. *-ke*.

For MIE non-clitic words meaning "*and*", compare especially MIE **eti**, "*out*, *further*", also "*and*", as Goth. *iþ*, O.N. *i*, O.E. *edw*, O.H.G. *ita-*, Lat. *etiam*, *et* (cf. Fr. *et*, It. *ed*, Spa.,Ca., *i*, Gl.-Pt. *e*, Rom. *şi*), Gk. *eti*, O.Ind. *ati*, Av. *aiti*, O.Pers. *atiy*, Phryg. *eti*, Toch. *atas*, *aci*/, O.Pruss. *et-*, *at-*, Gaul. *eti*, *etic*, O.Bret. *et-*, O.Welsh *et-*, *at-*.

Common Germanic *untha* (cf. O.N. *enn*, O.E. *and*, *ond*, O.S. *endi*, O.Fris. *anda*, M.Du. *ende*, O.H.G. *enti*, Ger. *und*), reconstructed as MIE **n̥ti**, is generally said to be ultimately from PIE **anti**, *in front*, although more conceivably a zero-grade form of nasalized ***enti***, from the aforementioned PIE **eti** (Adrados 1998). O.E. *eac*, "*also*" (as Eng. *eke*), Ger. *auch*, are used as the common conjunction in Da.,No. *og*, Swe. *och*, from **aug**, *increase*.

Slavic "*a*" comes from IE adverb **ad**, (PIH *h₁d*), "*and*, *then*", as Skr. *fat*, "*afterwards*, *then*, *so*", Av. *fat*, "*afterwards*, *then*", while Slavic "*(h)i*" comes from IE conjunction **ei**, *and*, *if*, as in Gk. *e*.

21. IE **-r**, enclitic "*for*", cf. Gk. *ar*, *ara*, *rá* (Cypriot *er*), O.Ind. *-r*, Lith. *ir*, "*and*, *also*", *ar* (interrogative).

22. The *Angles* are members of a Germanic tribe mentioned by Tacitus, O.E. *Angeln*, from Lat. *Anglii*, lit. "*people of Angul*" (cf. O.N. *Öngull*), a region in what is now Schleswig-Holstein, in Northern Germany. The adjectives for the older inhabitants could then be reconstructed as Modern Indo-European **Angliós**. Modern adjective *English* is a common Germanic formation, derived from IE suffix ***-isko-***; as, **Angliskós**, **Germaniskós**, **Teutiskós** (along with 'Classic' Graeco-Latin **Anglós**, **Anglikós**, **Germanós**, **Germanikós**, **Teutṓn**, **Teutonikós**), etc.

The noun **Germaniā** is from unknown origin. The Oxford English Dictionary records theories about the Celtic root *gair*. Another theory suggests *gar*, while the one that derive it from Gmc. *gaizo-* (cf. O.N. *geirr*, O.H.G. *ger*, O.E. *gar*, Ger. *Ger*) is one of the oldest theories proposed. It is still a common word in modern languages; as, Nor. *germansk*, Gk. *Γερμανός*, Rom. *german*, Ir. *Gearmáinis*, Sco. *Gearmailtis*, Arm. *germaneren*, Hindi *Jarman*, Alb. *gjermanishte*, etc. also in Non-Indo-European languages, like Maltese *Ġermaniż*, Hebrew *germani*, Georgian *germanuli*, Indonesian, Malay, Tagalog, Thai, Xhosa, *Jerman*, Amharic *järmän*.

23. For Indo-European **wl̥qos**, *wolf* (fem. **wl̥qiă̆/wl̥qī**), compare Gmc. *wulfaz* (cf. Goth. *wulfs*, O.S. *wulf*, O.N. *ulfr*, O.Fris., Du., O.H.G., Ger. *wolf*,), Lat. *lupus*, Gk. *λύκος*, Skt. *vr̥kas*, Av. *vehrka-*, O.Pers. *Varkana-* (*Hyrcania*, "*wolf-land*", district southeast of the Caspian Sea), Albanian *ulk*, Lith. *vilkas*, O.C.S. *вълкъ*; Rus. *волк*, Ukr. *вовк*. Closely related PIE words are **wĺpēs**, *fox*, cf. Lat. *uulpēs*, Gk. αλωπηζ,

Skr. *lopāśá*, Av. *urupis*, *raopis*, Pers. *rōbāh*, Arm. *aluēs*, lit. *lãpė*, Ltv. *lapsa*. These animals are also a symbol of lust in many old Indo-European dialects.

24.PIE root **bher-**, *bear*, *carry*, also *bear children*, gave Gmc. *beranan* (cf. Goth. *bairan*, O.N. *bera*, O.E., O.H.G. *beran*), Lat. *fero*, Umb. *fertu*, Gk. *φέρω*, O.Ind. *bhárati*, Av. *baraiti*, O.Pers. *baratuv*, Phryg. *ber*, Toch. *pär*, O.Arm. *berel*, Lith. *beriù*, Ltv. *beŕu*, O.C.S. *бъramu*, Rus. *беру*, Polish *biorę*, O.Ir. *berim*, Welsh *cymmeryd*, Alb. *bie*, Kamviri *bor*. With the meaning of *give birth*, compare Eng. *birth*, Goth. *baurþei*, Ger. *Geburt*, Lat. *fors*, O.Ind *bhṛtíṣ*, *bibhrāṇas*, O.Ir. *brith*, O.C.S. *бъранъ*. Modern derivatives include **bhērā**, *bier*, Gmc. *bērō* (cf. O.N. *bara*, O.E. *ber*, O.Fr. *biere*, O.H.G. *bara*, O.Fris. *bere*, M.Du. *bare*, Eng. *bier*); o-grade **bhórnom**, *child*, Gmc. *barnam* (cf. O.E. *bearn*, Scots *bairn*); suffixed zero-grade (**kom**)**bhṛtis**, *birth*, as Gmc. (*ga*)*burthiz* (cf. Goth. *gabaurþs*, O.N. *byrðr*, O.E. *gebyrd*, Ger. *geburt*, Eng. *birth*), **bhŕtinios**, *burden*, as Gmc. *burthinjaz* (cf. Goth. *baurþei*, O.N. *byrðr*, O.S. *burthinnia*, O.E. *byrðen*, Ger. *bürde*); compound root **bhrenkō**, *bring* (from ***bher***+***enk***-, *reach*), as Gmc. *brengan* (cf. Goth. *briggan*, p.t. *brohte*, pp. *broht*, O.Fris. *brenga*, O.E. *bringan*, M.Du. *brenghen*, O.H.G. *bringan*); from Latin *ferre* are common MIE **-bher**, *-fer*, **bhertilís**, *fertile*, **adbherénts**, *afferent*, **kombherentiā**, *conference*, **kikrombherentiā**, *circumference*, **kombherō**, *confer*, **debherō**, *defer*, **disbherō**, *differ*, **ekbherénts**, *efferent*, **enbherō**, *infer*, **obhbherō**, *offer*, **prāibherō**, *prefer*, **probherō**, *proffer*, **rebherō**, *refer*, **supbherō**, *suffer*, **transbherō**, *transfer*, **woqibherāiō**, *vociferate*; prefixed and suffixed zero-grade **probhrom**, *reproach*, in **obhprobhriom**, *opprobrium*; suffixed zero-grade **bhṛtus**, *chance* (from "*a bringing, that which is brought*"), as in **bhṛtuitós**, *happening by chance, fortuitous*, **bhṛtūnā**, *chance*, *good luck*, *fortune*; lengthened o-grade **bhōr**, *thief*, as in **bhortēiuós**, *furtive*, **bhorónkolos**, *furuncle*; from Greek *pherein* are o-grade noun **bhoros**, *carrying*, **-bhorā**, *-phore*, **-bhoretis**, *-phoresis*, **-bhoros**, *-phorous*, **am**(**bh**)**bhorā**, (from Lat., from Gk. ***ambhibhoreus***), **anábhorā**, **diabhoretis**, (**a**)**subhoríā**, euforia, **metábhorā**, **peribhéreiā**, **bheromonā**, etc.; suffixed **bhernā**, *dowry* ("*something brought by a bride*"), as in **parabhernaliā**.

For EIE **nāk**-, *reach*, *enough*, present with nasal infix **nankiō**, cf. Lat. *nanciō*, *nactus/nānctus*, Balt. *nāk*, o-grade prefixed (with intensive **kom**-) ***kom-nākiō***, *suffice*, as Gmc. *ganōkh*- (cf. Goth. *ganohs*, O.N. *gnogr*, O.E. *genog*, O.Fris. *enoch*, Ger. *genug*). Ultimately from root **nek-** (PIH *Hnek*-), variant Greek **enk-**, *carry*, gives o-grade noun **onkos**, *burden*, *mass*, hence *a tumor*, as Gk. ὄγκος, Skr. *aṃśaḥ*, as in **onkogénetis**, **onkologíā**; and Gmc. compound***bhrenkō***, *bring*, v.s. Compare also Gk. *ēnekḗ*, O.Ind. *naḱṣati*, Av. *nasaiti*, O.Ir. *-icc*, O.Ir., Welsh *-anc*, Hitt. *hink*.

Greek *eú*-, *ēú*-, is usually compared with Hittite *āssu*, *assija*-, Lyd. *asáã̃*, Luw. N. Pl. *assammas* < PIH *(e)h₂su* "*good*", MIE **āsús,** usually **su**- in compounds, cf. O.Ind. *su*-, Av. *hū*-, *hu*-, Sla. *sъ-dorvъ(jь)*, Bal. *sū-dru*-; *sw-ei-ka*, Gaul *su*-, Ir *su*-, *so*-. The fact that all Greek dialects show the same evolution in this Indo-European root, is considered a rare phenomenon.

Attested derivatives include zero-grade Greek **q'qlos**/**qúqlos**, *circle*, *cycle*, Gk. κύκλος, (from which L.Lat. *cyclus*, Eng. *cycle*), Toch. *kukäl*/*kokale*, e-grade **qéqlos**, *wheel*, as Gmc. *khwewlaz* (cf. O.N. *hvel*, O.E. *hwēol*, *hweogol*, O.S. *hiughl*, O.Fris. *hwel*, M.Du. *weel*), and Lith. *kãklas*, or neuter **qéqlom**, *chakra*, *circle*, *wheel*, as O.Ind. *cakram*, Av. čaxra, also found as metathesized ****qélqos***, *charkha*, as Old. Pers. *čarka*-, or Osset. *calx*. it is

also behind Lat. *populus*, although sometimes deemed from from o-grade of **pel-**, *full*, as seen in Germanic *folk* and Latin *plebs*, probably ultimately from **qeqlos**, *circle*, thus "*community*", and derivatives ***qeqlālís***, *public*, *popular*, **qeqlikós**, *public*, from O.Lat. *poplicus*, which was influenced by Lat. *pubes*, "*adult*", into Lat. *publicus*, see <http://www.apaclassics.org/AnnualMeeting/06mtg/abstracts/Southern.pdf>. Other derivatives from PIE verbal root **qel**, meaning *revolve*, *move around, sojourn, dwell,* include Lat. *colere*, "*till*, *cultivate*, *inhabit*", not originally o-grade in PIE (from basic form PIE ***qel-*** → **kwel-* → Lat. *col-*), as in **qélōn**(**os**), *setler*, **qélōniā**, *colony*, **qeltós**, *cultivated*, **qeltōs**, *worship*, *cult*, **qeltēiuós**, *tilled*, **qeltēiuāiō**, *cultivate*, **qéltosā**, *culture*, **n̥qeltós**, *incult*, **n̥qélinos**, *inquiline*, etc; suffixed **qelōs**, "*completion of a cycle*", *consummation*, *perfection*, *end*, *result*, *telos*, gives Gk. τέλος, -εος (remember that PIE [**kʷ**] becomes Gk. [*p*] or [*t*] before certain vowels), giving **qeliós**, *perfect*, *complete*, from which **qeliologíā**, *teleology*, **qeliom**, *telium*, **qeliō**, *consacrate*, *fulfill*, in turn giving **qelesmn̥**, *consecration ceremony*, from which through Arabic *tilasm*, then It. *talismano* or Spa. *talismán* into Fr. *talisman*; from o-grade **qolso-**, "*that on which the head turns*", *neck*, *hals*, are **qolsos**, Gmc. *kh(w)alsaz* (cf. Goth., O.N., Dan., Swed., Du., Ger. *hals*), and **qolsom**, as Lat. *collum*, from which derivatives **qolsā́r**, *collar*, **deqolsāiō**, *decollate*, *behead*, etc.; suffixed **-qelā**, *-colous*, and **enqelā**, *inhabitant* a Lat. *-cola*, *incola*; **ámqelos** (from **ambhi**, *around*), "*one who bustles about*", *servant*, as Lat. *anculus*, giving dim. f. ***amqillā***, *maidservant*; **qolos**, *axis of a sphere, pole*, as Gk. πόλος, also ***-qólos***, *herdsman*, as **couqolos**, *cowherd*, (from **cōus**, *cow*), as Gk. βουκόλος, giving **couqolikós**, *bucolic*; also, **qolōs**, *wheel*, as Slavic *kolo*, *koles* (cf. O.C.S. *коло*, Russ. *колесо*, Pol. *koło*); suffixed o-grade **qólenos**, *traffic*, as O.Ira. *-carana*, as in **wesāqólenos**, "*sale-traffic*", *bazaar*, as O.Ira. *vahacarana* (see **wes-**), Pers. *bāzār*, hence also MIE partial loan ***wesā́r*** or loan ***bazā́r***, *bazaar*. Compare also O.N. *hjōl*, Skr. *cárati*, Av. *caraiti*, Old Prussian *-kelan*, Lith. *kelias*, O.Ir. *cul*, Alb. *sjell*; Luw. *kaluti-*; zero-grade variant **ql̥in**, *again*, as Gk. πάλιν, as in **ql̥índromos** (from Gk. -δρόμος, *racecourse*), *palindrome*, **ql̥ínpsēstos**, *palimpsest*, Gk. παλίμψηστος (from Gk. *psēn*, "*scrape"*).

A common word for wheel is **rotā**, from which Gmc. *radō* (cf. ON rǫðull, O.E. *rodur*, O.H.G. *rad*), Lat. *rota*, Skr. *ratha*, Av. *radha*, Lith. *ratas*, Ltv. *rats*, Gaul. *Roto-*, Ir. *rath*, Welsh *rhod*, Alb. *rrath*. Known modern derivatives are Celtic loan word *to-wó-rets*, formed by IE "***do-upo-réts***", "*a running up to*", which gives Mod. Eng. *tory*, from O.Ir. *tōir*, "*pursuit*"; also, **retondós**, *rolling*, which gave **rotondós**, *rotund*, '*round*', as Lat. *rotundus*, even though "*round*" ws said in PIE **wr̥bhis**, "*round in line*", **orbhis**, "*round in plane*", and **orghis**, "*round in space*".

25. Compare for PIE **ghostis**, *stranger*, *guest*, Gmc. *gastiz* (cf. Goth. *gasts*, O.N. *gestr*, O.E. *gæst*, O.Fris. *jest*, O.H.G. *gast*), Lat. *hostis*, *hospes* (*hostis-potes*) O.C.S. *gosti*, OCS *gostĭ*, Russ. *гость*, Polish *gość*; Luw. *gaši*. Compound **ghospós**, *host*, (Lat. *hospes*, *guest*, originally *host*, "*lord of strangers*"), gives MIE **ghospotālís**, *hospitable*, and also **ghospotālis**, *hospital* (from M.Lat. *hospitale*, meaning *inn*, *large house*, "*guest house"*), reduced as ***ghostā́lis***, *hostel*, from O.Fr. *hostel*, in turn from Lat. *hos(pi)tale*. For *hotel*, compare international borrowings from the same French word, with slightly different meanings Eng. *hostel-hotel*, Ger. *Gasthaus-Hotel*, Swe. *gstgiveri-hotel*, Ice. *gistihtel*, Spa. *hostal-hotel*, It. *ostello-hotel*, Pt. *hotel*, Russ. гостиница (*gostinitsa*), Uk. готел (*gotel*), Pol. *hotel*, Cz. *hostinec*, Pers. *hotel*, Ind. *hotel*, and also in non-Indo-European languages, as Finnish *hotelli*, Japanese ホステル (*hosuteru*) - ホテル (*hoteru*), Korean 호텔 (*ho-t'el*), Thai โฮเต็ล (*hō-ten*), etc. The word for '*hotel'* in Latin, however, was *deuersorium*, from the same root as Eng. *divert*.

26.More PIE derivatives related to (**s**)**tauros**, (also ***steuros***, both maybe from PIE **ster**-) are Germanic (*s*)*teuraz* (cf. Goth. *stiur*, O.S. *stior*, O.N. *stjórr*, O.E. *steor*, O.H.G. *stior*, M.Du., Du. *stier*; Dan. *tyr*, Swed. *tjur*), Lat. *taurus*, Osc. *turuf*, Gk. *ταυρος*, Av. *staora*, O. Pruss. *tauris*, Lith. *tauras*, Ltv. *tauriņš*, O.C.S. *turu*, Rus. *tur*, Pol. *tur*, Gaul. *tarbos*, Welsh *tarw*, O. Ir. *tarb*, Oscan *turuf* and Alb. *taroç*.

27. Indo-European **nízdos***, nest, resting place,* is a secondary PIE root, from **ni**-, *down*, + **sed**, *sit*. Compare Gmc. *nistaz*, Lat. *nidus*, O.Ind. *nidas*, Skr. *nīḍá*, Arm. *nist*, O.C.S. *гнѣздо*, Russ. *гнездо́*, Polish *gniazdo*, O.Ir. *net*, Welsh *nyth*, Bret. *nez*. For **mizdhós**, compare Gmc. *mizdō* (Goth. *mizdō*, O.E. *mēd*, O.S. *mēda* , O.H.G. *mieta*), Gk. μισθός, Skr. *mīdhá*, Av. *mīžda*, Pers. *muzd*, *meed*, O.C.S. *mĭzda*, Russ. *мзда́*.

28.PIE **ker**, *horn*, *head*, gave derivatives **kṛnos**, *horn*, Gmc. *khurnaz* (cf. Goth. *haurn*, O.E. *horn*, Ger. *Horn*, Du. *horen*), Lat.,Celt. *cornū* (<**kórnus*, a blending with variant o-grade **korus**, as in Gk. *koru*-); **keruīks**, *neck*, from Lat. *cervīx*; **kérudos**, *male dear*, *hart*, from Gmc. *kherutas* (cf. O.H.G. *hiruz*, O.N. *hjörtr*, O.E. *heorot*, M.Du. *hert*, Ger. Hirsch); **keruos**, *deer*, as Lat. *ceruus*, Welsh *carw*; **kṛsniom**, Gk. κρανίον, Lat. *cranĭum*; **kṛsnotom**, *hornet* as Gmc. *khurznutu*- (cf. O.E. *hyrnetu*, *hurnitu*, Du. *horzel*); **kersrom** [ke-'rz-rom], *brain*, as Lat. *cerĕbrum* (compare also O.N. *hjarni*, O.H.G. *hirni*, Ger. *Hirn*); other derivatives include Gk. καρη, Skr. *śiras*, *srngam*, Av. *sarah*, Pers. *sar*, Toch. *krāñi*, Arm. *sar*, O.Pruss. *kerpetis*, Lith. *szirszu*, Ltv. *šķirpta*, O.C.S. *чрѣпъ*, Russ. *čerep*, Pol. *trzop*, Bret. *kern*, Alb. *krye*, Osset. *sær*.

29.For PIE **snusós**, *daughter-in-law*, compare Gmc. *snusaz* (cf. Goth. *schuos*, O.N. *snor*, O.E. *snoru*, O.H.G. *snur*), Lat. *nurus*, Gk. *vvος*, Skr. *snuṣā*, Arm. *nu*, OCS *snŭxa*, Russ. *сноха*, Polish *snecha*, Alb. *nuse*.

30.PIE **nebhōs**, *cloud*, evolved as Skr. *nábhas*, Av. *nabah*, Lith. *debesis*, Ltv. *debess*, O.C.S. *nebo*, Russ. *nebo*, Polish *niebo*, O.Ir. *nem*, Cor. *nef*, Kamviri *niru*; Hitt. *nepiš*, Luw. *tappaš*-, Lyc. *tabahaza*. Suffixed **nébhelā** gives Gmc. *nibila* (cf. O.N. *niflhel*, O.E. *nifol*, O.H.G. *nebul*, also found in MIE patronymic **Nebhelņkos**, Gmc. *Nibulunkhaz*, as O.H.G. *Nibulunc*, *Nibulung*), also Welsh *niwl*, Lat. *nebŭla*, as in **nebhelós**, *nebulous*, and Gk. *nephelē*, as in **nebhelinā**, *nepheline*, **nebhelometrom**, *nephelometer*; suffixed **nebhologíā**, *nephology*; nasalized **nembhos**, *rain*, *cloud*, *aura*, as Lat. *nimbus*.

For PIE **mē**, measure, compare derivatives suffixed **mēlos**, *meal* "*measure, mark, appointed time, time for eating, meal*", as Gmc. *melaz* (v.s.); suffixed **mētis**, *wisdom*, *skill*, as Gk. *mētis*, further suffixed **metiō**, *measure*, as Lat. *mētīrī*, in nasalized p.part. **mensós**, *measured*, **mensosāiō**, *measure*, **mensosālis**, *mensural*, **kommensosāiō**, *commensurate*, **dismensiōn**, *dimension*, **ņmensós**, *immense*; **metrom**, *measure*, *rule*, *length*, *proportion*, *poetic meter* (referred by some to IE **med**-), as Gk. μέτρον, in **metrikós**, *metrical*, **diametrós**, *diameter*, **geometríā**, *geometry*, **wiswometrikós**, *isometric*, **metrologíā**, *metrology*, **kommetríā**, *symmetry*. From the same root probably PIE base **mḗns**, *moon*, *month*, cf. Gk. *mḗn*, Ion. *mḗs*, Dor. *mḗs*, gen. *mēnós*, Aeol. *mēnn-os*, O.Ind. *mā́s*, Av. mɔ̄, gen. māŋhō, Pers. *māh*, Umb. *menzne*, Sla. *mēsę̑cь*, Bal. *mēnõ* (gen. *-es-es*), O.Ir. *mī*, gen. *mīs*, Welsh mis, Bret *miz*,Toch. A *mañ*, B *meñe*, Arm. *amis*, gen. *amsoy*, Alb. *muai*; derivatives include **mḗnā**, *month*, *moon*, as Gmc. *mēnōn* (cf. O.E. *mona*), Gk. *mēn*, *mēnē*, in derivatives **mēnopausā**, *menopause*, **ņmēnosrewiā**, *amenorrhea*, etc.; from Latin extended **mḗnsis**, also suffixed in -***tr***-, cf. -**mḗnstris**, in **mḗnstruā**, *menstruate*, **mḗnstruālís**, *menstrual*, **dwimḗnstris**, *bimester*, **dwimḗnstriālís**, *bimestrial*, **seksmḗnstris**, *semester*, **trimḗnstris**, *trimester*, etc. (see also zero-grade suffix -**m**(**ņst**)**ris**,

month). Compare also suffixed Germanic **mḗnōts**, as Gmc. *mēnōth-* (cf. Goth. *menoþs*, O.N. *manaðr*, O.E. *mōnath*, M.Du. *manet*, O.H.G. *manod*, Du. *maand*, Ger. *Monat*),

PIE **mē** referred also to certain qualities of mind, as suffixed o-grade **mṓtos**, mind, disposition, as Gmc. *mothaz* (cf. Goth. *moþs*, O.N. *moðr*, O.Fris. *mod*, M.Du. *moet*, O.H.G. *muot*, Du. *moed*, Ger. *Mut*), and Latin **mōs**, *wont*, *humor*, *manner*, *custom*, as in loan words (affected by rhotacism) **mosālís**, *moral*, **mosōs**, *custom*, **mosónts**(**ós**), *morose*.

Also, PIE root **mē**, *big*, *many*, gives suffixed **mē-r-**, **mēri**, as Sla. *mērъ*, Gmc. *mērī*, **mēros**, Gaul *-māros*, O.Ir. *mār*, *māu*, Cymr *mawr*, *mwy*, Corn *moy*, Bret *meuror*, and o-grade Gk. *-mōro-*; also deemed from this root, comparative **mēisós**, *greater*, *more*, as Gmc. *maizōn* (cf. O.S. *mera*, O.N. *meiri*, O.Eng. O.Fris. *mara*, O.H.G. *mero*, M.Du. *mere*, Ger. *mehr*), Osc. *mais*, Av. *mazja*, O.Ir. mōr; also, superlative **mēistós**, *most*, Gmc. *maistaz*; (Lat. *maes*, "*more*", comes from **meg**-).

IE **medō**, *take appropriate measures*, *measure*, gives Gmc. *metan* (cf. Goth. *mitan*, O.E. *metan*, O.Fris., O.N. *meta*, Du. *meten*, Eng. *mete*, Ger. *messen*), also found in Germanic as **kommediō**, *measure*, Gmc. (*ga*)*mætijaz* (cf. O.N. *mætr*, O.E. *gemæte*, O.H.G. *gimagi*, Eng. *meet*, Ger. *gemäß*); another PIE use for **mēdos**, "*smart measure taker, wise counselor*", hence "*healer, physician, medicine man*", found in Av. *vī-mad-*, Gk. *Μηδος*, *Μήδη*, and in secondary Lat. *medicus*, MIE **médikos**, behind verb **medēiō**, Lat. *medeor*, *-ērī* "*look after, heal, cure*", as in Av. *vī-maδayanta.*; derivatives include **medikāiō**, *medicate*, **medikinā**, *medicine*, **medikós**, *medical*, **remediom**, *remedy*; **meditāiō**, *think about, consider, reflect, meditate*; suffixed **medes**-, giving (influenced by Lat. *modus*) **medestós**, "*keeping to the appropriate measure*", *moderate*, **n̥medestós**, *inmodest*; **medesā**, "*keep within measure*", *moderate*, *control*, **n̥medesātós**, *inmoderate*; **medontiă̆**, *Medusa*, from Gk. *medein*, "*rule*"; suffixed o-grade **modos**, *measure, size, limit, manner, harmony, melody, mood*, as in **modā**, *mode*, **modelos**, *model*, **modesnós**, *modern*, **modidhakāiō**, *modify*, **modolāiō**, *modulate*, **módolos**, *module*, *modulus*, **kommodā**, *commode*, **kommoditā**, *commodity*, **adkommodāiō**, *accomodate*; suffixed o-grade **modios**, *a measure of grain*; lengthened o-grade **mōds**, *ability*, *measure*, as in **mōdō**, *have occasion, to be permitted or obliged*, as Gmc. *mōtan* (cf. Goth. *gamotan*, O.Fris. *mota*, O.E. *motan*, M.L.G. *moten*, Du. *moeten*, Ger. *müssen*, Eng. *must* from O.E. part. *moste*).

31. PIE verb **gen-**, *give birth, beget, produce,* is a well-attested root which gives derivatives referring to aspects and results of procreation and to familial and tribal groups, e.g. **genōs**, *race*, *stock, kind*, *gender*, as Lat. *genus*, *generis*, Gk. γένος, Skr. *janaḥ*, giving derivatives **genesāiō**, *generate*, **genesālis**, *general*, **genesātiōn**, *generation*; alternate base **gn̥-a-**, giving **gn̥tis**, *natural*, *native*, *clan*, *kin*, *race*, as Gmc. *kundiz* (cf. O.E. *gecynd*, Eng. *kind*), Lat. *gentis*, Gk. γένεσις, Skr. *jāta*, Lith. *gentis*; reduplicate **gígnō**, *beget*, cf. Lat. *gignere*, Gk. *γίγνεσθαι*, Skr. *jajanti*, Av. *zīzənti*, with past participle **gn̥tós**, Lat. **genitós**, as in **genitṓr**, **genitālis**, **komgenitālis**, etc.; **gn̥nskō**, *be born*, from Lat. *gnāscī*, as in **gn̥ntós**, *born*, maybe also **prāign̥ntis**, *pregnant*, from older Lat. *praegnās*, later remade *praegnans*, etc. zero-grade lenthened **gnī-** (v.i.), **komgn̥ntós**, *cognate*; **genios**, *procreative divinity, inborn tutelary spirit, innate quality*; **engenuós**, *born in (a place), native, natural, freeborn*, then *ingenuous*, and **genuīnós**, *genuine*; **engeniom**, *inborn character*, later *engine*, and **engeniónts**(**ós**), *ingenious*; **endogenā**, *native*, *indigen*; **genmēn**, *germen*, as in **genmenāiō**, *germinate*, **genmenālís**, etc. Compare also Gmc. *kunjam*, Osc. *genetaí*, Umb. *natine*, Skr. *janati*, Pers. *zāēdan*, Phryg. *cin*,

Thrac. *zenis*, Toch. *kän*, Arm. *cnanim*, Lith. *gimdyti*, Ltv. *znots*, OCS *zętĭ*, Russ. *зять*, O.Ir. *ro-genar*, Welsh *geni*, Alb. *dhëndër*/*dhândër*, Kam. *zut*; Hitt. *genzu*.

32. tu-stem Lat. nŭtū (maior- under likewise) “from birth”, therefrom nŭtūra “ birth; nature, natural qualities or disposition, character; an element, substance, essence, nature”; praegnŭs “pregnant”, new praegnans, from *-gnŭtis.

33. From PIE root **weid-,** see, *know*, compare Gmc. *wītan* (Goth. *weitan*, O.N. *vita*, O.S., O.E. *witan*, O.H.G. *wizzan*), Lat. *uidēre*, Gk. *ιδειν*, *ειδοσ*, *οιδα*, Doric Gk. *woida*, Skr. *vēdah*, Av. *vaēda*, Phryg. *wit-*, Arm. *gitem*, O.Pruss. *widdai* (from *vidāi̯et*), Lith. *véizdmi*, O.C.S. видѣти, Pol. *widzieć*, Rus. *ви́деть*, Gaulish *vindos*, O.Ir. *ro-fetar*, Welsh *gwyn*, Breton *gwenn*, Kashmiri *vūčhūn*. Derivatives include **weistos** (<*__wéidtos__), *learning, wisdom, knowledge, appearance, form*, *manner*, as Gmc. *wissaz* (cf. O.N. *viss*, O.S., O.Fris., O.E. *wīs*, O.H.G. *wiz*, O.Fr. *guise*, Du. wijs, Ger. *weise*, Eng. *wise*); suffixed **weidōs**, *form*, *shape*, as Gk. *eidos*, in **wéidolom**, *idol*, *eidolon*, as Gk. εἴδωλον; zero-grade form **widiom**, *knowledge, understanding, intelligence, mind*, as Gmc. *witjam* (cf. O.N. *vit*, O.S. *wit*, O.Fris. *wit*, O.H.G. *wizzi*, O.E. *wit*, Dan. *vid*, Swed. *vett*, Ger. *Witz*), also **n̥widiom**, *ignorance* (cf. Goth. *unwiti*); from zero-grade **widēiō**, *see*, *look*, as Lat. *uidēre*, O.Ind. vēdayati, Goth.*witan*, *-aida*, O.Ice. veita, O.C.S. *viděti*, Lith. *pavydéti*, Goth.*witan*, *-aida*, O.Ir. *fōid-*, pl. *fōidit*; PIE derivatives include **weidsō**, “*visit*” (<“*wish to see*”), cf. Lat. *vīsō*, *-ere*, Umb. *revestu* “*revisit*”, Goth. *gaweisōn*, O.S. O.H.G. *wīsōn*; **windō**, *find*, cf. O.Ind. *vindati*, Ir. *finn-*, Arm. *gint, etc.*; **widā́**, cf. O.Ind. *vidā*, Welsh *gwedd* as in **Ńwidā**, *Hades*, *the underworld*, perhaps “*the invisible*”, as Gk. *Haidēs*/*Aidēs*; **widiā́**, O.Ind. vidyā, Av. viδya ds.; O.Ir. airde, Welsh arwydd, O.S. giwitt, O.H.G. (gi)wizzi, O.E. witt, Goth. unwiti, O.H.G. wizzī O.H.G.gi-, ir-wizzēn, M.L.G. witte, etc.; es-stem, as in **weidōs**, *form*, *shape*, cf. Gk. *eidos*, in **wéidolom**, *idol*, *eidolon*, as Gk. εἴδωλον; cf. O.Ind. vḗdas, Gk. εἶδος, Lith. véidas, O.C.S. vidъ, M.Ir. fiad m. “Ehrenbezeigung”, O.Ir. fiad, Welsh yngwydd, M.Bret. a goez; other formation __weid-so-__ Goth. -weis, O.Ice. vīss, O.H.G. O.S. O.E. wīs, O.H.G. wīs(a), O.E. wīs(e), perhaps also **widésā**, Gk. ἰδέα “*outer apparition, shape, sight*” (if *Fιδέσᾱ); **wistós** (<*__widtós__, *uisós* in Latin), *seen*, as in **wistā**, *visa*, **wistiōn**, *vision*, **wistōs**, *visor*, **adwistom**, *advice*, **adwistāiō**, *advise*, **enwidiāiō**, *envy*, **ekwidénts**, *evident*, **prowidēiō**, *foresee*, **prowistós**, *foreseen*, **n̥prowistós**, *unforeseen*, **n̥prowistāiō**, *improvise*, **enterwidēiō**, *interview*, **enwidiónts**(**ós**), *invidious*, **prāiwidēiō**, *previse*, **prowidēiō**, *provide*, **prowidénts**, *prudent*, **rewidēiō**, review, **rewistāiō**, *revise*, **superwistāiō**, *supervise*, *survey*; suffixed **wistœr** (<*__widtór__), *wise*, *learned*, *learned man*, Gk. *histōr*, in **wistoríă̆**, *history*, Gk. ἱστορία.

34. Indo-European **qēl-**, *far*, gives prefixes **qēle-**, *far off*, from Gk. τηλε- (related to **qēleios**, Gk. τελεος, *end, goal, result*), and **qḷai-**, *long ago*, Eng. *paleo-*, from **qḷaiós**, *old*, *ancient*, Gk. παλαιός. This PIE base is possibly related (as a lengthened form) to **qel-**, *move around*; cf. Skr. *caramah*, Welsh *pellaf*, Bret. *pell*.

It is discussed whether *television* was formed in Eng. or borrowed from Fr. *télévision*, in either case from Gk. *tele-*, “*far off, afar*, *at or to a distance*”, and Lat. *vision*. Other proposals for the name of this then-hypothetical technology were *telephote* (1880) and *televista* (1904). The technology was developed in the 1920s and ‘30s. Loan-translated in Ger. as *Fernsehen*.

English technology comes from PIE **tek**-, Gk. *tektōn*, O.Ind. *takman*, *tak-ia*-; Sla. *tъkā́tī*, *tъ̃kǭ*; Osset. *taxun*, Arm. *tekhem*, usually extended **tek-s**-, *weave*, also *fabricate*, *plait*, cf. O.N. *þexla*, O.H.G. *dehsa*, Lat. *textō*, Skr. *takṣati*, Bal. *takiš-ia*-, Sla. *tъčь*, *tъčjā*, Hitt. *takš*. Common derivatives include **tékstus**, *thread, wire*, "*thing woven*", later *text*, cf. Gmc. *takhtuz* (cf. O.N. *thāttr*, O.H.G. *tāht*, common in Gmc. for "*roof*"), Lat. *textus*, **komtekstus**, *context*, **prāitekstus**, *pretext*; suffixed **tekslā**, *web*, *net, warp of a fabric*, also *weaver's beam* (to which the warp threads are tied), cf. Lat. *tēla*, Russ. *tesla*, Ir. *tál*, also found in adj. **supteklís**, *thin, fine, precise, subtle* (<****sup-tekslā***, "*thread passing under the warp*", *the finest thread*); suffixed **teksōn**, *weaver*, *maker of wattle for house walls*, builder, **tekstṓr**, *builder*, **tekstōn**, *carpenter*, *builder*, as in **tekstonikós**, *tectonic*, or **arkhitekstōn**, *architect* (from Gk. *arkhein*, "*begin*, *rule*"); **teksnā**, *art*, *craft*, *skill*, as Gk. *tekhnē*, in **teksnikós**, *technical*, **teksnologíă̆**, *technology*.

Another common IE root for "*weave*" was **webh-** (<PIH *Hʷ*-) as in verb **webhō**, Gmc. *webanan* (cf. O.N. *vefa*, O.E. *wefan*, O.H.G. *weban*, M.L.G., M.Du., Du. *weven*, Eng. *weave*, Ger. *weben*), Skr. *ubhati*, Av. *ubdaēna*, O.Pers. *baftan*, Pers. *bāfad*, Toch. *wäp*/*wāp*, Arm. *ven*, Hitt. *hupala*, *hupiki*, *hupra*-, Alb. *vegjë*. A common Germanic word is **wobh(i)ā́**, *web*, *fabric*, as Gmc. *wobō* (cf. O.S. *webbi*, O.N. *vefr*, O.E. *webb*, O.H.G. *weppi*, Du. *webbe*, Ger. *gewebe*), Gk. *huphē*, also in English loan word ***Wíralts Witā́ Wobhiā***, *World Wide Web, WWW*. Maybe originally the same root as **webh**-, *wander*, *move back and forth as in weaving*, as Gmc. *wabjan* (cf. O.N. *vafra*, O.E. *wafian*, *wæfre*, M.E. *waveren*, M.H.G. *waben*, L.Ger. *wabbeln*), Bal. *webǰdē*-, *wibǰdē*-.

Proto-Indo-European **wi**, *apart*, *away*, is the source for adj. **witós**, *wide*, as Gmc. *withas* (cf. O.S., O.E., O.Fris. *wid*, O.N. *viðr*, Du. *wijd*, O.H.G. *wit*, Eng. *wide*, Ger. *weit*), and also for **wit(e)ros**/**m**, *against*, lit. "*more apart*", as Skr. *vitaram*, Gmc. *withros* (cf. Goth. *wiþra*, O.S. *withar*, O.N. *viðr*, O.E. *wið*, O.H.G. *widar*, M.Du., Du. *weder*, Du. *weer*, Eng. *with*, Ger. wieder). Compare other derivatives as Skr. *vi*, Av. *vi*-, Hitt. *na-wi* "*not yet*", O.C.S. *vutoru*, "*other*, *second*", as Russ. *второй*.

35. PIE **agō**, *drive, draw out or forth, move, set in motion*, gives O.N. *aka*, Lat. *agere*, *actus*, Osc. *acum*, Gk. ἄγω, Skr. *ájati*, *ajiráh*, Av. *azaiti*, Toch. *āk*, Arm. *acem*, O.Ir. *ad-aig*, *āin*, O. Welsh *agit*; probably Hitt. *aggala*-, "*furrow*". For more on **ag**-, v.i.

36. For root **legh**-, *lie down*, *rest*, verb **leghiō**, as Gmc. *ligjan* (cf. Goth. *ligan*, O.N. *liggja*, O.E. *licgan*, O.Fris. *lidzia*, M.Du. *ligghen*, O.H.G. *liggan*), Cel. *leghjo*, Sla. *ležjō*; cf. Lat. *lectus*, Gk. *λεχώ*, Toch. *lake*/*leke*, Lith. *at-lagai*, Ltv. *lagača*, O.C.S. *lego*, Russ. *лежа́ть*, Polish *leżeć*, Gaul. *legasit*, O.Ir. *lige*, Welsh *gwal*; Hittite *lagi*.

37. PIE root **ped**-, *foot*, Nom. **pōds**, cf. Gmc. *fōts* (cf. Goth. *fōtus*, O.N. *fōtr*, O.E. *fōt*, O.H.G. *fuoz*, Du. *voet*), Lat. *pedis*, Umb. *peři*, Gk. *πεζός*, Dor. *πώς*, Skr. *padám*, Av. *pâda*-, Pers. *pa*, Arm. *het*, Toch. *peṃ*/*paiyye*, Lith. *pė́dą*, Ltv. *pęda*, O.C.S. пѣшь, Russ. *пе́шый*, Pol. *pieszy*, Alb. *poshtë*, Osset. *fad*; Hitt. *pata*, Lyc. *pede*-, Luw. *pati*-.

38. The common verb **klus(sk)ō**, *listen*, comes from zero-grade of PIE **kleu-**, *hear*, and it has derivatives refer also to *fame*, *word* or *loud*, as in Gmc. *khlusinōn*, '*listen*' (cf. O.E. *hlysnan*, O.H.G. *hlosen*, Eng. *listen*), *khlūdaz*, '*loud*' (cf. Goth. *hliuþ*, O.N. *hljóðr*, O.N. *hlud*, O.H.G. *hlut*), Lat. *cluēre*, Gk. κλυω, κλέος (as in Ἡρακλῆς, *Herakles*), Skr. *śru*, *srnoti*, *çrāváyati* Av. *sraota*-, *surunaoiti*, *sravayeiti*, M.Pers. *srod*, Pers. *sarāyīdan*, Illyr. *cleves*, Toch. *klyos*, *klāw*, Arm. *lu*, O.Lith. *šlãvė*, *šlovẽ*, Lith. *klausau*, *šlóvė*, Ltv. *klausīt*, *slava*, *slave*, O.C.S. *slusati*, *slava*, *slovo*, Russ. *слово*, *сла́ва*, Pol. *słowo*, *sława*, Gaul. *clu*, O.Ir. *clunim*, Welsh *clywaf*, Alb. *quhem*.

The common Slavic word to define themselves, O.C.S. словѣне, словѣньскъ, reconstructed as an older base [*ḱlou-*], if ultimately Indo-European (cf. for **klutós**, "*heared, famous*", Skr. *śrutá-*, Av. *sruta-*, Gk. *lytós*, Lat. *inclitus*, M.Ir. *rocloth*, O.H.G. *Hlot-hari*, Arm. *lu*), is a demonym whose first reference is probably found in Ptolemy, who identified tribes called *Stavanoi* and *Soubenoi*, then translated (6th century) as M.Lat. *Sclaueni/Sthlaueni*, M.Gr. *Σκλαβηνοί/Σθλαβηνοί*. It is thus probably related to either *slava*, *fame*, (as *slaviane*), thus "*glorious people*", or from *slovo*, *speach*, (as *slověne*), therefore originally meaning "*member of the speech community*" (cf. Albanian noun for themselves, *shqipetár*, derived from *shqipónj*, *understand*), in contrast with the Germans, who were in O.C.S. *nemici*, related to *nemu* '*dumb*'. Compare with the Greek custom of using βαρβαρος to mean "*foreign*, *strange*, *ignorant*" (derivatives are Lat. *barbărus*, Eng. *barbarian*) from PIE base ***barbar-***, echoic of unintelligible speech, like that of foreigners (cf. Skt. *barbara-*, *stammering*, also "*non-Aryan*"). Therefore, a proper MIE reconstruction for such Slavic term is **Klówenos**, *Slav*, for словѣне, and **Kloweniskós**, *Slavic*, for словѣньскъ, but – because the reconstruction is uncertain, and modern crossed borrowings are usual–, modern loan words ***Slawenos***, ***Slaweniskós*** should be preferred.

For common MIE terms – which could be also written with initial ***klo-*** instead of ***slo-***/***sla-***, compare: ***Slawenos***, *Slav*; ***Slaweniskós***, Slavic; ***Sloweniskā***, *Slovakia*; ***Sloweniă̆***, *Slovenia*; ***Sloweniskós***, *Slovak*; ***Slowenikós***, *Slovene*; ***Augoslawiā***, *Yugoslavia*. The later is a compound of MIE reconstructed **augós**, *southern*, from **ug-** (proper IE reconstruction of Slavic *jug-*), originally referring to a southern wind, possibly ultimately from PIE root **aug-**, with derivatives meaning *increase*, *enlarge*, as already seen.

39. PIE root **bhes-** *breathe*, *blow*, gave Skr. *bhas-*, Gk. *ψυχειν*, and is probably of imitative origin. Its zero-grade **bhs-** gives supposedly ***bhsūghā́*** ['(bʰ)su:-kʰa:], *spirit*, *soul*, originally *breath*, *life*, "*the invisible entity behind the physical body*" (personified as *Psykhe*, the lover of Eros), a MIE loan word (***bhsūgho-*** in compounds) from Gk. ψυχή, with an unreconstructed Greek ending ***-kh-***, probably PIE ***-gh-***. In light of O.Ind. *bábhasti*, some would rather reconstruct PIE ***spu-***, hence MIE metathesized ***psūghā́***.

40. Usually reconstructed preposition and preverb ****ksun***, *with*, *together*, as Gk. ξυν, is explained as **kom** via Greek-psi substratum (Villar). Slavic *su-*, *so/s*, normally compared with the Greek form, could in turn come from zero-grade **sm̥** (see **sem**, *one*), as O.Ind. *sa*. Then compound **sm̥weitus**, *council*, from Slavic *so-vetu*, is also formed by O.C.S. вѣтъ, *counsel, advice* (a loan-translation in Gk. *βουλή* in 'συμ-βούλιον'), which comes from PIE root **weit-**, *declare, condemn*, cf. Av. *vaēð*, Sla. *vētъ*, Bal. *wait-* f., cf. O.Pruss *waitiāt*, Lith. *vaitenù*.

41. IE **gn̄tis**, *birth*, *family*, lit. "*that which has been born*" (ultimately from **gen-**), cf. O.Ind. *jātís*, Lat. *nāti-o*, Umb. *natine*, O.E. O.E. (*ge*)*cynd* f. "*kind of, nature, quality, origin, source, beginning; an ancestor, descendant*" (Eng. *kind*), from base **gn̄-**, as **gn̄s,** O.Ind. *jā-s* " descendant ",as **gn̄iā́,** *pra-jā* " progeny ", **gn̄pots,** *jās-patis,* "*paterfamilias*". Political sense has gradually taken over from racial meaning "*large group of people with common ancestry*", hence MIE **gn̄tis** (or Lat. loan ***gn̄tiōn***) *nation*, *stock*, *race*, and common derivatives include **gn̄tís**, *national* (<***gn̄tiōnālís***) or **gn̄titā**, *nationality*, or **gn̄tēiuós**, *native*, "*innate, produced by birth*", etc. suffixed **-tu** (v.i.), **gn̄tū**, *from birth*, in **gn̄tūrā**, *birth; nature, natural qualities or disposition, character; an element, substance, essence, nature*.

42. PIE root for **prkskṓ** is **prek-**, *ask*, *entreat*, *pray*, and is cognate with Gmc. *frēkhnan* (cf. Goth. *fraíhnan*, O.N. *fregna*, O.E. *frignan*, O.H.G. *frāga*), Lat. *prex*, Osc. *aparsam*, Umb. *pepurkurent*, Skr. *praçnás*, *prāś*, Av.

frāsa, Toch. *prak/prek*, Arm. *harṛanem*, Lith. *prašaũ*, Ltv. *prasu*, O.C.S. *npocumu*, Russ. *npocúmь*, Pol. *prosić*, Welsh *archaf*, Ir. *arco*, M.Bret. *archas*. Common MIE derivatives include **preks**, *prayer*, as Lat. *prex*, and verb **prekāiō**, *entreat*, *pray*, as Lat. *precāri*, in **prekāsiós**, *precarious* (PIE proper is **dúsopis**, cf. O.Ir. *domme* '*poor*' <**dus-op-smjo*, Lat. *inops*, O.Ind. *durāpah* '*hard to obtain*', etc), **deprekāiō**, *deprecate*, **enprekāiō**, *imprecate*; from **prkskō** is extended **p(o)rs(k)stolāiō**, *ask*, *request*, *postulate*, as Lat. *postulāre*.

43. Modern Indo-European words for "*house*":

A. Derivatives from an original PIE root **dem**- are **dōms**, acc. **dōmṃ**, *house*, '*shelter*', cf. Gk. nom. *dō*, acc. *dōma*, Arm. acc. *tun*, also found as common o-stem **domos**, cf. Lat. loc. *domī*, Umb. *dâmoa*, Gk. δόμος, δῆμος (*deme*), O.Ind. *dámas*, Av. *dąm*, Toch. *tam/täm*, Arm. *tun*, Lith. *namas*, Ltv. *nams*, O.C.S. домъ, Rus. *дом*, Pol. *dom*, Welsh *tŷ*. Also common is the u-stem ***domus*** (cf. Lat. *domus*, *domūs*; O.Ir. *dom-*, *dam-*, O.C.S. *domъ*, O.Russ. *domovь*, Arm. *tanu*, etc.), which gives **dómūnos**, "*house-lord*" (cf. O.Ind. *damūnas*, "*housemate*", Lat. *dominus*, "*lord*", see Latin *ablaut*), and adjective **domūnikós**. From IE **dṓmn** is Gk. δῶμα, *dome*. Probably from same root is base **demō**, *build*, as Gk. δέμω, found as "*settle*, *fit*" in Goth. *ga-timan*, O.S. *teman*, O.H.G. *zeman*, giving dialectal **demrom**, *timber*, Gmc. *temran* (cf. Goth. *timrjan*, O.N. *timbr*, O.E. *timber*, O.Fris. *timber*, O.H.G. *zimbar*, Ger. *Zimmer*); cf. also Gmc. *tumfetìz*, (Eng. *toft*, from O.N. *topt*), Gk. *δάπεδον*, Lith. *dimstis*.

B. For '*house*' in Germanic languages MIE reconstructs a common **kusom**, *dwelling*, *shelter*, from Gmc. *khusam* (cf. Goth. *-hus*, O.N., O.E., O.Fris. *hus*, Du. *huis*, Ger. *Haus*), probably related to PIE root (**s**)**keu**-, *cover*, *conceal*. Compare in **keudh**(**i**)**o**, *hide*, *conceal*, Gmc. *kluthjanan* (O.E. *hyde*), Gk. κεύθω, and other derivatives like **keudhis**, *covering*, Gmc. *khudiz* (cf. O.N. *huð*, O.E. *hyd*, O.Fris. *hed*, M.Du. *huut*, Ger. *Haut*); Gmc. *skeujam cloud*, *cloud cover*, (cf. Goth. *skuggwa*, O.N. *scy*, *skuggi*, O.E. *sceo*, *scua*, O.S. *scio*, O.H.G. *scuwo*, *scūr*, O.Ice. *skāli*, *skjōl*, M.H.G. *hode*, Ger. *Scheuer*), Lat. *cutis*, *scutum*, *ob-scurus*, Gk. κύτος, Skr. *kostha*, *skunati*, Arm. *cim*, Lith. *kẽvalas*, Ltv. *skura*, Rus. *kishka*, O.Ir. *cūl*, Welsh *cuddio*.

C. PIE root **kat**-, *hut*, *shed* is probably the source of Romance casa, hence PIE **katiā** or **katsā**, as in Gmc. *khathra* (cf. O.E. *heaðor*), Lat. *catena*, *cassis* (<***kat-tis***), *castrum* (<***kat-trom***) Av. *kata-*, Pers. *kad*, O.C.S. *kotici*, *kotú*, O.Ir. *cathir*, Welsh *cader*. The different warlike meanings found are explained by confusion with a similar PIE root, **kat**-, *troop, battle*, in **katus**, **katā**, cf. Gmc. kathu-, katho (cf. O.N. *hoð*, O.E. *heaþu*, O.H.G. *hathu*), Skr. *śátru*, "*enemy*", Toch. *keta*, *kete*, O.C.S. *kotora*, Gaul. *catu*, O.Ir. *cath*, Welsh *cad*.

Compare also from other works, Swe. *kåta*, Nor. *kota/kote/kåte* (probably borrowed from Uralic *kota*, as Finnish *koti*, Est. *kodu*, Hung. *ház*), and also Skr. *cātvāla-*, Av. *čāiti*, Toch B *kotai-*, Alb *katua*, as well as other unexplained words like Bul. *къща*, Srb.-Cro. *kuča*, Slovene *hiša*, all meaning *hut*, *shed*, *house*, or *hole*, *prison*, some of them reconstructed as ultimately from PIE root **ket**-, *storage pit* (Mallory-Adams).

D. Old Greek οἶκος (*oíkos*), *house*, comes from IE **woikos**, which gave also Gk. οἰκία, *house*, and Gk. οἰκησις, *dwelling*, *administration*, and Gk. οἰκητός, *inhabitant*; in MIE, it has universal loan-translations like **woikonomíă̆**, *economy*, originally "*household, management*", from **woikonomos**, *econome*, "*manager, steward*", **woikologíă̆**, *ecology*, **woikosōmenos**, *world*, *inhabited world* (into Proto-Greek *woikohōmeno-* -> Att. Gk. οἰκουμένη [γῆ], "*inhabited* [*land*]"). It is the o-grade form of **weikos**, *village*, *dwelling*, "*group of houses*", (cf. Lat. *uīcus*, Skr. *vesaḥ*, OCS *vĭsĭ*, Russ. *ves'*, Pol. *wieś*, Lith. *viešas*), as in **weikinos**, *neighbour*, **weikinitā**, *neighborhood*, or loan **weikslā** (from It. *villa*, *country house*, *villa*, *farm*, from Lat. *villa*). The noun

is derived from PIE root **weiks**, *clan*, *village*, "*social unit above the household*"; compare Goth,O.H.G. *weihs*, O.E. *wic*, Skr. *viś*, Av. *vīs*, O.Pers. *vitham*, Ltv. *viesis*, Alb. *vis*; cf. also O.Pruss. *waispattin*, Lith. *viešpats*, MIE **weikspóts**,"*clan-master*", *landlord*, a compound equivalent to **dems-póts**, "*house-master*", *landlord*, and similar to **ghos-póts**, "*guest-master*", *host*.

MIE suffix **-nomíă**, **-nomos** come from IE **nomos**, *custom*, *law*, *usage*, *method*, Gk. νόμος, in turn from PIE verb **nemō**, *allot*, *distribute*, *divide*, *manage*; cf. Gmc. *niman* (cf. Goth. *niman*, O.N. *nema*, O.E. *naemel*, *numol*, O.H.G. *nëman*, Eng. *numb*, *nim*, Ger. *nehmen*), Gk. νέμειν, Av. *nəmah*, Toch. *ñemek*, Lith. *nuomas*, Ltv. *noma*, Russ. *nemoj*, O.Ir. *nem*. Other known derivatives include **nómesos**, *number*, *division*, as Lat. *numerus*, **nomesālís**, *numeral*, etc. **nomā**, *pasturage*, *grazing*, hence "*a spreading, a spreading ulcer*", *noma*, from which **nomads** is derived (Lat. *nomas*); also, **nomimós**, *regular, ordinary*, hence "coin, money", as Lat. *nummus*, Gk. *νομμος*; **nomismatis**, Lat. *numismatis*, in **nomismatikā**, *numismatics*, from **nomismn̥**, *current coin*, *custom* (from O.Gk. νόμισμα, lit. "w*hat has been sanctioned by custom or usage*"), from IE verb **nomísō**, "*to hold or own as a custom, usage, to use customarily, practise, to be used to a thing*" (as Gk. νομίζω, in turn from νόμος). Also, **Németis**, Gk. *goddess of vengeance*, from Gk. Νέμεσις, "*indignation*, *jealousy*, *vengeance*" lit. "*distribution*, *partition*".

E. For Indo-Aryan *ghar*, compare a comon IE root **ghers-**, *court*, *yard*.

44.For PIE base **potis**, *powerful*, *able*, *capable*; also *lord*, *master*, compare **potō**, "*be able*", (from Lat. *potere*), from which **poténts** (Lat. pres.p. *potens*) and **poténtiă**; cf. also Gk. *posis*, Skt. *patih*, Lith. *patis*. Also found in compounds **potsō**, *be able*, (Lat. *posse*, from ***potis***, *able*, and ***es***, *be*), as in **potsibhilís**, *possible*, "*that can be done*", and ***potsedēiō***, *possess* (from Lat. *possidēre*, from ***potis***, "*as master*", and **sedēiō**, *sit*), which gives ***potsestiōn*** (<****pot-s-edtion***), *possession*, forms which are properly expressed by **potēiō**, as O.Lat. *potēō*, a verb usual in Romance through a V.Lat. *potere*, cf. Fr. *pouvoir*, Ita. *potere*, Pt., Spa. *poder*, Rom. *putere*, etc.

For PIE **esmi** (PIH *hₗes*), *be*, compare Goth. *ist*, O.N. *es*, O.E. *is*, O.H.G. *ist*, Lat. *est*, Osc. *súm*, Umb. *sent*, Gk. *esti*, Skr. *asti*, Av. *asti*, O.Pers. *astiy*, Toch. *ṣe*/*ṣei*, Arm. *ē*, O.Pruss. *asmai*, Lith. *esmi*, Ltv. *esmu*, O.C.S. *jestĭ*, Russ. *есмь*, Polish *jest*, O.Ir. *am*, Alb. *është*/*âsht*; Hitt. *asa*, Lyc. *es*, Luw. *as*, Lyd. *e-*, Palaic *aš-*.

a. A proper Indo-European word meaning "*owe, possess*" was PIE verb **eikō**, *be master of, possess*, Skr. *īṣṭe*, *iṣah*, Avestan *īšti*, *išvan-*, and **eikōn**, *property*, **eikenós**, *master*, *owner*; as Gmc. *aigan-an* (cf. Goth. *aigan*, O.Fris. *aga*, O.N. *eiga*, O.E. *āgan*, O.H.G. *eigan*, Eng. *ought*), O.Ind. *íśāná-*, Toch. A *akäṃtsune*, B *ekañ̃ñi*.

b. For PIE **sed-**, *sit*, compare verb **sedēiō**, *sit*, as Lat. *sedēre*, O.Ind. *sādayati*, Av. *ni-šāδayeitiwith*, O.Cz. *sedeťi*, Germanic remade *sitjan* (cf. Goth. *sitan*, O.S. *sittian*, O.N. *sitja*, O.E. *sittan*, O.Fris. *sitta*, M.Du. *sitten*, O.H.G. *sizzan*, *sezza*l), Welsh seddu; p.part. **sestós** (<****sedtós***) *sat*, hence **sestos**, "*seat*", cf. O.Ind. *sattá-*, Av.-*hasta-*, Lat. *sessus*, O.Ice. O.E. *sess*, also Lith. *séstas* and Lith. *sóstas*, O.Pruss. *sosto*; causative **sodēiō**, *place*, *plant*, as Goth. *satjan*, O.Ice. *setia*, O.H.G. *sezzen*, Lat. *adsuidi*, O.C.S. *saditi*; with reduplication **sisdō** (***sizdō***), *put*, *place*, cf. O.Ind. *sídati* (<si-zd-ati), Av. *hiδaiti*, Gk. ἵζω, Lat. *sīdō* (<*si-zdō*), Umbr. *sistu*; **sedlos**/**sedlā** (from ****sed-tlo-***) *seat*, *position*, as Gmc. *setlaz* (cf. Goth. *sitls*, M.L.G., M.Du. *setel*, O.E. *setl*, Du. *zetel*, Ger. *Sessel*), Lat. *sella*, O.C.S. *sedlo*, O.E. *sadol*, etc.; giving **sedentasiós**, *sedentary*, **sédikom**, *siege*, (from L.Lat. *sedicum*, although besiege from Lat. is ***situā***, possibly from IE **tkei-**), **dissedēiō**, *disagree*, **dissedénts**, *dissident*,

adsedēiō, *asist*, *assess*, *help*, **adseduós**, *assiduous*, **prāisedēiō**, *preside*, **resedēiō**, *reside*, **supsediom**, *subsidy* (but **supsisdō**); Greek ἕδρα, Ice. *setr*, is PIE **sedrā**, *chair*, *throne*, *face of a geometric solid*, hence loan translations **komsedrós**, *sitting in council*, **komsedriom**, *council* (from which Hebrew *sanhedrīn*, from Gk. συνέδριον*)*, **eksedrā**, *exedra*, **kátsedrā**, *cathedra*, **katsedrālis**, *cathedral*, *bishop's see*, **qetrasedrom**, *tetrahedron*; Also, from Latin **sēdēs**, *see*, *seat*, *residence*, **sēdā**, *sedate*, *settle*, *calm down*; prefixed and suffixed **pisediō**, *sit upon, push, press* (**pi**, from **epi**) O.Ind. *pīdayati*, Gk. πιέζω (<*πι-σεδ̯ω*), **kesdō**, *give up, give after*, as Av. *syazd-*, *sižd-*, Lat. *cēdo*, as well as *necesse* "*necessary*", **nekestis** (<*ne-ke-sd-ti*s, "*not something to give after*"); for lengthened **sēdāiō**, *calm down, sedate*, cf. Lat. *sēdāre*, M.L.G. *sāten*; for suffixed **sestis**, *seat*, cf. O.Ind. *satti-*, Av. *šasti-*, Umb. *sersitu*, further suffixed as **sestiōn**, *session*, Lat. *sessiō* (<**sessis*); compare also Gk. ἕζομαι, Skr. *sad*, Av. *nišaðayeiti*, O.Pers. *niyašayadan*, Pers. *nešastan*, Toch. *sätk*, Arm. *nstil*, O.Pruss. *sīdons*, Lith. *sėdėti*, *sėdžiu*, *sėsti*, *sėdu* Ltv. *sēdēt*, *sēdu*, Slav. *sěděti*, *sěd̨ǫ* (O.C.S. сѣдѣти, сѣжда, Russ. *сиде́ть, сесть* Pol. *siedzieć*), *sěsti*, *sędǫ* (cf. O.C.S. сѣсти, сѧдѫ, O.Russ. сѣсти, сяду, Pol. *siąść*, *siądę*), Gaul. *essedum*, O.Ir. *saidim*, Welsh *seddu*, Ir. *suidh*.

45. For PIE **ghortos** with the sense of *garden, fenced place* compare Gmc. *gardaz* (cf. Goth. *gards*, O.N. *garðr*, O.E. *geard*, O.Fris. *garda*, Du. *gaard*, O.H.G. *gart*), also Lat *hortus*, *cohors*, Osc. *heríiad*, Gk. *χορτος*, Skr. *gṛhá-*, Phrygian *-gordum*, Lith. *žardas*, Ltv. *zārds*, Gaul. *gorto*, O.Ir. *gort*, Welsh *garth*, Bret. *garz*, Alb. *garth-*; Hitt. *gurtas*. Note the Balto-Slavic terms related to this root and beginning with [g] – as Lith. *gardas*, O.C.S. *gradu*, Rus. *gorod*, *-grad*, etc. – not affected by *satemization*, explained as Gmc. borrowing.

46. IE **ghrēdhus**, *hunger*, gives Gmc. *grēduz* (cf. Goth. gredus, O.E. grædum, cognate with Skt. *grdh*, Gk. *-gyros*). From the same PIE root is **ghṛtāiō**, *urge on, encourage* (from Lat. *hortārī*, giving **eksghṛtāiō**, *exhort*), **ghṛis**, *grace*, *favor* (from Gk. χαρις, which gives **ghṛísmā**, *charism*, or (**A**)**sughṛistíă̆**, *Eucharist*), **ghṛēiō**, *it is necessary* (from Gk. χρη, which gives **ghrēstós**, *useful*, and **ghrēstomńdhia**, *chrestomathy*). With the – possibly older – sense of *bowels*, compare Gmc. *gernjan* (O.N. *gorn*, O.Eng. *gearn*, O.H.G. *garn*, Eng. *yarn*), O.E. *gorst*, Lat. *hernia*, *horrēo*, Gk. χορδή, χἐρσος, Skr. *hirah*, *harṣate,* Av. *zaršayamna*, Arm. *dzar,* Lith. *žarna*, Ltv. *zarna*, Russ. *зор*, O.Ir. *garb*, Welsh *garw*, Alb. *derr*; Hitt. *karat*, and adj. Gmc. *grēdigaz* (cf. O.S. *gradag*, O.N. *graðr*, O.Eng. *graedig*, Eng. *greedy*).

47. PIE root **ceiw**-, *live*, PIH *$g^{w}eih_3$-, with metathesized variant **cjo**- (older *$g^{w}jeh_3$, coloured to *$g^{w}joh_3$) gives derivatives zero-grade **cĭ̆wós** (<*$g^{w}ih_3$-)*, *living*, *alive*, as Gmc. *kwi*(*k*)*waz* (cf. Goth. *quis*, O.N. *kvikr*, O.E. *cwicu*, O.Fris. *quik*, O.H.G. *quec*, Ger. *keck*, Eng. *quick*), Lat. *uīus*, Osc. *bivus*, O.Pruss. *giwa*; verb **cīwō**, *live*, as Lat. *uīuō*, O.Ind. *jī́vati*, Sla. *žīvъ*(*jь*), Bal. *gīwa*; **cīwoparós**, *viviparous*, *living*, *alive*, as Lat. *vivipărus*, and shortened **cī**(**wo**)**parā**, *viper*, "*bearing live young*", from Lat. *vipĕra* (both from IE **parós**, v.s.); with k-suffix: **cīwāks**, *lively*, *vivacious*, cf. Lat. *vīvāx*, Lith. *gyvókas*, O.Ind. *jīvaka-*; with t-suffix **cĭ̆wotā**, *life*, cf. Lith. *gyvatà*, O.C.S. *životъ*, O.Ind. *jīvatha-h*, Lat. *uīta*, in **cīwotālís**, *vital*. Compare also O.E. *cwifer*, Gk. *βίομαι*, Av. *gaēthā*, *jiġaēsa*, O.Pers. *gaithā*, Pers. *zēstan*, Toch. *śo*/*śai*, Arm. *keam*, *giwāntei*, Lith. *gýti*, *gyventi*, Ltv. *dzīvs*, *dzīt*, O.C.S. *живѫ*, *жити*, Russ. *жить*, *живу́*, Polish *żyć*, *żyję*, Gaul. *Biturīges*, O.Ir. *bethu*, Welsh *byd*.

48. PIE root ***ser***- gives **sérōs**, "*guardian*", *heroe*, Gk. ἥρως, and general verbal base **serw**-, *guard*, *protect*, in **serwāiō**, *keep*, *preserve*, Lat. *seruāre*, **serwiō**, *serve*, as Lat. *seruīre*, and **serwos**, *slave*, *servant*, Lat. *seruus*

(forms also found in other Italic dialects, cf. Osc. *serevkid*, '*protection*', *ooserclom*, usually considered borrowings from Etruscan); cf. also O.Ind. Av. *haraiti*, *pasuš-haurvō*, "*shepherd*", Gmc. *sarwia*, Bal. *serg-*, Sla. *stergt*.

49.To refer to a *person*, *man*, PIE had root **manu**-, Indo-Iranian **manus**, Germanic **manwos** and Balto-Slavic o-grade ***monw*(*i*)*os***. Compare Gmc *manwaz*/*mannaz* (cf. Goth. *manna*, O.N. *maðr*, O.E. *mann*, O.S., O.H.G. *man*, Ger. *Mann*), Skr. *manuḥ*, Av. *manu-*, Pers. *mærd*, Kurd. *mêr*, Lith. *žmogus*, O.C.S. mǫžĭ, Russ. *муж*, Polish *mąż*, Kamviri *mânša*. Compare also with Ger. *Mensch*, Du. *mens*, Nor.,Da. *menneske*, Swe. *människa*, Ice. *manneskja*, from Gmc. *manniskaz*, IE **manwiskos**, *person*, *human* (cf. Romany *manush*, from Skr. *manuḥ*). A common European borrowing is **ṃbhudhománwos**, from compound ***ṃ*(*bhi*)+*bhudhom*** (from Gmc. *budam*, O.N. *bodh*, "*command*") + ***manwos***, *ombudsman*, with the exception of some regionally translated terms, as Fr. *médiateur*, Spa. *defensor del pueblo*, etc.

Some names for '*German*', '*Germany*', (Fr. *allemand*, Spa. *alemán*, Pt. *alemão*, Cat. *alemany*, Celtic, like Welsh *Almaeneg*, Bret. *Alaman*, Indo-Iranian, as Pers. *almani*, Kurd. *elman*; and even non-IE, as Turkish *Alman*, Arabic *almanya*, Azeri *Alman*, Basque *alemanera*, Guarani *Alemaniagua*, Malagasi *alema*, Khmer *alaman*, Tagalog *Aleman*), in turn a loan word from the tribal name that the neighboring *Alamanni* used for themselves. The term comes from Gmc. compound *Ala-manniz*, PIE reconstructed **Alomanwis**, with first word from PIE root **al**-, therefore originally meaning lit. "*all men*".

EIE **al**-, *all*, ***alo***- in compounds; derivatives include adjectives like Germanic ***alnós***, *all*, as Gmc. *allaz* (cf. Goth. *alls*, O.N. *allr*, O.E. *all*, *eall*, eal-, O.Fris., O.H.G. al); maybe also in Latin ***al*(*n*)*erós***, *instructed*, *well-informed*, Lat. *alers*, *allers*; and Baltic ***aliós***, *all*, cf. Bal. *al-ja-* .

50.PIE stem (**s**)**neu**- (cf. Skr. *snavan-*, Arm. *neard*), an extension of (**s**)**nē**-, *spin*, *sew*, which gives derivatives **nētlā**, *needle*, (with instrumental suffix -***tlo***-), as Gmc. *nēthlō* (Goth. *nēþla*, O.S. *nathla*, O.N. *nál*, O.E. *nǣðlæ*, O.Fris. *nedle*, O.H.G. *nādala*), **snotā́**, *snood*, as Gmc. *snōdō*, or **nēmn̥**, *thread*, as Gk. νημα. Compare also Lat. *neō*, Gk. νειν, νηθω, Skr. *snājati*, Ltv. *snāte*, O.C.S. *niti*, Russ. *нить*, O.Ir. *snáthat*, Welsh *nyddu*, *nodwydd*.

51. For derivatives of PIE root **stāi**, *hide*, *stone*, also *thicken*, *stiffen*, compare **stoinos**, *stone*, Gmc. *stainaz* (cf. Goth. *stains*, O.N. *steinn*, O.E. *stan*, O.H.G., Dan. *steen*, Ger. *Stein*), and **stājr̥**, *solid fat*, from Gk. στεαρ; compare also Gk. *stia*, *stion*, Skr. *stjajat*, Av. *staj*, O.C.S. *stena*.

52. PIE root **pūr**/**pāwr̥**, *fire*, *bonfire*, is probably derived from an older **peh₂wr̥* (cf. Hitt. *paḫḫur*) and has an irregular Genitive **pūnós**. Compare Goth. *fōn*, Gk. *πυρ*, Osc. *purasiai*, Umb. *pir*, Skr. *pu*, Toch. *por*/*puwār*, Arm. *hur*, O. Pruss. *panno*, Polish *perz*, Cz. *pýř*. The suffixed form **pūris**, *fire*, gave Gmc. *fūris* (cf. O.N. *fúrr*, O.E. *fȳr*, O.Fris. *fiur*, M.Du. *vuur*, O.H.G. *fiur*).

53.IE **per**- means *lead*, *pass over*, as in verb **periō**, cf. Gk. πείρω (<*perio*), O.C.S. *na-perjǫ*; adj. **perwn̥tós**, *rocky*, noun **pérwn̥tos**, *mountain*, as Skr. *parvataḥ*; **pertā**, *cliff*, *rock* (possibly earlier "*bedrock*", "*what one comes through to*"), as Lat. *petra*, Gk. πέτρα (both dissimilated as ****petrā***, which means '*feather*' in MIE, v.*i*., hence name *Peter*, from Lat. *Petrus*, should be ***Pertos***; **pertus**, *place for crossing over*, ford as Gmc. *ferthuz* (cf. O.N.*fjörðr*, Eng. *firth*), compare zero-grade **pr̥tus**, *going*, *entrance*, *passage*, modern *ford*, *harbor*, *port*, as Gmc. *furthuz* (cf. O.Fris. *forda*, O.E. *ford*, O.H.G. *furt*, Ger. *Furt*), Lat. *portus*, O.Welsh *rit*, Welsh *rhyd*. Other derivatives include o-grade **porēiō**, *drive*, *ship*, *travel*, Gmc. *farjan* (cf. Goth. *farjan*, O.H.G. O.E. *faran*, O.Ice. *fara*, O.S. *ferian*, O.H.G. *ferien*, *ferren*, O.Ice. *ferja*), also iterative behind Lat. *portāre*, MIE **poritāiō**, *carry*, and

poritā́, *gate*; **peritós**, *experienced*, Lat. *peritus*; **poros**, *journey*, *passage*, *way*, as Gk. πόρος; **porṇos**, *feather*, as Gmc. *farnaz* (cf. O.E. *fearn*, M.Du. *varn*, O.S.,O.H.G. *farn*, Eng. *fern*), Skr. n. *parṇa-*, Av. n. *parəna-*, Lith. *sparn̂as*, Ltv. *spàrns*; lengthened **pōrēiō**, *lead*, *lead across*, *bring to safety*, as O.C.S. *pariti*, O.Ind. *pārayati*, Gmc. *fōrjan* (cf. O.E. *gefera*, O.H.G. *fuoren*, M.E. *fere*, Ger. *führen*).

The name Portugal is MIE **Pṛtukalē**, *Port of "Kale"*, as Lat. *Portucale*, with the second term of uncertain origin, although some relate it to PIE sources akin to Lat. *Gallus*, "*Gallic*", also related to similar Celtic names giving *g-* or *w-* (<g^w?) as *Gallaecia*, *Wallacia*, *Wales*, etc. (hence maybe *-***cale**), Lat. *calĭdus*, "*warm*", or Lat. *calx*, "*lime*".

54. English word "*true*" comes from O.E. *triewe* (W.Saxon), *treowe* (Mercian), *faithful*, *trustworthy*, from Gmc. *treuwjaz* (cf. Goth. *triggws* O.N. *tryggr*, O.Fris. *triuwi*, Du. *getrouw*, O.H.G. *gatriuwu*, Ger. *treu*), ultimately from PIE adj. **derwós**, **dr(e)wós**, "*belonging to the tree*", *wooden*, hence "*firm, strong*" also suffixed **dreurós**, as dissimilated Lat. *dūrus* (<**drew-r-os*), *hard*; common PIE noun **dŏru** (n.), *tree*, *oak*, *wood*, from root **deru-**, also **drew-**: cf. Gmc. *trewan* (cf. Goth. *triu*, O.N. *tré*, O.S. *trio*, O.E. *trēow*, O.Fris. *tre*), O.C.S dravъ, Gk. *δρυς*, *δόρυ*, Skr. *dru*, *dáru*, Av. *dāuru*, O.Pers. *duruva*, Pers. *deraxt*, Toch. *or*, Arm. *tram*, *caṙ*, O. Pruss. *drawine*, Lith. *derva*, Ltv. *dreve*, O.C.S. *дрѣво*, O.Rus. *дрова*, Rus. *дерево*, Pol. *drwa*, Gaul. *Dervus*, O.Ir. *daur*, *derb*, Welsh *derwen*, Alb. *drusk*, *dru*/*drû*, Kam. *dâa*; Hitt. *ta-ru*, Luw. *tarweja-*, and also A.Mac. *darullos*.

55. For IE root **leu-**, *cut off*, *separate*, *divide*, *cut apart*, compare **louwā**, Gmc. *lawwō* (Swe. *lagg*, Eng. lag), O.Ir. *loë*, *lo*, Russ. *láva*, Lith. *lóva*, Ltv. *lāva*. For zero-grade forms, compare **lúō**, *loosen*, *release*, *untie*, as Gk. λύω, Lat. *luō*, **lúēs**, *plague*, *pestilence* (< "*dissolution*, *putrefaction*"), from Lat. *luēs*, and also **selúō**, *loosen*, *untie*, as Lat. *soluere* (from PIE ***s(w)e-lúo-***), into p.part. **selwotós**, *untied*, as lat. *solūtus*, etc.

56. PIE **belis**, *power*, *strength*, gives O.H.G. *pal*, O.Fris. *pall*, Lat. *dē-bĭlis*, Gk. *βελτίων*, Skr. *bálīyān*, *báliṣṭhas*, *bálam*, Phryg. *balaios*, O.Ir. *adbal*, M.Ir. *bolg*, Welsh *balch*, Kamviri *bâlim*. O.C.S. *болїи*, *болѣши*, *болѥ*, Russ. *большо́й*, Ukr. *більший*, Bulg. *бо́ле*.

57. Indo-European *father*, **patḗr**, is possibly an earlier compound formed by baby-speak sound like **pa-** (compare modern baby words in your language beginning with *p+vowel*), probably earlier *ph_2-, and IE common suffix for relatives ***-ter***, a pattern followed in "*mother*" and other family members, too. It evolved as Gmc. *fader* (cf. Goth. *fadar*, O.N. *faðir*, O.E. *fæder*, O.H.G. *fater*), Lat. *pater*, Osc. *patír*, Umb. *pater*, Gk. *πατήρ*, Skr. *pitár-*, Av. *pitar-*, O.Pers. *pitā*, Pers. *pedar*, Toch. *pācar*/*pācer*, Arm. *hair*, Gaul. *ātir*, O.Ir. *athir*, Welsh *gwaladr*, Kashmiri *petū́r*, Osset. *fyd*.

58. Indo-European **bhatis**, *appearance*, *phase*, gives Greek φάσις (*phasis*). It is related to verb **bhaniō**, "*bring to light*", *makes visible*, *cause to appear, show*, as Gk. φαινειν (*phainein*), suffixed from common PIE verb **bhāmi**, *shine*. It gives also derivatives **bhantós**, *visible*, **bhantom**, *phantom*, **bhantasíă̆**, *fantasy*, **énbhatis**, *emphasis*, **enbhatikós**, *emphatic*, **epibhaniă̆**, *epiphany*, **bhaniomenom**, *occurrence*, *circumstance*, also *phenomenon*, from Lat. *phaenomĕnon*, in turn from Gk. φαινόμενον, etc.

59. For PIE **ana-**, *breathe*, *blow*, *spirit*, compare Goth. *uzanan*, *andi*, O.N. *anda*, *önd* O.E. *eðian*, *ōþian*, Lat. *animus*, Osc. *anamum*, Gk. *anemos*, Skr. *ānas*, *aniti*, Av. *åntya*, Toch. *āñcäm*/*āñme*, Arm. *anjn*, *hov*, Lith. *anuoti*, O.C.S. *vonja*, Russ. *von'*, O.Ir. *anál*, *animm*, Welsh *anysbryd*, *anadl*, Alb. *ajë*/*âj*.

60. The reconstruction of common words for each day in a Seven-Day Week is almost impossible, if not through the adoption of numbers, from one to seven, like the one used by the Roman Catholic Church (Lat. *Feriae*, used in Portuguese, see **dhēs**-), Armenia, Greece, Iran, as well as in Arabic, Georgian and Hebrew. However, there seems to be a common old (pagan) pattern, followed in Greek (and partly in Sanskrit), and loan-translated from it in Latin and from this in Germanic.

PIE **dhēs** (possibly an extension of **dhē**-, *set*) is the reconstructed base for words applied to various religious concepts, as **dhēsiās**, *holidays*, Lat. *fēriae*, (O.Lat. *fēsiae*), **dhēstos**, *festive*, Lat. *fēstus*, in **dhēstēiuós**, festive, **dhēstēiuālis**, *festival*; also, zero-grade **dhasnom**, *temple*, as Lat. *fānum*, in **dhasnatikós**, *fanatic*, **prodhasnós**, *profane*. Sometimes said to be derived from this root, compare Gk. θεός (theós) "god"; however, because of Lith. *dvasià* "*ghost*", M.H.G. *getwüs* "*ghost*" and forms as Gk. θέσ-φατος, "*spoken from god*", θεσπέσιος, θέσπις "*divine*", it is reconstructed (after Hirt) as Proto-Greek *θFεσός from PIE **dhwesós**, and therefore related to Hom. θέειον and θέιον, Att. θεῖον "*sulphur steam, sulphur*" (*θFεσ-(ε)ιον?)]. Thus MIE **dhwesós**, *god*, for common Gk. θεός, in **apodhwesotis**, *apotheosis*, **n̥dhwesós**, *atheistic*, **n̥dhwesismos**, *atheism*, **endhwesosiasmós**, *enthusiasm* (Gk. ἐνθουσιασμός), **pántdhwesiom**, *pantheon*, Gk. Πάνθειον, etc.

NOTE. In Latin, the **s** before **m**, **n**, **l**, disappears, and the preceding vowel shows a compensatory lengthening; cf. Duenos: *cosmis* > *cōmis*; Columna Rostrata *-resmom* > *rēmum*; *fasnom* > *fānum*, **habēsna* > *habēna*, **catēsna* > *catēna*; *candēsla* > *candēla*, **quaisēsla* > *querēla*. , etc.

For PIE "*feast*", a more common verbal root **wes**- was used, cf. Goth. *wisan*, ON *vist*, O.E. *wesan*, O.H.G. *wist*, Lat. *vescor*, Skr. *anuvāvase*, Av. *vastra*, Lith. *švest*, Pol. *wesele*, O.Ir. *fiach*, Welsh *gwest*, Hitt. *weši*.

A. The word for "*day*" (as opposed to "*night*") in Indo-European comes usually from a common **dinom** (especially in compounds), originally "*daylight*", derived from PIE root **diw**-, *shine*, as Eng. *lent*, from Gmc. compound *langa-tin*-, (probably lit. "*longer daylight*", cf. O.S. *lentin*, O.E. *lencten*, M.Du. *lenten*, O.H.G. *lenzo*), Lat. *nun-dinum* (compare also general *diēs*, as in Eng. *diurnal*, from base **djeu*-), Skr. *dinam*, O.C.S. *дьнь*, Russ. *день*, Pol. *dzień*, O.Ir. *tre-denus*, Alb. *gdhin*; it is also found as full grade ***deinos***, Goth. *sin-teins*, and f. ***deinā***, in O.Pruss. *deina*, Lith. *diena*, Ltv. *diena* – compare also Lat. fem. ***dinā***, in *nun-dinae*.

B. Germanic '*day*' comes from old PIE **agh**-, *day*, older *h_2eg^h, considered as a span of time, hence "*24 hours*", from IE **aghōr**, **aghn̥**-, n. cf. Skr. *ahar*, *ahn*-, Av. *azan*-; compare for an original EIE n. **dhaghōr**, **dhaghn̥**-, *halfday of 12 hours, daylight*, Germanic *dōg*- (<**dhāgh*-?) O.N. *dőgn*, O.Da.,Da.,Swe. *døgn*; also O.N. *dőgr*, O.Swe., O.Da. *dōger* O.E., *dōgor* (*-er*), -es (along with the common innovative Gmc. *dagaz*<**dhaghos*, as in Eng. *day*, Ger. *Tag*, etc.) where the initial ***dh***- is interpreted as from (possibly the original) PIE root **dhech**-, *burn* – which gave derivatives with the sense of "*hot season*", "*summer*", thus maybe evolved ****dh-agh***- to mean "*hot part of the day*", *daylight* –, as in O. Pruss. *dagis*, Lith. *dagas*. Compare from **dhech**- Lat. *fovēre*, Gk. *-πτανος*, Skr. *dahati*, *dah*, Av. *dažaiti*, Pers. *dāġ*, Toch. *tsäk*/*tsäk*, Lith. *degti*, Ltv. *degt*, OCS *žešti*, Russ. *sžigat'*, *žgučij*, Polish *żgę*, Ir. *daig*, Alb. *djek*. C

Here is a brief explanation of possible loan-translations of the names of week days into Modern Indo-European in three different calendars, Pagan (like Greek, Roman and Germanic, as well as Sanskrit calendars, the last followed in Indian timekeeping, i.e., modern Hindi, Telugu, Gujarati, Bengali, and even Tamil and Malayalam,

beginning in Monday), International (beginning in Monday, similar to the traditional Slavic one), and Christian (counting in **Dhēsiās**, *feasts*, from Ecc.Lat. *Feriae*, see **dhēs**-), viz:

I.*Monday* should be **Mēnsós** (**dinom**), "*Moon's (day)*". Compare Gmc. *Monan-dagaz*, L.L. *Lunæ dies*, Gk. *ημερα Σεληνης*, and Skr. *Soma vāsara* (Beng. *Shombar*). Also, '*neutral*' **Prīwóm** (**dinom**), "*First* (*day*)", and Christian **Seqondhā́** (**Dhēsiā**), "*Second* (*Feast*)", i.e. "*Feast following Sunday*".

PIE **seq**-, *follow*, gives derivatives verb (middle-only) **séqomai**, *follow*, Lat. *sequor*, Gk. *hepomai*, Skr. *sacate*, Av. *hačaitē*, O.Pers. *hačā*, Toch. *säk*/, Lith. *sekti*, Ltv. *sekt*, Ir. *sech* Welsh *hep*. Common modern MIE words include p.part. **seqtós**, Lat. *secūtus*, Gk. ἑπτός, Lith. *–sèktas*, and Latin derivatives **seqtṓr**, *eager follower*, **seqtā**, *party*, *sect*, **séqelā**, *sequel*, **seqentiă̆**, *sequence*, **komseqénts**, *consequent*; from 3rd p. sg. **séqetoi**, pass. **séqetor**, cf. O.Ir. *sechithir*, Lat. *sequitur*, **ekseqomai**, *carry out*, *accomplish*, *follow up, carry out, pursue judicially, punish*, *execute*, **ekseqtós**, *accomplished*, *carried out*, **obhseqiom**, *present*, **obhseqiós**, *obsequious*, **perseqomai**, *persecute*, **proseqomai**, *prosecute*, **supseqomai**, *follow immediatly*, **supseqénts**, *subsequent*; from es-stem **seqōs** extended **seqestḗr**, "*follower*", *mediator*, *depositary*, **seqestrāiō**, *kidnap*, **séqestrom**, *sequestrum*, *kidnapping*; **seqós**, *following*, *along*, *alongside of*, cf. Lat. *secus*, O.Ind. *sácā*, as in **ekstrēmseqós**, *from outside*, *extrinsic*, **entrēmseqós**, *from inside, intrinsic*; **seqnom**, *identifying mark, sign* (from "*standard that one follows*"), Lat. *signum*, also **seqnā**, *sign*, **adseqnāiō**, *assign*, **komseqnāiō**, *consign*, **deseqnāiō**, *designate*, *design*, **reseqnāiō**, *return*, *give back*; suffixed **soqios**, *ally*, *companion*, *friend* ("*follower*"), cf. Lat. *socius*, O.H.G. *beinsegga*, O.S. *segg*, O.E. *secȝ*, O.Ice. *seggr*, Alb. *shoku* and verb **soqiēiō**, cf. Lat. *soqiare*, Gk. *ἀοσσάω* "*help, stand by*" (<***sm̥-soqiēiō***); **soqio**-, *socio*-, **sóqitis**, Av. zero-grade *āskiti*, "*association*" (full grade *hačiti*- "*Begleitung*"), Lat. *ad-soqiā-ti*-, **sóqietā**, *society*, etc.

II. *Tuesday* is **Taronós** (**dinom**), *Thunder's (day)*, as it is the day of the gods of war. Mars was called *Mavōrs* in some poetry (Virgil VIII, 630), and *Mamers* was his Oscan name. He was also known as *Marmor*, *Marmar* and *Maris*, the latter from the Etruscan deity *Maris*. If compared with Greek mythology, Ares (Ancient Greek Ἄρης) is the son of Zeus and Hera. Though often referred to as the Olympian god of warfare, he is more accurately the god of savage warfare, bloodlust or slaughter. There may be a connection with the Roman war god Mars, via common Indo-European **mar**-, *crush, smash, destroy, break*, possilby through Gk. Ἄρης (<*Ṃrēs*?); cf. Lat. *morētum*, Gmc. *marjan,* Gk. *marái̯nō*, *márnamai̯*, O.Ind. *mr̥ṇā́ti*, pass. *mūryáte*, ptc. *mūrṇá*-; *ā-marītár*-, "*destroyer*", Hitt. *marrija*-. Compare for a general IE god of war **Tarōn** (<PIH *-rH-*) *thunder*, *the Thunderer*, cf. Gmc. *thunr*- (maybe influenced by the former PIE root, cf. O.N. *þorr*, O.E. *þunor*, O.Fris. *thuner*, M.Du. *donre*, O.H.G. *donar*), Hitt. *dTarḫu*-, *dTarḫunna*-, "*storm god*", Pashto Pashto *taṇā́/tanā́, təṇā́/təṇā́* f., Sla. *t[ā]ronъ*, *tъronъ*, Gaul (in Lat.) *Taranis* "*thunder god*"; Ir *torann*; Cymr *taran id*, Bret. *taran*. For modern names, cf. Gmc. *Tiwaz-dagaz*, (althoug *Tiw*, from PIE ***deiw***-, thus , is in fact etymologically related to Gk. *Zeus* and Lat. *Iove*, v.i.), loan-translated from L.L. *Martis dies*, *ημερα Αρεως*, "*day of Ares*", and compare also Skr. *Mangala vāsara* (Beng. *Monggolbar*), identified with *Karttikeya*, the god of war. Compare for PIE **eis**-, originally maybe denoting "*passion*, *vigor*", hence '*anger*, *wrath*': cf. Lat. *īra*, Gk. οἰστρος, ἱερος, Ἀρης, Skr. *isirah*, Av. *aēšma* (as in *Asmodeus*, v.i.). English "*iron*" comes from Gmc. *īsarnan* (cf. O.S. *isarn*, O.N. *isarn*, O.E. *isærn*, M.Du. *iser*, O.H.G. *isarn*), borrowed from Celtic *isarnon* (cf. O.Ir. *iarn*, Welsh *haiarn*), from IE **ajos** (gen. **ájesos**, PIE root ***ajos***-, older *h₂ei̯os*), originally *metal* ("*vigorous*, *powerful material*"); compare also Gmc. *ajiz*, (cf. Goth. *aiz*, O.N.

eir, O.E. *ār*, O.H.G. *ēr*, *ehern*), Lat. *aes*, Umb. *ahesnes*, Skr. *ayaḥ*, Av. *ayaṅh*, Pers. *āhan*, Gaul. *Isarnodori*, O.Ir. *iarn*, Welsh *haearn*. Also, **Alterom** (**dinom**) or Christian **Tritiā́** (**Dhēsiā**).

III. Wednesday comes from North Gmc. *Wodenaz-dagaz*, "*day of Odin*" (cf. O.N. *Ōðinsdagr*, O.S. *odensdag*, O.E. *Wōd*(*e*)*nesdæg*, O.Fris. *wōnsdei*, M.Du. *Wudensdach*; but, from uncertain origin, compare O.Fris. *wērendei*, Du. *wonseldach*, South. Ger. *guotentag*, and even Eng. *Wednesday* and Du. *waansdei*, as well as Low Ger. and Du. dial. with initial *g*-), loan-translated originally from L.L. *dies Mercurii*, "*day of Mercury*", in turn from Gk. *ημερα Ερμου*, "*day of Hermes*", Lat. *Mercurius* (from ***merk***-, Etruscan root for various economic aspects, as in **mérkātos**, *market*, or **merkāiō**, *buy*) and Gk. Ἑρμῆς, (also from unknown origin, with some relating it to ἕρμα, a *square pillar*), both equivalent to Skr. *Budha vāsara* (Beng. *Budhbar*), "*day of Budha*", the name of the planet Mercury, a son of Chandra, the moon, in Hindu mythology, but the three are unrelated to the Nordic concept of *Odin*, the "*sky-god*", equivalent to Lat. *Jupiter* or Gk. *Zeus*.

*NOTE. Rübekeil (2003:29) draws attention to the suffix variants *-ina- (in Óðinn) vs. *-ana- (in Woden, Wotan). This variation, if considered at all, was dismissed as "suffix ablaut" by earlier scholars. There are, however, indications from outside Old Norse of a suffix *-ina-: English Wednesday (rather than *Wodnesday) via umlaut goes back to *wōđina-. Rübekeil concludes that the original Proto-Germanic form of the name was *Wōđinaz, yielding Old Norse Óðinn and unattested Anglo-Saxon *Wēden, and that the attested West Germanic forms are early medieval "clerical" folk etymologies, formed under the impression of synchronic association with terms for "fury". The Pre-Proto-Germanic form of the name would then be *Wātinos. Rübekeil suggests that this is a loan from Proto-Celtic into pre-Proto-Germanic, referring to the god of the *wātis, the Celtic priests of mantic prophecy, so that the original meaning of the name would be "he [the god/lord] of the Vates" (p. 33), which he tentatively identifies with Lugus.*

Lugus was a deity apparently worshipped widely in antiquity in the Celtic-speaking world. His name is rarely directly attested in inscriptions, but his importance can be inferred from placenames and ethnonyms, and his nature and attributes are deduced from the distinctive iconography of Gallo-Roman inscriptions to Mercury, who is widely believed to have been identified with Lugus, and from the quasi-mythological narratives involving his linguistic descendants, Irish Lugh and Welsh Lleu Llaw Gyffes.

Julius Caesar in his De Bello Gallico identified six gods worshipped in Gaul, by the usual conventions of interpretatio Romana giving the names of their nearest Roman equivalents rather than their Gaulish names. He said that "Mercury" was the god most revered in Gaul, describing him as patron of trade and commerce, protector of travellers, and the inventor of all the arts. The Irish god Lug bore the epithet samildánach (skilled in all arts), which has led to the widespread identification of Caesar's Mercury as Lugus. Mercury's importance is supported by the more than 400 inscriptions into him in Roman Gaul and Britain. Such a blanket identification is optimistic – Jan de Vries demonstrates the unreliability of any one-to-one concordance in the interpretatio Romana – but the available parallels are worth considering. It has been suggested that the Germanic deity Wotan (English Woden) was influenced by Gaulish Mercury and his name is possibly reflected in Germanic Loki. There is no one-to-one correspondence between Germanic and Celtic gods, though.

*Proto-Celtic *Lug-u-s should probably be related to Proto-Celtic *lug- meaning "oath, pledging, assurance" on the one hand and "deceive" on the other (derived from PIE root* ***leugh-****, oath, swear, bemoan, lie; Juliette Wood interprets his name as deriving from Proto-Celtic *lug-, oath, which would support this identification of Mercury as a god of contracts*; *cf. Cel. lugjo-m → OIr lu(i)ge, Gmc. liug-a- (cf. Eng. lie, Ger. lügen), Sla. lъgā́tī, lъžjǭ; Hitt. haluga, "message". Hence the most suitable name for a Wednesday in an Indo-European Pagan week should be from* ***Lughus****, "Oath/Contract/Message-god" (into Cel. Lugus, Gmc. Loki, equivalent to Lat. Mercurius, Gk. Hermes, origin of Gmc. Odin), hence* ***Lughous*** *(****dinom****), "Mercury's (day)".*

III.A. Indo-Aryan term *Budha* (and also *Buddha*) comes from PIE verb **beudhō**, *awake, notice, become aware*, cf. O.Ind. *bṓdhati*, *bṓdhate*, Av. *baoδaiti*, Gk. *πεύθομαι*, Gmc. *biuthan* (cf. Goth. *anabiudan*, O.N. *bjóða*, O.E. *bēodan*, O.H.G. *biotan*), O.Bulg. *bljudǫ*; participle **bustós** (<****budh-to-***), "*awakened*, *wise*; *recognized*" cf. Skr. *buddháḥ*, Gk. -πυστος; also, nasalized **bundhō**, *learn, find out, perceive, make aware, announce*, cf. Gk.*πυνθάνομαι*, Lith. *bundu*, O.Ir. *-bond-*; and noun f. **bustis** (<****budh-ti-***) *understanding, mind, opinion*, *intention*, as O.Ind. *buddhí-*, Av. *-busti-*, Gk. *πύστις*; for **beustṓr** (<****beudh-ter-***), *expert*, *knower*, cf. O.Ind. *boddhár-*, also in Gk. *πευστήρ-ιος* ("*questioning* "); for es-stem n. **beudhōs**, *awareness*, *perceptivity*, Av. *baoδah-* adj. **beudhḗs** "*perceiving*", as Gk. Hom. *ἀ-πευθής* "*unexplored*, *unacquainted*; *ignorant*"; **budhrós**, *watching*, *aware*, Av. *-buδra-*, O.Bulg. *bъdrъ*, Lith. *budrùs*; **beudhis**, cognition, Av. *baoiδi-*, O.Ind. *bṓdhi-*; compare also Gk. *peithein*, *pistis*, Av. *buidjeiti*, Pers. *bēdār-šudan*, O.Pruss. *budē*, Lith. *budinti*, Ltv. *budīt*, O.C.S. *beda*, *bljudo*, Russ. *будем*, Pol. *budzić*, O.Ir. *buide*, Welsh *bodd*, Kamviri *bidi*.

III.B. The new, non-pagan model (cf. M.H.G. *mittewoche*, M.L.G. *middeweke*, Du.dial. *Midswiek*, Fris. *metswik*, Norw. dial. *mækedag*, Mod.H.G. dial. *Mittag*, Eng.dial. *Mid-week*, and also unrelated Ice. *þriðjudagur*, "*third-day*"), influenced by Gothic, was probably adopted from Gk. or Lat. missionaries, avoiding the old pagan week, and is also found in Slavic – and Hungarian – *srēda*, lit. "*middle*" (cf. O.C.S. *srěda*, Rus. *sreda*, Pol. *sroda*), loan-translated from Lat. *media hebdomas*, itself a loan word from Gk. εβδομάδα, from ἑβδομάς, *seven*, from PIE **septm̥ā** (cf. Gk. ἑβδομαδικός, "*belonging to the week*", Alb. *javë* "*week*" common Alb. b→v phonetic mutation), translated in L.Lat. as *septimāna*, from Lat. *septem*; compare also words for "week" from PIE **septm̥** in Srb. *седмица*, Cro. *sedmica*, Bulg. *седмица*, Bret. *sizhun*, Lith. *savaitė*, Hindi *haftā*, Hung. *hét* (from an Iranian source, cf. Kurdish *heft*, "*seven*"). Then, **Medhjā́** (**Séptm̥ā**), "*mid-week*", as well as 'neutral' **Tritióm** (**dinom**) or Christian **Qetwrtā́** (**Dhēsiā**).

Other Indo-European terms for common periods of days:

III.B.1. From IE **wigā**, *turning*, *succession*, *variation*, hence "*work*, *trade*, *week*", comes Eng. *week*, Gmc. *wikō-* (cf. Goth. *wikō*, O.N., O.S. *vika*, O.E. *wice*/*wican*, O.Fris. *wike*, M.Du. *weke*, O.H.G. *wecha*, Ice. *vika*, even Finnish *viikko*), as Skr. *viṣṭi*, also in **wigis**, *variation*, *change*, hence *trade*, *exchange*, cf. Lat. *uix, uicis*, O.Ir. *fiach*, Ice. *-vīxl*, O.S. *wehsāl*, O.H.G. *wëhsal*, *wehsil*, all from PIE ***weik***/***weig***, *bend*, *wind*; cf. Gmc. *wik-* (e.g. Eng. *wicker*), *waikwaz* (Eng. *weak*), etc.

III.B.2. Other common word for "*week*" in Slavic is O.C.S. *ten dzień* (cf. Pol. *tydzień*, Slovak *týždeň*, Slovene *teden*, Ukr. *тиждень*, Cz. *týden*), translated as MIE **tod dinom**, "*this day*".

III.B.3. Ltv. *nedēļa* is a loan word from Rus. *неделя* (*nedélja*), originally Sunday in Slavic languages, IE **Nedhēlā**, Russ. *не-делать*, "*no-work*(*ing day*)", composed of:

For PIE **ne**, *no*, *not*, and EIE negative particle **nē**, compare Gmc. *ne-*, *na-*, (cf. Goth. *ni*, ON *né*, O.E. *ne*, O.H.G. *ne*, Eng. *no*), Lat. *nē*, *ne-*, Osc. *ne*, Skr. *na*, Av. *na*, O.Pers. *na*, Pers. ن, O.Pruss. *ne*, Lith. *ne*, Ltv. *nē*, Russ. *не*, *нет*, Polish *nie*, O.Ir. *ní*, Welsh *ni*, *na*, Alb. *nuk*, Hitt. *natta*, Luw. *ni-*, Lyc. *ni-*, Lyd. *ni-*; also common is zero-grade suffix **n**- [n̥], as Gmc. *un-*, Lat. *in-*, Umb. *an-*, Gk. *a-*, *an-*, Skr. *a-*, *an-*, Toch. *an-*/*en-*, Arm. *an-*, frequently found in PIE compounds, as **n̥cowijós**, "*man without cows*" (cf. Skr. *ágos*, Gk. *aboúteō*, O.Ir. *ambuæ*), **n̥mrtós**, *inmortal* (cf. O.Ind. *amr̥ta-*, Av. *aməša-*, Gk. *ἄμβροτος*), **n̥udrós**, *without water* (cf. Skr. *anudrás*, Gk. *ánydros*), **n̥gnōtós**, *unknown* (cf. Skr. *ájñātas*, *ágnōtos*), **n̥gn̥(n)tós**, *unborn*, etc. A common derivative is MIE ***nóin***, *no*, *none*, originally "*not one*, *not any*" (from **n**(**e**)-**óinos**), giving Gmc. *nean* (cf. O.S., M.L.G. *nen*, O.N. *neinn*, M.Du., Du. *neen*, O.H.G., Ger. *nein*), possibly analogous to Lat. *nōn*, *non-*, although usually explained as nasal extension of o-grade negative particle **nē**.

PIE root **dhē-**, *set*, *put*, *place*, gives Gmc. *dēdiz* (Eng. *deed*, Ger. *Tat*), *dōn* (Goth. *gadēþs*, O.E. *dōn*, O.H.G. *tuon*, O.N. *dalidun*, O.S. *duon*, O.Fris. *dua*, M.E. *de*, Ger. *tun*), Lat. *faciō*/*fēcī*, *facilis*, *condere*, *abdomen*, *fās*, Osc. *faciiad*, Umb. *feitu*, Gk. θήκη, θέμα, θέτω, τίθημι, Skr. *dádhāti*, Av. *daδāiti*, O.Pers. *adadā*, Phryg. *dak-*, Toch. *täs*/*täs*, Thrac. *didzos*, Arm. *ed*, Lith. *dedù*, *dė́tis*, Ltv. *dēt*, O.C.S. благодѣт, дѣти, дѣлати, Russ. *деть*, *делать*, Pol. *dziać*; *działać*, Gaul. *dede*, Welsh *dall*, Alb. *ndonj*; Hitt. *dai*, Lyc. *ta-*.

IV. <u>*Thursday*</u> is, after the Greek and Roman calendars, a day consacrated to **djēus**, Zeus and Jupiter respectively; cf. Gk. *ημερα Διος* (Gk. *Zeus* has gen. *Dios*), Lat. *Iovis dies*, both the "*sky-gods*" – compare also Hindu *Guru vāsara*, "*day of the preceptor*", for Vjasa, the supreme preceptor of mankind, and Beng. *Brihoshpotibar*, "day of Brihoshpoti" (equivalent to Jupiter), the guru of the Devas and the arch-nemesis of Shukracharya, the guru of the Danavas. In loan-translated Gmc. *thonaras-dagaz* (cf. O.N. *Þorsdagr*, O.E. *Þurresdæg*, O.Fris. *thunresdei*, M.Du. *donresdach*, Du. *donderdag*, O.H.G. *Donares tag*), the day is dedicated to a Germanic god whose name is often related to PIE root (**s**)**ténō**, *resound*, *thunder*, as in Lat. *tonāre*, Skr. *tánjati*, Pers. *tundar*, Pashto *taṇā*; but for **Tarōn**, *the Thunderer*, v.s. Therefore, **Diwós** (**dinom**), "*Sky-God's (day)*", **Quturóm** (**dinom**), "*fourth* (*day*)" or **Penqtā́** (**Dhēsiā**), "*fifth* (*Feast*)".

V. <u>*Friday*</u> is "*Frigga's day*", wife of Odin in Germanic mythology, goddess of heaven and married love, loan-translation of Lat. *Ueneris dies*, "*day of (planet) Venus*", in turn translated from Gk. *ημερα Αφροδιτης*, "*day of Aphrodite*", the goddesses of love, lust and beauty; also, Skr. *Shukra vāsara* (Beng. *Shukrobar*), where Shukra is the name for Venus, one of the Navagrahas, a male planet for the Hindus and named after the Guru Shukracharya. Ἀφροδίτη comes from Phoenician ᶜ*Aštart*, "*Astarte*", influenced by Gk. ἀφρός, *foam*, having parallels to Indo-European "*dawn*" god(desse)s, as Vedic Skr. *Ushas*, Lat. *Aurora* (reinterpreted as a-Decl. **Áusos-ā*), IE **Ausōs**. Latin Venus comes from **wenōs**, *love*, *sexual desire*, *loveliness*, *beauty*, *charm*, from PIE **wenō**, *desire*, *strive for*, and **wn̥skō**, *wish*, cf. Gmc. *wunskan* (*O.Ice. ōsk, O.E. wūsc-, O.H.G. wunsc, etc.*), O.Ind. *vānchati*; or **wenesnom**, Lat. *uenēnum*, "*venom*". Compare for this root Gmc. *winnwan* ("*seek to gain*", O.E. *wynn*, Eng. *win*), Gmc. *wunēn*, ("*become accustomed to, dwell*", cf. O.E. *wunian*, Ger. *wohnen*, Eng. *won*), Gmc. *wanian* ("*accustome, train*", cf. O.E. *wenian*, Eng. *wean*), Lat. *uenia*, *uēnāri*, Skr. *vanas-*, *vanam*, *vanati*, *vanik*, *vanijah*, Av. *vanaiti*, Toch. *wani*/*wna*, *wins-*/*winsk*, Arm. *gun*, Cel. *wenj* (cf. O.Ir. *fine*, O.Bret. *coguenou*, Welsh *gwen*,

Bret *gwenn*); Hitt. *wen-*, *went-* (for more on this root v.i. Sla. *voin'*, "*soldier*"). For *Frigg*, compare Gmc. *Frije-dagaz* (cf. O.N. *frijadagr*, O.E. *frigedæg*, O.Fris. *frigendei*, M.Du. *vridach*, Du. *vrijdag*, Ger. *Freitag*), from IE **prijā**, *friend*, in Germanic *woman*, *wife* – also *Freya*, goddess of love and beauty in Norse mithology – Gmc. *Frijō* (cf. O.N. *Freyja*, O.E. *frea*, O.S. *frua*, M.Du. *vrouwe*, Ice. *Freyjudagr*, Ger. *Frau*, Eng. *Freya*), itself from PIE root **prai-**, *like*, *love*, which gave **prijós**, *dear*, *beloved*, *friend*, later *noble*, as Gmc. *frijaz* (cf. Goth. *freis*, O.E. *freo*, M.H.G. *vri*, Ger. *frei*, Du. *vrij*), and other derivatives related to *free*, *love*, *friend*, like **pritus**, *peace* as Gmc. *frithuz* (O.H.G. *fridu*, L.Lat. *exfredāre*, Eng *afraid*), **prijonts**, "*beloved*", *friend*, as Gmc. *frijands* (cf. Goth. *frijonds*, O.N. *frændi*, O.E. *frēond*, O.Fris. *friund*, M.H.G. *friunt*, Ger. Freund); also, compare Gk. *πραος*, Skr. *priyah*, *prīṇāti*, Av. *frā*, Ltv. *prieks*, O.C.S. *prějati*, *prijatelji*, Russ. *приятель*, Polish *przyjaźń*, *sprzyjać*, O.Ir. *ríar*, Welsh *rhydd*; therefore, **Ausosés** (**dinom**), "*Dawn's (day)*", **Penqtóm** (**dinom**), "*fifth* (*day*)", **Sekstā́** (**Dhēsiā**), "*sixth* (*Feast*)".

VI. <u>*Saturday*</u> is a partial loan-translation from Lat. *Saturni dies*, "*day of Saturn*", itself translated from Gk. ημερα Κρονου, "*day of Cronus*"; compare also Skr. *Shani vāsara* (Beng. *Shonibar*), from *Sani*, one of the nine Navagraha or primary celestial beings, embodied in the planet *Saturn*. *Saeturnus* was an Italic god of agriculture, poss. a borrowing from Etruscan, although folk-etymology relates it to PIE **sējō**, *sow*, from which Gmc. *sējan* (cf. O.H.G. *sāen*, O.S. *sāian*, O.E. *sāwan*, O.Ice. *sā*), Lith. *séju* (*séti*), O.C.S. *sějǫ* (*sějati*), p.part. **satós**, *sowed*, also reduplicated verb **s(ē)ísō**, cf. Lat. *serō*, Goth. *saian* (<*saísō*), **satṓr**, *sower*, hence folk-etymology reconstruction of Ita. **Satornos**, *the Sower*. Compare O.E. *Sæterdæg*/*Sæternesdæg*, Du. *zaterdag*, O.Fris. *saterdi*, M.L.G. *satersdach*; Ir. *dia Sathuirn*, Welsh *dydd Sadwrn*. However, an ancient Nordic custom is preserved in O.N. *laugardagr*, Dan. *lørdag*, Swed. *lördag*, lit. "*bath day*" (cf. O.N. *laug*, "*bath*"). Ger. *Samstag* (from O.H.G. *sambaztag*) appears to be from Vulg. Lat. *sambatum*, from Gk. **sambaton*, a colloquial nasalized variant of *sabbaton* "*sabbath*", also attested in Slavic (cf. O.C.S. *sabota*, Rus. *subbota*, *simbata*) and even Hung. *szombat*; also Romance (cf. Fr. *samedi*, It. *sabato*, Spa. *sábado*, Pt. *sabado*). The *sabbath* is observed by the Jews as a day of rest, and comes from Hebrew *shabbath*, prop. "*day of rest*", from *shabath* "*he rested*". Hence, only two names appear to be correct for MIE, IE pagan **Satorni** (**dinom**), "*Sower's (day)*", and Christian **Sabbatom**.

VII. <u>*Sunday*</u>, the last day of the week – first according to religious tradition –, is the "*day of the sun*", Lat. *dies solis*, loan-translated from Gk. *ημερα Ηλιου*, compare also Skr. *Ravi vāsara* (Beng. *Robibar*); according to Hinduism, Ravi is Surya, the Sun. Therefore, the pagan version should be **Sāwlós** (**dinom**), "*Sun's (day)*", gen. of **Sāwel**, *sun*, v.i., and in Christian tradition, following Lat. *dominicus dies*, Gk. *Κυριακος*, (from Gk. κυριος, *lord*, with a different IE base), **Kuriakós**/**Domūnikós** (**dinom**).

Indo-European root **keu-**, *swell*, in verb **kwēiō**, cf. Skr. *śvayatē*, Lat. *inciēns* "pregnant" (<**en-cu̯iens*, as Eng. as Eng. *enceinte*), Gk. *kuéō*, probably with the sense *vault, hole*, behind PIE o-grade **kow(i)os**, *hollow*, cave, also **kowā** (as V.Lat. *cova*), as Lat. *cauus* (but cf. Port. *covo*), Gk. κόοι, Bal. čāwā, Sla. sūjь(jь), M.Ir. *cūa*, Bret. *kéo*, *cave*, **kowesna**, *cavern*, **kówitā**, *cavity*, **komkowós**, *concave*, **ekskowāiō**, *excavate*; **kówilos**, *hollow*, **kowilíă̆**, *belly*, as Gk. κοιλία, and **kówilom**, *coelom*, as in Eng. derivatives *-cele*, *celiac*, *-coel*; **kowos**, *hollow place, cavity*, as in **kówodeiā**, *poppy head*, Gk. κώδεια, which gives **kowodeínā** (***-ínā***, "*alkaloid*"), *codeine*; zero-grade shortened **kúmelos**, *heap*, *mass*, *cumulus*, as Lat. *cumulus*, **kumelāiō**, *cumulate*, or **adkumelāiō**, *accumulate*; zero-grade **kūrós**, "*swollen*", *strong*, *powerful*, hence **kūrios**, *master*, *lord*, as Gk. *κυριος*, as in

kūriakós, "*of the lord*", as in MIE **Kūriakóm** [**dōmn̥**], *Lord's* [*dome*] (Gk. *dōma*, *dōmatos*, from **dōms**, "*house*", see ***dem***-), as Late Greek *kūriakon* [*dōma*] (cf. Med. Gk. *kūrikon*, into W. Gmc. *kirika*, as O.E. *ciricem*, Eng. *church*, Ger. *Kirche*), used for houses of Christian worship since c.300, especially in the East, though it was less common in this sense than **ekklētíă̆** (from Gk. *ekklesía*, see **kel**-) or ***basílikā*** (from loan adj. *basilikắ*, *royal*, Gk. βασιλική, from *basiliós*, *king*); from **keu**- (v.s.), **kūmn**, *a swelling, wave*, with Greek derivatives as Eng. *cyma*, *cyme*, *cymo*-, *kymo*-.

Indo-European **kel**-, *shout*, *call*, PIH **kelh₂*, gives verb **kálēmi,** cf. Gk. Aeol. κάλημι, Umb. *karĭtu*, *karĕtu*, *carsitu* (<**kalētōd*), variant Gk. *klēmi*, which gives **ekklētíă̆**, *assembly, church*, as Gk. ἐκκλησία; and corresponding to (newer) thematic Gk. καλέω, Lat. **caleō* (<***kalēiō***) in "*Dies te quinque, respectively septem, calo, Iuno Covella*", and in **kálendās**, *calends*, from Lat. *kalendae* (first day of the month, when it was publicly announced on which days the nones and ides of that month would fall) giving **kalendāsiom**, *calendar*; çsuffixed **klāmāiō**, *call*, *shout*, *cry out*, *claim*, cf. Lat. *clamāre*, O.Ind. *krándati* (<**klem-d*-?), O.E. *hlimman*, *hlymman*, *hlimme*, *hlemm* (<**hlammi*), O.H.G. *(h)limmen,* O.N. *hlymja*, O.H.G. *hlamōn*; as in **klāmā́nts**, *clamant*, **klāmōs**, *clamor*, **adklāmāiō**, *acclaim*, **deklāmāiō**, *declaim*, **eksklāmāiō**, *exclaim*, **proklāmāiō**, *proclaim*, **reklāmāiō**, *reclaim*; **komkaliom** (from ***kom***-, *together*, and zero-grade **kĺh*->*IE* ***kal-io***-), *meeting*, *gathering*, *council* ("*a calling together*"); **kalāiō**, *call out*, *gather*, as Lat. *calāre*, Ltv. *kaluôt*, as in **enterkalāiō**, *intercalate*, **kalātṓr**, *gatherer*, **nomn̥kalātṓr**, *nomenclator*; suffixed **klārós** (from zero-grade **kĺh*), *bright*, *clear*, as in **deklārāiō**, *declare*; zero-grade **klastis**, *summons, division of citizens for military draft*, hence *army*, *fleet*, from Lat. *classis*, also *class*, from PIE d-suffixed ****klad-tis***, cf. Gk. κέλαδος.

61. MIE **Januarios** is probably from IE **janos**, Lat. *Janus*, ancient Ita. deity, guardian god of portals, patron of beginnings and endings, lit. "*gate, arched passageway*" from PIE **eí**mi, *go* (cf. Skt. *janaḥ*). Other Roman months are **Februarios** (pl. of Lat. *februum*, *purifications*, unkn. origin), **Martios**, (from Ita. god *Mars*, *Mamers* in Oscan, borrowed from the Etruscan deity *Mariś* as a war/agricultual god *Mars* and equated with Greek *Ares* by *interpretatio romana*, v.s. IE **mar**-), **Aprilis** (from Ita. godd. *Venus*, Etruscan *Apru*, possibly from Gk. *aphrodite*), **Magios** (from Lat. *Maia*, from PIE **meg**-, *great*), **Jūnios** (from Lat. *Jūnō*, possibly from PIE **jeu**-), **Djówilios** (from Lat. *Iūlius Caesar*, from **djēus**, *god*), **Augostos** (from Lat. *Augustus Caesar*, from **aug**), **Septm̥mris**, **Oktōmris**, **Nown̥mris**, **Dekm̥mris**, all from IE numbers following the Roman calendar (which began in March) and adj. suffix ***-m*(*nst*)*ris***, Lat. *-bris*, from PIE **mēns**, *month*.

a. For PIE **eími**, *go*, *walk*, compare Goth. *iddja*, O.E. *ēode*, Lat. *ire*, *iter*, Umbrian *ier*, Oscan *eítuns*, Gk. ειμί, ἰών, Skr. *ēti*, *imas*, *ayanam*, Av. *aēiti*, O.Pers. *aitiy*, Toch. *i*, O.Pruss. *eit*, Lith. *eiti*, Ltv. *iet*, O.C.S. *iti*, *idǫ* Rus. *uдmu*, Polish *iść*, Gaulish *eimu*, O.Ir. *ethaim*, Kamviri *ie*; Luw. *i*-.

b. For PIE **meg**-, *great*, compare derivatives **megos**, cf. Skr. *maha*-, Gk. *μέγας*, Phryg. *meka*-, Pers. *meh*, Gmc. extended Gmc. *mekilaz* (cf. Goth. *mikils*, O.E. *micel*, O.N. *mikill*, O.H.G. *mihhil*, M.E. *muchel*), comparative **megiós**; compare also Skr. *mahayati*, *mahat*-, Av. *mazant*, Illyr. *mag*, Toch. *māk*/*mākā*, Arm. *mec*, Gaul. *Magiorīx*, O.Ir. *mochtae*, Welsh *Maclgwn*, Alb. *madh*, Kurd. *mezin*; Hitt. *makkes*.

c. PIE root **jeu**-, "*vital force, youthful vigor*", and its suffixed zero-grade en-stem **juwōn**, *young*, *youngling*, cf. Skr. *yuván*-, Lat. *iuuĕn-is*), give **juwn̥kós**, *young*, as Gmc. *juwungaz*/*jungaz*, (Goth. *juggs*, O.S., O.Fris. *jung*,

O.N. *ungr*, O.E. *geong*, M.Du. *jonc*, O.H.G. *junc*) Lat. *juvencus*, Umb. *iveka*, *iuenga* O.Ind. *yuvaśáḥ*, *yuvaká-ḥ* and Cel. *yowankos* (cf. Gaul. *Jovincillus*, O.Ir. *ac*, Welsh *ieuanc*); **juwents, juwn̥tis**, *young*, as Gmc. *juwunthiz/jugunthiz* (cf. Goth. *junda*, O.S. *juguth*, O.E. *geogu*, O.Fris. *jogethe*, M.Du. *joghet*, O.H.G. *jugund*), O.Ind. *yúvant-*, f. *yuvatí-ḥ*, into **júwn̥tā**, *youth*, Goth. *junda* and **júwn̥tūts**, Lat. *juventūs*, O.Ir. *ōetiu*, *ōitiu*. For Lat. *Jūnō*, if the name of the goddess stands for "*the young one*", is from stem **jūn-**, as in Lat. *jūnīx*, *jūnior*, O.Ind. *yūnī*, Av. *yūnō*, hence in any case MIE **Jūnōn.**

d. PIE root **aug-**, *increase*, gives verb **augēiō**, *increase*, *augment*, *enlarge*, *spread*, *extend*, cf. Lat. *augēre*, Gmc. *aukan* (cf. Goth. *aukan*, O.H.G. *ouhhōn*, O.S. *ōkian*, O.E. *ēacian*, *īecan*); **augtṓr**, *promoter, producer, father, progenitor, author*, cf. Lat. *auctor*, Umb. *uhtur*; **augtís**, *increased, high*, cf. O.Ltv. *aukts*, Lat. *auctus*, Ltv. *aũgt*, Thrac. Αὐθί-, O.Pruss. *aucti-*, *aucktai-*, **augtis**, *an increasing*; hence, from the bidding, *auction*, as Lat. *auctiō*; **augmōn**, *increase*, *growth*, *augment*, as Lat. *augmen*(*tum*), Lith. *augmuõ*, O.Ind. *ōjmán-*. For es-stem **augōs**, "*vigorousness, strength*", cf. O.Ind. *ṓjas-* n., Av. *aojah-*, *aogah-*, O.Pruss. *aūgus*, also behind Lat. *augur* ("*divine favor, increase*"→"*he who obtains favorable presage*"→ "*diviner*"), as in **enaugosāiō**, *inaugurate*; extended **augostos**, *high*, *highness,* cf. Lat. *augustus* (*highness*, "*consecrated*, *holy*; *majestic*, *dignified*"), Lith. *áukštas*, Ltv. *aûksts*. Variant and o-grade **wogsēiō**, *allow to grow*, *make grow*, as Goth. *wahsjan* (cognate with Du. *was*, Ger. *Wachs*, Eng. *wax*), Gk. ἀ(ϝ)έξω, O.Ind. *vakṣayati*, Av. *vaxšaiti*, and noun **wogstus**, *waist*, Gmc. *wakhstus* (cf. Goth. *wahstus*, O.N. *vaxtr*, Swed. *vstm*, O.H.G. *wahst*); also extended in **-s** causative-iterative in Gk. αὔξω, also behind **augsiliom**, *aid*, *support*, *assistance*, from Lat. *auxilium*

e. Compare for MIE **mēns**, *moon*, *month*, cf. Lat. *mēnsis*, Gk. *μην*, Skr. *māsah*, Av. *maoṅh*, Pers. *māh*, Toch. *mañ/meñe*, Arm. *amis*, O. Pruss. *menig*, Lith. *mėnuo*, Ltv. *meness*, O.C.S. *meseci*, Russ. *mesjac*, Pol. *miesiąc*, O.Ir. *mí*, Welsh *mis*, Alb. *muaj*, Kurd. *mang*, Kamviri *mos*, Osset. *mæj*. *Vide supra*, under **mē**, *measure*.

62. For season, year, time, PIE had different words

A. From root **jēr-**, as **jērom**, *year*, *season*, cf. O.Pers. (*duši*)*jaram*, Gmc. *jæram* ("*year*, *season*" cf. Goth. *jer*, O.S., O.H.G. *jar*, O.N. *ar*, O.E. *ġēar/gēr*, Dan. *aar*, O.Fris. *ger*, Du. *jaar*, Ger. *Jahr*); **jōrā**, *hour*, *season*, from Gk. *ὡρα* ("*hour, season, year*" as in Mod.Eng. *horoscope*, *hour*); also, compare Lat. *hornus*, Av. *jare*, O.C.S. *jaru*, probably originally "*that which goes a complete cycle*", from older verbal root PIH *h₂eí*, *go*, v.s.

A.a. The best option for "*season*" in MIE would be to use **jērós daitis**, "*year-time*", loan-translated from IE compounds like Ger. *Jahreszeit*, Fris. *jiertiid*, Du. *jaargetijde*, Swe., Da. *årstid*, Rom. *anotimp*, Lith. *metų laikas*, Russ. *время года*, Pol. *pora roku*, Cz. *roční období*, Slov. *letni čas*, Bret. *koulz-amzer*, etc., as a compound from gen. of **jērom**, followed by **daitis**, *period of time*, as Skr. *díti-h*, "*the distributing*", Gmc. *tīthiz* "*division of time*" (cf. O.N. *tīð*, O.S.,O.E. *tīd*, Du. *tijd*, O.H.G. *zīt*, Ger. *Zeit*), Arm. *ti*, gen. *tioy* "*age, years, days, time*" (<**dī-t(i)-*), suffixed zero-grade form of IE **dā-**, *divide, cut up*; for extended **dām-**, *tribe, family*, into **dāmos**, Gk. δῆμος, Dor. δᾶμος m. "*(people's division) people, area; the single region in* Athens", O.Ir. *dām*, O.Welsh *dauu*; in addition Hitt. *da-ma-a-iš* (*damaīš*?) "*an other, foreigner, stranger*", from "**foreign people*", Pedersen Hitt. 51 ff.

A.b. Greek word for "*season*" is IE **epsoghā́**, Gk. εποχή, *epoch*, from PIE roots **epi**, *on*, *at*, and **sogh-**, o-grade of **seghō**, *hold*, as in Gk. ἔχω, Skr. *sáhate*, Gaul. Sego-, ; other derivatives are **seghōs**, *victory* (<"*a holding or conquest in Battle*"), as Gmc. *sigiz-* (cf. Goth. *sigis*, O.H.G. *sigi*, East Gmc. *Sigi-merus*, *Segi-mundus* etc., O.H.G. *sigir-ōn*; O.H.G. *sigu* m., O.E. *sigor*), Gaul. *Segisū*(**-ō*), *Sego-*, M.Ir. *seg*, Welsh *hy, Illyr*. *Segesta*; **seghús**,

strong, into **seghurós**, *strong*, *victorious*, cf. Gmc. *sigus* (cf. O.H.G. *Sigur-*), Lat. *seuērus*, O.Ind. *sáhu-ri-*, Gk. ἐχυρός, ὀχυρός; **sgholā́**, *school*, as Gk. σχολή, **sghḗmn̥**, *scheme*, as Gk. σχῆμα.

A.c. Also, MIE zero-grade **satios**, *sowing*, *season*, *multitude, crow* (from *seed, sperm*, into *generation, progeny*) as L.Lat. *sessĭōnis* (O.Fr. *seison*, Eng. *season*, Du. *seizoen*, Rom. *sezon*), from Lat. *satiō* (<*satjiōn*) O.Ir. *sa(i)the* (<*sətjo-*), Welsh *haid* f., Bret. *hed* m., Alb. *hedh*; for full grade **sētis**, *seed*, *semen*, cf. in Gmc. *sēthiz* (cf. Goth. *sēÞs*, O.N. *sāð*, O.S. *sād*, O.Fris. *sed*, M.Du. *saet*, O.H.G. *sāt*, Ger. *Saat*), Welsh, Bret. *had*, Corn. *has*; from PIE **sē-**, *sow* (v.s. **Satornos**), as in **sējō**, *sow*, cf. Gmc. *sējan* (Goth. *saian*, O.N. *sá*, O.E. *sāwan*, M.Du. *sayen*, O.H.G. *sāen*), Skr. *sāya-*, Lith. *seju*, *sėti*, Ltv. *sēt*, *sĕti*, O.C.S. *sejo*, *sejati*, Russ. *сеять*, Pol. *siać*, Welsh *hil*, O.Ir. *sí*, and Hitt. *sai*. It gave also a common **sēmēn**, *seed*, *semen*, *sperm*, cf. Lat. *sēmen* (*Sēmōnēs*, "*seed gods*"), Umb. *semenies*, O.H.G., O.S. *sāmo*, O.Pruss. *semen*, O.C.S. *sěmę*, Rus. *семя*, Ger. *Samen*, even Finn. *siemen*.

A.d. Other word is **statis**, *stay, stand*, *position*, into Lat. *statĭōnis* (cf. Spa. *estación*, Pt. *estação*, Cat. *estació*), cf. O.Ind. *sthíti-* f., Av. *stāti-* 'stehen, Aufstellung", Gk. *στάσις*, *-εως* (from which **statikós**, *static*, Gk. *στατικός*, *στάσιμος*), Lat. *statim*, *statiō*, Osc. *statíf* , Gmc. *stathiz* (cf. Goth. *staÞs*, O.Ice. *staðr*, O.H.G. *stat*, O.E. *stede*, *styde*), O.C.S. *postatь*, *stati,* Inf. Lith. *stóti*, Ltv. *stāt*, O.Pruss. *stāt*; and **status**, *position*, **statuō**, *put*, *place*, as Gmc. *stathuz*, *stathwan* (cf. Goth. *staÞa*, O.Ice. stǫð, *stǫðva*<**staÞwō(n)*, O.S. *stath*, O.H.G. *stad*, *stado*; M.L.G. *stade*), Lat. *status*, *statuō*, Umb. *statita*, Bret. *steut*, Welsh *ystawd*, Bret. *steudenn*, Lith. *statùs*. Ultimately from PIE **stā-**, *stand*, with derivatives meaning "*set down, make or be firm*" and "*place or thing that is standing*", as in IE **stōdhā**, *stallion*, *studhorse*, *steed*, as Gmc. *stōdō* (cf. O.N. *stoð*, O.H.G. *stuot*, O.E. *stod*, M.H.G. *stud*, M.L.G. *stod*, Ger. *Stute*, and also O.C.S. *stado*, "*herd*", Lith. *stodas*, "*a drove of horses*"), Welsh an-sawdd "das Festmachen", O.Ir. *sādud* (*stüdh-ī-tu-), and causative verb Gmc. *stōÞia*, in Goth. *-stōdjan* "*begin*", O.Ice. *støða*, also in Lith. *stãčias*, Lith. *statìnė*; compare for **stā-** Lat. *sistere*, *stō*, Umb. *stahmei*, Osc. *staíet*, Gk. ἵστασθαι, ἱστός, στῦλος, Skt. *tiṣṭhati*, Av. *hištaiti*, O.Pers. *aištata*, Pers. *istādan*, *-stan* (*country*, lit. "*where one stands*"), Phryg. *eistani*, Toch. *ṣtām*/stām, Arm. *stanam*, O.Pruss. *postāt*, *stacle*, Lith. *stojus*, Ltv. *stāt*, O.C.S. *стоямu*, *стоѭ*, *stanu*, *staru* (*old*, lit. "*long-standing*"), O.Russ. *cmamu*, *cmaну*, Pol. *stoję*, *stać*, O.Ir. *táu*, *sessam*, Welsh *gwastad*, Alb. *shtuara*; Hitt. *išta*, Luw. *išta-*, Lyc. *ta-*

A.e. Hindustani *mausam* (Hindi मौसम, Urdu موسم) comes from Persian موسم, in turn from Arabic مَوْسِم., *weather*, *season*, *time*.

B. Romance languages have words derived from PIE **atnos**, *year* (from "*a period gone trough*"), which gave Germanic and Italic words, cf. Goth. dat. pl. *aþnam*, Lat. *annus* (modern Romance Fr.,Rom. *an*,It. *anno*, Pt. *ano*, Spa. *año*, Cat. *any*), Osc.-Umb. *akno-*, from IE **at-**, *go*, as in Skr. *atati*, *goes, walks, wanders*, note the possible relation to PIE root **en-**, *year*, as Gk. *ἔνος*, O.Ind. *hāyaná-*.

C. Modern Slavic languages have different words for "*year, season*".

C.a Some dialects have IE o-grade **ghodhós**, originally *fit*, *adequate*, *belonging together* (v.i. for Eng. *good*), which developed into O.C.S. *годъ*, *time*, "*pleasing time*", giving O.Rus. *годъ*, Cro. *godina*, Bulg. *година* (cf. Ukr. *годи*, Pol. *gody*, Cz. *hod*, Bulg. *годе́*, Srb. го́д, Slov. *gôd*), also adopted in Ltv. *gads* (cf. 'proper' Latvian derivatives, *gadigs*, *gadit*), from PIE base **ghedh-**, *unite*, "*be associated, suitable*", also with the meaning of "*good*".

C.b. Another common Slavic word is Pol., Cz., Slovak *rok*, Ukr. *pik* (also, cf. Russ. *c-рок*), from O.C.S. рѫка, *arm*, *hand* (cf. Russ. *рука*, Ukr.,Bel. *рука́*, Slov. *róka*, Pol. *ręka*), also found in Lith. *rankà* (gen. *rañką*), Ltv. *rùoka*, "*hand*" (cf. Russ. *rancko*, gen. *rānkan*, Lith. *renkù*, *rinkaũ*, *riñkti*, *parankà*) with the year as a notion of a "*cubit measurement of time*"; the word is believed to be ultimately from a source akin to a nasal extended IE **wrn̥kā**, from PIE **wer**-, *turn*, *bend* (maybe through O.Ind. *vrag*, "*corner*, *angle*", *vrangr*, "*scythe*").

C.c. Finally, compare Slovene *leto*, Russ.pl. *лет*, Pol. *lata*, Cz., Slovak. *leto* (cf. also Russ. лето, Pol. *lato*, "*summer*"), from PIE **latom**, *warm season*, Sla. *leto*, Gaul *lat*... (in Calendar of Coligny), Ir. *laithe*, "*day*".

D. In Celtic, a common isolated root is found, MIE **bhled**-, cf. O.Ir. *bladain*, Ir. *bliain*, Sc. *bliadhna*, Welsh *blwyddyn*, Bret. *bloaz*, Corn. *bledhen*.

E. For "*year*" in modern Iranian languages, compare Av. *sarəd*, O.Pers. *ýâre*, Persian سال (*sâl*), Kurdish *sal*, Pashto *kāl*, Zazaki *serre*, all from PIE **jēr**-, already seen. Also borrowed in Hindustani as *sāl* (Urdu سال , Hindi साल), although some Indo-Aryan languages derive it from Skr. वर्षम् (*varsham*, as Marathi वर्ष, *varsha*, and Malayalam *varsham*), "*year*, *summer*, *rain season*", a word which some derive from the sound of the rain, from a Dravidian source.

F. Another PIE word with a similar meaning is **wet**-, *year, of last year, age,* (cf.), which gives derivativee **wetōs**, *year*, *age*, *old*, as Lat. *vetus*, *veteris* or Gk. ἔτος, dial. *wetos*, Bal. *wet-uš-a*, Sla. *vetъxъ(jь)*, *vьtъxъ*, Alb. *vjet*; cf. Gmc. *fir-d*, "*last year*", (O.N. ī *fjorð*, O.H.G. *vérit*), **wétolos**/**m**, *yearling*, as Lat. *vitulus* and Gk. ἔταλον; cf. Skr. *vatsaḥ*, Osc. *vezkeí*, O.Lith. *vetušas*, O.C.S. *vetŭcŭ*, Russ. *ве́чный*, Pol. *wiotchy*, O.Ir. *fethim*, Corn. *guis*, Alb. *vjet*; Hitt. *witt*.

I For <u>*Summer*</u>: PIE masc. **Samos**, *summer*, gives **samā**, *year*, *season*; compare Gmc. *sumaraz* (cf. O.N.,O.S. *sumar*, O.E. *sumor*, O.F. *sumur*, M.Du. *somer*, O.H.G. *sumar*), Skr. *samā*, Av. *hama*, Toch. *ṣme*/*ṣmāye*, Arm. *amaṙ*, Kurdish *havîn*; it is also a common Celtic word (<*samo*-), cf. O.Ir. *samain*, *samuin*, *samfuin*, Ir. *Samhain*, Sc. *Samhradh*, O.Welsh *ham*, Welsh *haf*, Bret. *hañv*.

I.a. For Lat. *aestātis* (cf. Fr. *été*, It. *estato*, Cat. *estiu*, also secondary Spa. *estío*, Pt. *estio*) a MIE **Aistā** (< ****aidht(o)-tā***) is reconstructed, from common PIE root **aidh**-, *burn*, *illuminate*; cf. Lat. *aedēs*, Gk. αἴθω, O.Ind. *šṭakā*, *índdhḗ* (nasalized form), Av. *aēsma*-, Lith. *íesmė́*, O.Cz. *niesteďe*, Slov. *istė́je*.

I.b. Another common form is derived from **Wēsr̥**, *spring* (vide infra), as Lat. *veranum* (*tempus*), "(*time*) *of spring*" (cf. Spa. *verano*, Pt. *verão*, Rom. *vară*), Lith., Ltv. *vasara*, Alb. *verë*.

I.d. For the common Slavic word, PIE n. **Latom**, cf. Russ. *лето*, Pol. *lato*, Cz. *léto*, Srb.-Cro. *ljeto*.

II. MIE has for <u>*Autumn*</u>, *Fall*, different Indo-European words referring to "*harvest*". PIE masc. <u>**Osēn**</u> (Gen. **Osnós**), *autumn*, *harvest*, from older **h₃esh₃en*, as in Balto-Slavic, giving O. Pruss. *assanis*, Rus. *осень*, Ukr. *осінь*, Pol. *jesień*, Srb.-Cro. *jesen*, Slovak *jeseň*, Lat. *annōna*, Gk. *οπωρ*, O.Ir. *ēorna* (<**esornja*), Arm. *ashun*, and also *earn*, in Gmc. *aznojanan* (cf. Goth. *asans*, O.N. *önn*, O.E. *earnian*, *esne*, O.H.G. *aran*, Ger. *Ernte*).

II.a. **Kérpistos**, *harvest*, Gmc. **kharbistas* (cf. Goth. *ƕaírban*, O.N. *hverfa*, O.S. *hervist*, O.E. *hærfest*, O.H.G. *hwerban*, Du. *herfst*, Ger. *Herbst*), from PIE **kerp**-, *pluck*, *gather*, *harvest*, cf. Lat. *carpere*, Gk. *καρπος*, Skr. *krpana*-, Toch. *kārp*/*kärp*, Lith. *kerpu*, O.Ir. *carr*, M.Ir. *cerbaim*, Welsh *par*.

II.b. **Autúmnos** (Lat. *Autumnus*, of Etruscan origin), is the common word in Romance languages and English.

II.c. In Baltic '*autumn*' is found as Ltv. *rudens*, Lith. *ruduo*, originally "*red season*", derived from PIE **reudhós**, *red, ruddy*. Compare Gmc. *rauthaz* (cf. Goth. *rauþs*, O.N. *rauðr*, O.E. *rēad*, Dan. *rød*, O.Fris. *rad*, M.Du. *root*, O.H.G. *rōt*), Lat. *ruber*, (Lat.dial. *rufus*), Osc. *rufriis*, Umb. *rufru*, Gk. ἐρυθρός; Skr. *rudhira-*, Av. *raoidita-*, Toch. *rtär/ratre*, O.C.S. *rudru*, Rus. *рдеть*, *румяный*, Pol. *rumiany*; Lith. *raudas*, Ltv. *ruds*, Gaul. *Roudos*, O.Ir. *ruad*, Welsh *rhudd*, Bret. *ruz*.

III. For MIE <u>*Winter*</u>: There is a common PIE masc. **Ghjems** (gen. **ghjmós**), *winter*; compare O.N. *gói*, Lat. *hiems*, Gk. *χειμα* (Mod. Gk. *χειμώνας*), Skr. *heman*, Av. *zimo*, Pers. زمستان (*zemestān*), *dai*, Toch. *śärme/śimpriye*, Arm. *dzmeṙ*, Old Prussian *semo*, Lith. *žiema*, Ltv. *ziema*, OCS *zima*, Russ. *зима*, Polish *zima*, Gaul. *Giamillus*, Ir. *gaimred*, Sc. *Geamhradh*, Welsh *gaeaf*, *geimhreadh*, Bret. *goañv*, Alb. *dimër/dimën*, Kurdish *zivistan*, *zistan*, Kamviri *zẽ*; Hittite *gimma-*. From the same root, compare **ghjemrināiō**, *hibernate*, from Lat. *hibernāre*, from which also (***tempōs***) ***ghjemrinom***, Lat. (*tempus*) *hibernum*, "*time of winter*" (cf. Fr. *hiver*, Ita.,Pt. *inverno*, Spa. *invierno*, Rom. *iarnă*), or **ghjemriă̆**, *chimera*, from Gk. χίμαιρα.

III.a. In Germanic, however, the word comes from Gmc. *wentruz* (cf. Goth. *wintrus*, O.N. *vetr*, O.E., O.Fris., Du. *winter*, O.S., O.H.G. *wintar*, Ger. *winter*, Dan., Swed. *vinter*), thus IE ***Wendrus***, "*watery season*", from PIE root ***wed-/wod-/ud-***, *wet*, *water*. Compare for IE general **wōdṛ** and zero-grade **udṛ**- (or nasalized **wondṛ-/undṛ**-), Gmc. *watar*, (cf. Goth. *watō*, O.N. *vatn*,O.E. *wæter*, O.H.G. *wazzar*, O.Fris. *wetir*, Du. *water*), Lat. *unda*, Umb. *utur*, Gk. ὐδωρ, Skr. *udan*, Toch. *wär/war*, Phryg. *bedu*, Thrac. *udrēnas*, Arm. *get*, O. Pruss. *wundan*, Lith. *vanduo*, Ltv. *ūdens*, O.C.S., O.Russ. *вода*, Pol. *woda*, O.Ir. *uisce*, Welsh *gwer*, Alb. *ujë*, Kashmiri *odūr*; also, Hitt. *watar*, and Ancient Macedonian *bedu*. And for alternate form **udros**, *water*, "*water-creature*", *otter*, cf. Gmc. *utraz* (cf. O.N. *otr*, O.E. *oter*, O.H.G. *ottar*, Swed. *utter*, Dan. *odder*, Du. *otter*,), Lat. *lutra*, Gk. ὐδρος, Skr. *udra*, Av. *udra*, Lith. *ūdra*, O.C.S. *vydra*, Russ. *vydra*, O.Ir. *uydr*, *odoirne* Ir. *odar*, Osset. *wyrd*; also, derivative **úderos**, **wénderos**, *belly*, compare Ger. *wanast*, Lat. *uterus*, *uenter*, Skr. *udara*, Av. *udaras*, Lith. *vėdaras*, Ltv. *vēders*. As with IE "*fire*" (**pāwṛ-egnís**), Indo-European had two different roots for "*water*", one inanimate, referring to an inanimate substance, and the other, **apos**, *water* (animate), referring to water as a living force (cf. Sk. *apaḥ*), which comes probably from an older IE II root *h_2p-, giving PIE **piskos**, *fish*, older *h_2p-isko-, cf. Gmc. *fiskaz* (cf. Goth. *fisks*, O.N. *fiskr*, O.E. *fisc*, O.H.G. *fisc*, Du. *vis*, Ger. *Fisch*), Lat. *piscis*, Russ. *peskar'*, Polish *piskorz*, O.Ir. *asc*, Welsh *pysgodyn*.

IV. For Modern Indo-European <u>Spring</u>: The common PIE word was **Wēsṛ**; compare O.N. *var*, Swe. *vår*, Lat. *vēr*, from which L.Lat. *prima vera* (cf. Spa.,Pt.,It. *primavera*, Rom. *primăvară*), Gk. *ἐαρ*, Skt. *vasantah*, Pers. بهار (*bāhār*), Kur. *bihar*, Lith. *vasara*, Lith.,Ltv. *pavasaris*, O.C.S. *vesna*, Russ. *весна*, Pol. *wiosna*, Gael. *Earrach*, and even Turkish *ilkbahar*, *bahar*, a borrowing from Iranian.

IV.a. The spring is usually considered the first season, hence the common resource of taking words for '*fore*' or '*early*' followed by '*year*', as MIE **Prōjērom**; cf. Dan. *forår*, Du. *voorjaar*, Ger. *Frühjahr*, Bul. *пролет*, Srb.-Cro. *proljeće*, Slovene *pomlad*, Alb. *pranverë*, originally lit. "*fore-year*"; also, Ger. *Frühling*, from M.H.G. *vrueje*, or Cz. *jaro*, Slovak *jar*, from **jērom**. Also, in French, the older *primevère* was substituted in the 16th c. for *printemps*, O.Fr. *prin tans*, *tamps prim*, from Lat. *tempus primum*, lit. "*first time, first season*", which also influenced Mid.Eng. *prime-temps*; cf. also Faer. *maitiid*. For "*fore*" in compounds, there is IE **pṛā**, *before*, as Gmc. *fura* (cf. Goth. *faiura*, O.N. *fyrr*, O.E. *fore*, O.Fris. *fara*, O.H.G. *fora*, Ger. *vor-*), Gk. *πάρος*, Skr. *purā*, Av. *paro*, Hittite

para-, as well as IE **prŏ**, *before*, *in front of*, as Gmc. *fra-* (cf. Goth. *fram*, O.N. *frā*, O.E. *fram*, Scots *fro*, Ger. *vor-*), Ita. *pro-*, Gk. *προ-*, Ind. *pra-*, Slav. *pra-*, Celt. *ro-*; although Eng. "*fore*" itself comes from PIE **per-**, base of prepositions with meanings like *forward*, *through*, and other extended senses.

IV.b. Another common Germanic term is **Dlnghódeinos**, as Gmc. *langa-tinaz*, lit. "*long-day*", (cf. O.S. *lentin*, O.E. *lencten*, M.Du. *lenten*, O.H.G. *lenzo*, Eng. *Lent*, Du. *lente*, Ger. *Lenz*), from **dlnghós**, *long*, as Gmc. *lanngaz* (cf. Goth. *laggs*, O.N. *langr*, O.E.,O.H.G. *lang*, M.Du. *lanc*), Lat. *longus*, Gk. δολιχός, Skr. *dīrgha*, Av. *darəga*, O.Pers. *darga*, Pers. *derāz*, O.Pruss. *ilgi*, Lith. *ilgas*, Ltv. *ilgs*, OCS *dlŭgŭ*, Russ. *dolgij*, Pol. *długi*, Gaul. *Loggostalētes*, O.Ir. *long*, Welsh *dala*, Alb. *gjatë*, Kashmiri *dūr*, Hitt. *dalugaes*; and IE **deinos**, a root meaning "*day*", *vide supra*. The compound probably refers to the increasing daylight in Spring.

63.Indo-European **Djēus**, *sky-god*, *sky*, and **Deiwos**, *god*, (the later formed by *e-insertion* of zero-grade ***diw-***), means originally *shine*, usually *sky, heaven*, hence *sky god*; cf. Gmc. *Tīwaz* (O.N. *Tyr*, Eng. *Tiu*, also in *Tuesday*), Lat. *deus*, *Iovis*, as in *Iuppiter* (from older *o-grade of* ***Djeus patér***, "*o father Iove*" cf. O.Ind. *devaḥ pitar*, Gk. *Zeus pater*), Gk. Ζεύς, gen. Διός, Skr. *devaḥ* (*as in Devanāgarī*), O.Pers. *daēva-*(as in *Asmodeus*), O.C.S. *deivai*, Lith. *devas*. From zero-grade **djous** is extended **djowis**, Lat. *Iouis*, "*Jupiter*", as adjective **djowiliós**, "*descended from Jupiter*", Lat. *Iūlius* (name of a Roman gens), into **Djowilios**, *July*. The form **deiwos**, as Gmc. *tīwaz*, Lat. *deus*, gives **déiwismos**, *deism*, **déiwitā**, *deity*, **deiwidhakós**, *deific*, ***addéiwos***, *bye* ("*I commend you to God*", cf. Fr.,Eng.,Ger. *adieu*, It. *addio*, Spa. *adiós*, Pt. *adeus*, Cat. *adeu*, Nor. *adjø*, Swe. *adjö*, Gk. *αντίο*, Slo. *adijo*, Lux. *äddi*, Papiamento *ayo*, etc.), **deiwinós**, *divine*; **deiwēs**, *rich* ("*fortunate, blessed, divine*"), as Lat. *dīues*; **diwiós**, *heavenly*, as in **Diwianā**, *Diana*, as Lat. *Diāna*, *moon goddess*; also **djēus** with the meaning of *day*, cf. Lat. *diēs*, O.Ir. *die*, W.Gmc. *zīo*, Arm. *tiw*, as in **edjeu**, *today*, cf. O.Ind. *adyā́, adyá*, Lat. *hodie*, O.Ir. *indiu*, Welsh *heddyw*, Hitt. *anisiwat*, or **médhidjōus**, *midday*, *noon*, which gives ***medhidjówonos***, "*of or at midday*", also *meridian*, and adjective, ***medhīdjowonós***, "*of or relating to a meridian, meridional*" from Lat. *merīdiānus*, **qōtidjowonós**, *quotidian* modern derivatives include **djewālís**, *daily*, *dial*, **djewāsiós**, *diary*, **djētā**, *daily routine, diet*, *national or local legislative assembly* (alteration influenced by **djē** from **díaitā**, *way of living, diet*, from Gk. δίαιτα into Lat. *diaeta*), **djousnós**, *diurnal*, "*of the day*", *daily*, as in **djousnālís**, *diurnal*, *daily*, hence as noun "*breviary*, *journal*" (as Fr. *journal*), and also "*salary*" (as Prov. *jornal*), **djousnom**, *day*, **djóusnātā**, *day*, *day's travel, journey*, *midday*; **doilós**, *clear*, *evident*, *apparent*, *manifest*, *obvious*, as O.E. *-tol*, M.Ir. *dōel*, Lith. *dailùs*, and e-grade Hom. δέελος (*δει̯ελος), Alb. diel, as in **psūghodoilikós**, *psychedelic*, an English loan word using Greek loan words. Also, with the sense of *shining, clear, day*, compare Goth. *sinteins*, Lat. *nundinum, nundinae*, O.Ind. *dinam*, Welsh *diw*, Bret. *deiz*, Arm. *tiw*, Prus. *deinan*, Lith., Latv. *diena*, O.C.S. *дьнь*, Pol. *dzien*, Ukr., Rus. *день*, etc.

The origin of Germanic word for "*God*" is probably Gmc. *guthan* (cf. Goth. *guþ*, O.E. *god*, O.N. *guð*, Du. *god*, Ger. Gott), from zero-grade **ghutóm**, *God*, "*the Invoked*", cf. Skr. *hūta-*, *invoked*, *called*, an epithet of Indra, Av. *zūta-*, from PIE **ghawō**, *call*, *invoke*, compare u-stem **ghutus**, into O.Ir. *guth* m. "*voice*" in addition Gaul. *gutuater* a class of priests, probably from **ghutupatēr** "*father (i.e. Master) of Invocations (a god)*"; although some trace it to **ghutom** "*poured*, *libated*", from PIE root **gheu-**, *pour*, *pour a libation*, compare Alb. *zot*, "*god*", O.Ind. *hōtrā*, M.Pers. *zōt*, Av. *zaoθra*, all of which apparently from PIE **gheutrom**; p.part. **ghutós**, *poured in fire, sacrified*,; as Gmc. *giutan* (cf. Goth. *giutan*, ON *gjta*, O.E. *guttas*, O.H.G. *giozan*, Ger. *giessen*, Eng. *gut*), Lat.

fūtis, Gk. *χειν*, Skr. *juhoti*, Av. *zaotar*, Pers. *zōr*, Toch. *ku*, Phryg. *Zeuman*, Arm. *dzulel*. Originally neutral in Gmc., the gender of "*God*" shifted to masculine after the coming of Christianity. Following Watkins, "*(...)given the Greek facts, the Germanic form may have referred in the first instance to the spirit immanent in a burial mound*", therefore O.E. god was probably closer in sense to Lat. *numen*, a Latin term for the power of either a deity or a spirit that informs places and objects. A better word to translate *Deus* might have been *Æsir*, Gmc. *ansuz* (cf. O.N. *Ás*, O.E. *Ós*), a name for the principal gods of the pantheon of Norse mythology, but it was never used to refer to the Christian God. It survives in English mainly in the personal names beginning in *Os-* (cf. *Oswin*, *Oswald*, *Osborn*, etc.). The Germanic noun is believed to be derived from PIE **ansus**, *breath*, *god,* related to Skr. *asura* and Av. *ahura*, with the same meaning; though in Sanskrit *asura* came to mean *"demon"*. v.i. for more on meaning shift for substituted deities in IE languages. **Ansus** is in turn related to **ana**-, *breathe*, v.s.

64.**Prōbhastŏr** comes from Lat. *professor*, agent noun from *profitieri*, from Lat. *pro-*, "*forth*", and p.part. **bhastós** (<****bhat-tós***), "*acknowledge*, *admit*, *confess*", as Lat. *fateri* (pp. *fassus*), zero-grade from PIE roots **bhā**-, *speak*, and ***pro***-, already seen.

65.MIE **Kelomn̥elis**, *Colonel*, comes from It. *colonnella*, "*commander of a column of soldiers at the head of a regiment*", from *compagna colonella*, "*little column company*" from IE **kelomn̥ā**, Lat. *columna*, "*projecting object, pillar, column*", compare from o-grade **kolnos**, M.Ir. *coll "head, guide, leader*", Lith. *kálnas*, Ltv. *kaĺns* "*mountain*", also in **kolm̥bhŏm**, *summit*, *end*, *colophon*, from Gk. κολοφών; all from PIE **kel**-, *be prominent*, also *hill*, from which **kelomn̥**, *top*, *summit*, as Lat. *columen*, newer *culmen*. Other derivatives from the same root are zero-grade **kl̥nis**, *hill*, as Gmc. *khulniz* (cf. O.N. *hallr*, O.E. *hyll*, M.Du. *hill*, L.Ger. *hull*), Lat. *collis*, Slav. *сьлнъ* (cf. Ser.-Cr. *čûn*, Cz. *člun*, Russ. čoɬn), and **kl̥mos**, *islet in a bay, meadow*, as Gmc. *khulmaz* (cf. O.N. *holmr*, O.E. *holm*), Gallo-Roman *calma*, probably Pre-Celt.; extended form Lat. *excellere* (<***ekskeldō***) *raise up, elevate*, also "*be eminent, excel*".

66. Indo-European **reg**- meant originally probably *straight line*, hence "*move or direct in a straight line", rule, guide, lead*. Compare common derivatives like verb **regō** *direct*, *rule*, *lead straight*, *put right*, as Lat. *regere*, Gk. *ορεγειν*, Av. *razeyeiti*; **regtós**, *right*, *straight*, *upright*, *righteous*, *wise*, *true*, as Gmc. *rekhtaz* (cf. Goth. *raihts*, O.N. *rettr*, O.E. *riht*, O.H.G., O.Swed. *reht*, Ger. *recht*, Eng. *right*, *straight*), Lat. *rectus*, Gk. ὀρεκτός, O.Pers. *rahst-*, *aršta-*, Pers. *rahst*, Lith. *teisus*, O.Ir. *recht*, Welsh *rhaith*, Breton *reiz*; **regmen**, cf. O.Ind. *rasman-*, Gk. *ὄρεγμα*, Lat. *regimen*; **rēgs**, *ruler*, *leader*, *king*, as Lat. *rēx*, Skr. *rājā*, O.Ir. *rī*, Goth. *reik*; adj. **rēgiós**, *royal*, O.Ind. *rājyá-*, Lat. *rēgius*, from Celtic (cf. Gaul. *-rix*, O.Ir. *ri*, gen. *rig*, Gael. *righ*) into Gmc. *rīkjaz*, "*rich, wealthy*", (cf. Goth. *reiks*, O.N. *rikr*, O.E. *rice*, O.H.G. *rihhi*, O.Fris. *rike*, Du. *rijk*, Ger. *Reich*, Eng. *rich*), noun **rēgiom**, *kingdom, domain*, cf. O.Ind. *rājyá-*, *rājya-*, M.Ir. *rīge*, Goth. *reiki*; modern terms include **rēgālís**, *royal*, *kingly*, *regal*; **rēgolā**, *straight piece of wood, rod*, hence "*rule*", and as verb "*regulate*", from Lat. *rēgula* and L.Lat. *rēgulāre*; o-grade **rogā**, *ask* (<"*stretch out the hand*"), from Lat. *rogāre*; and lengthened **rōgio**, from Gmc. *rōkjan - rakjan* (cf. O.N. *rækja*, O.E. *reccan*, O.H.G. *giruochan*, Ger. *geruhen*, Eng. *reck*). Derivatives include **rēgtŏr**, *ruler*, *rector*, *director*, cf. Lat. *rēctor*, Skr. f. *rāstrī*, n. *rāstrá-*, Av. *rāstar-*, etc.

67.<u>*North*</u>: from PIE root **ner**- *below*, *under*, also *on the left*, hence, "*with an eastward orientation*", *north*, as north is to the left when one faces the rising sun, giving **Nr̥tos** as Gmc. *nurthaz* (O.N. *norðr*, O.E. *norð*), borrowed into most European languages; cf. also Skt. *narakah,* Gk. *enerthen*, Osc.-Umb. *nertrak*.

Originally PIE had (**s**)**kew**(**e**)**ros**, *cold wind*, *north wind*, *north*, cf. W.Gmc. *skūraz* (cf. Goth. *skura*, O.N. *skúr*, O.S., O.H.G., O.E. *scūr*, Ger. *Schauer*, Eng. *shower*), Lat. *caurus*, Arm. *c'urt/c'urd*, Lith. *šiaurus*, *šiaurys*, *šiaure*, O.C.S. *severu*, Russ. *sever*.

I. Other IE derivatives for "*left*" are:

I.1. Indo-European **laiwós**, *left*, as Gmc. *laewaz* (cf. ON *lǽn*, O.E. *lǣw*. O.H.G. *lēwes*), Lat. *laevus*, Gk. *laios*, Illyr. *Levo*, Lith. *išlaivoti*, O.C.S. *lěvŭ*, Russ. *levyj*, Polish *lewy*. English "*left*" is maybe also derived from the same root, through an extended ***laiwt***-, although probably from a source meaning "*weak*"; cf. O.E. *lyft*, E.Fris. *luf*, Du. dial. *loof*, M.Du., Low Ger. *luchter*, *luft*.

Common Germanic vocabulary include Ger. *link*, Du. *linker*, from O.H.G. *slinc*, M.Du. *slink*, related to O.E. *slincan* "crawl", Swe. *linka* "*limp*", *slinka* "*dangle*".

I.2. PIE **soujós**, *left*, was the source for Skr. *savya*, Av. *haoya*, Toch. -/*saiwai*, OCS *šujĭ*, Russ. *šuj*, Welsh *aswy*.

I.3. A reconstructed IE **sen**- is in the origin of Romance **senesterós**, *left, on the left side*, as Lat. *sinister* (opposite of *dexter*), meaning prop. "*the slower or weaker hand*" [Tucker], but Buck suggests it's a euphemism, connected with the root of Skt. *saniyan* "*more useful, more advantageous*".

Spa. *izquierda*, Gl.-Pt. *esquerda*, Cat. *esquerra* are late borrowings from Basque *ezkerra*.

II. Indo-European derivatives for "*right*":

II.1. The opposite of **ner**- in PIE was probably **deks**-, *right*, hence **Deksinā**/**Deksiós** *south* (facing east), giving Goth. *taíhswa*, O.H.G. *zeso*, Lat. *dexter*, Oscan *destrst*, Umb. *destrame*, Gk. *δεξιός*, Skr. *dakṣina*, Av. *dašina*, Kashmiri *dạchūn*, Toch. *täk*/, Lith. *dešinė*, OCS *desnaya*; *desnŭ*, Russ. *десница*, Gaul. *Dexsiva*, O.Ir. *dech*, Welsh *deheu*, Alb. *djathtë*. Common derivatives from Latin are **dekstrós**, *right*, *on the right side*, hence *skilful*, *dexter*, as, as in **dekstéritā**, *dexterity*, or **ambhidekstrós**, *ambidextrous*.

II.2. The usual derivative for *right* (in both senses, *direction* and "*straight*, *just*") in modern Romance and Germanic languages is still made from oldest **regtós** (cf. Eng. *right*, Ger., Du. *recht*, Da.,Nor. *rett*, Swe. *rätt*, Spa. *recto*, Pt. *reto*), ultimately from PIE **reg**-, although a usual Romance derivative comes from prefixed Lat. *directus* (cf. Fr. *droit*, Spa. *derecho*, It. *diritto*, Pt. *direito*, Rom. *drept*, Cat. *dret*), and a usual Germanic one is suffixed as Gmc. *rektikhaz* (cf. Ger. *richtig*, Da. *rigtig*, Nor.,Swe. *riktig*); also found in both, Lat. and borrowed in Gmc. is adj. **komregtós**, *correct* (as Ger.,Da. *korrekt*, Fr.,Du. *correct*, Spa. *correcto*, Pt. *corretto*).

II.3. Another usual word in Slavic languages comes from PIE verbal root **bheu**- (PIH *bheuh₂*-), *be*, *exist*, *grow*, (see more on **bheu**-), as zero-grade reduced suffixal form -***bhw***-, as in **probhwós**, "*growing well or straightforward*", hence *right, upright, correct*, as Slavic *prōvos* (cf. O.Russ., O.C.S. *правъ*, Pol. *prawy*, Cz.,Slk. *pravý*, Sr.-Cr.,Slo. *pràv*), Lat. *probus*, O.Ind. *prabhúṣ*.

68. *South*: related to base of Gmc. *sunnon*, from **suntṇ**, *sun*, (**swen**-/**sun**- are alternate nasalized roots for PIE **sāwel**) with the sense of "*the region of the sun*", Ger. *Süd*, *Süden* are from a Du. pronunciation. O.Fr. *sur*, *sud* (Fr. *sud*), Sp. *sur*, *sud*- are loan words from Gmc., perhaps from O.N. *suðr*. Compare Gmc. *sawel*/*sunnon* (Goth. *sauil*, *sunno*, O.N. *sól*, *sunna*, O.Eng. *sigel*, *sunne*, O.H.G. *sunna*) Lat. *sōl*, Gk. *ἡλιος*, Skr. *sūras*, Av. *hvarə*, Pers. -*farnah*-, Kamviri *su*, Toch. *swāñce*/*swāñco*, Alb. *(h)yll*, O. Pruss. *saule*, Lith. *saulė*, O.C.S. *slunice*, O.Russ. сълньце, Pol. *słońce*, Welsh *haul*, O.Ir. *súil*.

69.The *East* is the direction in which the Sun breaks, from PIE **aus**-, *dawn*; cf. Gmc. *austo*/*austraz* (O.N. *austr*, O.E. *ēast*, O.H.G. *ōstra*, Du. *oost*, Ger. *Osten*), Lat. *aurōra*, *auster*, Gk. *αυριον* (*aurion*), *ηως* (*ēōs*), Skr. *uṣās*, Av. *ušastara*, Lith. *aušra*, Ltv. *ausma*, Russ. утро, O.Ir. *usah*, *fáir*, Welsh *gwawr*. For Modern Indo-European we will use generally **Austos** as Gmc. *East*, and **Austrós** as Gmc. *Eastern* (*austraz*) and for Lat. *auster*; as, **Austrorēgiom**, *Austria* (cf. Gmc. *austro+rikjan*, Ger. *Oesterreich*), **Australiā** (from Lat. *Terra Australis*, MIE ***Austrā́(lís) Térsā***, *Southern Land*), etc.

70.*West*: Pie root **wes**- is root for words meaning *evening*, *west*, as **wést(e)ros**, *west*, Gmc. *westraz* (cf. O.N. *vestr*, Du. *west*, Ger. *West*), **wespros**, *evening*, Gk. *ἑσπερος* (*ʰesperos*), Lat. *vesper*, **wéskeros** O.C.S. *večeru*, Lith. *vakaras*, Welsh *ucher*, O.Ir. *fescor*, perhaps an enlarged form of PIE base **we**-, *to go down* (cf. Skt. *avah*), and thus lit. "*direction in which the sun sets*".

Revisions heading for version 4.xx end here. Notes after this line were not corrected.

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71. Lat. *platea*: *courtyard, open space, broad street*, comes from Gk. *plateia (hodos)*, *broad (way)*, fem. of **pltús**, *broad*, Gk. *πλατυς*, from PIE stem **plat**-, *spread out, broad, flat*. Cf. Gmc. flataz; Lat. *planta*; Skt. *prathati*, Gk. *pelanos*, Hitt. *palhi*; Lith. *platus*, *plonas*; O.Ir. *lethan*. Related to **plāk**-, *to be flat*; cf. Gmc. *flakaz* (Eng. *flake*), Lat. *plācāre*, Gk. *plax*. Both extended forms of PIE base **pĺā**- (from **pel**-), *flat, spread*; cf. Gmc. *felthuz* (Eng. *field*), Lat. *plānus*, Gk. *plassein*, Sla. *polje*, etc.

IE **plat** is an extension of PIE root **pel**-, *flat*, and *spread*. Compare **péltus**, *flat land*, *field*, as Gmc. *felthuz* (cf. O.Fris. *feld*, O.E. *feld*, M.H.G. *velt*, Ger. Feld, Eng. *field*, even Finnish *pelto*, "*field*", from Proto-Germanic), **plā́rus**, *floor*, *ground*, as Gmc. *flōruz* (cf. O.N., O.E. *flor*, M.H.G. *vluor*, M.Du. *vloer*, Ger. *Flur*, Eng. *floor*) or Welsh *llawr*, **plānós**, *flat*, *level*, *even*, *plain*, *clear*, from Lat. *plānus*; **pĺmā**, *palm*, as Lat. *palma*; **plānḗtā**, "*wandering*", *planet*, as Gk. πλανήτης, from **plānā**, *wander* (<"*spread out*"), from Gk. πλανασθαι; also zero-grade **pladhio**, *mold*, "*spread out*", as Gk. *πλασσειν* (*plassein*), hence **plastikós** (<****pladhtiko***-), **pládhmā**, -**pladhia**, **plastós**(<****pladhto***-), etc. In Slavic there are o-grade **polís**, *open*, and **pólā**, *broad flat land, field*.

The old territory of the tribe of *Polans* (*Polanie*), MIE **Polános**, had a name which became that of the Polish state in the 10th century. MIE **Póliskā**, Pol. *Polska* (Eng. *Poland*, "*land of the Poles*"), expressed both meanings, and comes from IE adjectival suffix -***isko***-, as in **poliskós**, *polish*, **Póliskos**, *Pole*, f. **Poliskā́ dńghūs** or n. **Póliskom**, *polish language*. The name of the tribe comes from a PIE source akin to Polish *pole*, "*field*, *open field*"), from IE **pólā**.

72. PIE **wer**, *speak*, is the source of zero-grade **wŕdhom**, *word*, as Gmc. *wurdan* (cf. Goth. *waurd*, O.N. *orð*, O.S., O.E., O.Fris. *word*, Du. *woord*, O.H.G. *wort*), full-grade **wérdhom**, *verb*, from Lat. *verbum* (originally "*word*"), as in **adwérdhiom**, *adverb*, and **prōwérdhiom**, *proverb,* **prāiwérdhiom**, *preverb*; **wério**, *say*, *speak*, as Gk. *ειρειν*, from which **werioneíā**, *irony*, as Gk. εἰρωνεία; **wrētṓr**, *public speaker, rhetor,* as Gk. ῥήτωρ, from which **wrētṓrikā**, *rhetoric*, as Gk. ῥητορική, or **wrḗmn**, *word*, *rheme*, as Gk. ῥημα; compare also,

with the sense of *speak, command, agree, call, summon, lie*, etc., Umb. *uerfalem*, Skr. *vrata-*, Av. *urvāta*, Old Prussian *wīrds*, Lith. *vardas*, Ltv. *vārds*, OCS *vračĭ*, Russ. *врать*, O.Ir. *fordat*, Hitt. *ueriga*.

73. Indo-European **ékwos**, **ékwā**, and **kŕsos**, have also another synonym in Celtic and Germanic – maybe a borrowing from Gaulish –, **márkiā**, *mare*, as Gaul. *markan*, O.Ir. *marc*, Welsh *march*, Bret. *marh*, and Gmc. *markhjon*, cf. O.N. *marr*, O.E. *mearh*, also fem. O.S. *meriha*, O.N. *merr*, O.E. *mere/myre*, O.Fris. *merrie*, O.H.G. *marah*, Eng. *mare*, Ger. *Mähre*.

74. PIE root **bak**, used for "*staff*", is the source for **bákolom**, *rod, walking stick*, as Lat. *baculum*, and diminutive **bákillom**, *staff, bacillum*, and possibly **nbakillós**, *imbecile, weak, feeble*. Also, for **báktrom**, *rod*, from Gk. βάκτρον, and its diminutive **baktḗriom**, *bacterium, little rod*, for Gk. βακτηριον. French loan words *débâcle* (MIE ***debákolā***) and *baguette* (from It. *bacchetta*, from *bacchio*, in turn from Lat. *baculum*) are also modern derivatives. Compare also Lith. *bakstelėti*, Ltv. *bakstīt*, O.Ir. *bacc*, Welsh *bach*.

75. For Indo-European **bhel**, *light, bright*, also *gleam*, compare Gmc. *blaik-* (cf. Goth. *bala*, O.N. *bāl*, *blár*, *bleikr*, O.E. *blæcern*, *blǣcan*, *blǣwen*, O.H.G. *blecken*, *bleich*, *blāo*), Lat. *flagrāre*; *flāvus*, Oscan *Flagiúi*; *Flaviies*, Gk. *φλεγειν*; *φαλος*, Skr. *bharga*; *bhālam*, Phryg. *falos*, Toch. *pälk/pälk*, Illyr. *balta*, Thrac. *balios*, Arm. *bal*, O.Pruss. *ballo*, Lith. *blagnytis*, *baltas*, Ltv. *balts*, Russ. *belyj*, Polish *biały*, Gaul. *Belenos*, Ir. *beltene*, *blár*, Welsh *bal*, *blawr*, Alb. *ballë*. Thus e.g. Modern Indo-European **Bhaltikós**, *Baltic*, **Bhelārús**, *Belarus*, "*White Ruthenia*", and possibly **Bhélgiā/Bhélgikā**, from the Celtic tribe of the **Bhélgās**, *Belgae* for the Romans.

76. IE **téuta** means originally *people, tribe*; as Gmc. *theudo* (cf. Goth. *þiuda*, O.N. *þjóð*, O.E. *þeoð*, O.H.G. *diutisc*, M.Du. *duitsch*, Eng. *Dutch*, Ger. *Deutsch*, Ice. *Þýska* , L.Lat. *theodice*, It. *tedesco*), Osc. *touto*, Umb. *totam*, Illyr. *teuta*, O.Prus. *tauto*, Lith. *tauta*, Ltv. *tauta*, Gaul. *teuto*, O.Ir. *tath*; Hitt. *tuzzi*. Lyc. *tuta*. Today the Germanic adjective equivalent to MIE **Teutiskós** is mainly used to describe Germans (also in a wider sense of German-speaking people) and Germany (cf. Dan., Nor, Swe. *tysk*, Du. *Duits*, Ice. *Þýskur*, Lat. *theodisco*, It. *tedesco*, Rum. *tudestg*, even Chinese *dǔ*, Japanese *doitsu*, Korean *dogeo*, or Vietnamese Đức), hence **Téutiskom**, *German language*, **Teutiskoléndhom**, *Germany*, from O.H.G. *Diutisklant*, Ger. *Deutschland*.

Finnish and Estonian derivatives are from loan word *saksa*, MIE **Sáksōn**, from L.Lat. *Saxō*, *Saxonēs*, in turn from West Germanic tribal name *Saxon*, traditionally regarded as from **sóksom**, Germanic *sakhsam*, "*knife*", (cf. O.E. *Seaxe*, O.H.G. *Sahsun*, Ger. *Sachse*), therefore '*Saxon*' could have meant lit. "*warrior with knifes*", "*swordsmen*", related to **sókā**, *cutting tool, saw*, as Gmc. *sagō* (cf. O.E. *seax*, *secg*, O.N. *sõg*, Norw. *sag*, Dan. *sav*, M.Du. *saghe*, Du. *zaag*, O.H.G. *saga*, Ger. *Säge*), from PIE root **sek**, *cut*. Athematic **sekā**, as Lat. *secāre*, gives common derivatives like **séktiōn**, *section*, **sekméntom**, *segment*, **enséktom**, *insect*, **sektṓr**, *sector*, ***dissekā***, *dissect*, etc. Other derivatives include **skend**, *peel of, flay*, and **skends**, *skin*, as Gmc. *skinths* (cf. O.N. *skinn*, O.H.G. *scinten*, Ger. *schinden*, Flem. *schinde*); **sáksom**, *stone* (maybe from "*broken-off piece*"), from Lat. *saxum*; **sékitā**, *sickle, scythe*, as Gmc. *segithō* (cf. O.S. *segasna*, O.E. *sigði*, M.L.G. *segede*, M.Du. *sichte*, O.H.G. *segensa*, Ger. *Sense*). Compare also Lat. *sacēna*, Slavic *sěkǫ, sěkti* (cf. O.C.S. сѣкѫ, сѣшти, O.Rus. *сѣку*, *сѣчи*, Pol. *siec*, *siecę*, Srb.-Cro. *sijecem*, *sijehi*), O.Lith. *įsekti*, *išsekt*, O.Ir. *doescim*, Ir. *ésgid*, Bret. *scant*, Alb. *shat*.

77. Adjective **entergnītís** comes from ***enter+gnītis***[41] and is a usual modern loan word (from Lat. terms *inter+natio*) in Romance and Germanic languages, as well as in Celtic and South Slavic. In some Slavic modern languages, even though the same Latin borrowings exist (cf. Russ. *нация*, *интернационал-*, Pol. *nacja*,

internacjonal-, etc.), the usual compound is made by **medhjonorodhós** (cf. Russ. *между+народный*, Pol. *między+narodowy*, etc.) from PIE **médhjos**, *middle*, and **nórodhs**, *nation*.

Indo-European **énter**, *between*, *among*, gave Lat. *inter*, and is found in common loan words **enteriós**, *interior*, **enternós**, *intern*, and **enternālís**, *internal*. Also, compare other similar derivatives like **ént(e)ro**, as in **éntrō**, *inward*, *within*, from Lat. *intrō*, as in **entroduko**, *introduce*, **entrospeko**, "*look inside*", *introspect* (see **spek**); or **éntrā**, *inside*, *within*, from Lat. *intrā*, as in verb **entrā**, *enter*, or suffix ***entra-***, *intra-*; also found in **énterim**, (with ablative suffix ***-im***), **entrīnseqós** (from ***énterim*** and ***séqos***, *alongside*), and **entmós**, *innermost*, *intime*, and its verb **entmā**, *intimate*, with ***-mo-*** being a superlative suffix. Similar IE words include **entós**, *within*, from Gk. εντός, **énterom**, *intestine*, *enteron*, from Gk. ἔντερον, and Skr. *antara-*.

The previous derivatives are ultimately derived from PIE root **en**, *in*, which gives Gmc. *in*(*nan*) (cf. Goth. *in*, O.N., O.Swe. *i*, O.E. *inn*, *inne*, O.Fris, O.H.G. M.Du., Eng. *in*), Lat. *in*, Gk. *εν*, Skr. *an-*, O.Pruss. *en*, Lith. *į*, Ltv. *iekšā*, O.C.S. *on-*, O.Ir. *in*, Welsh *yn-*, Luw. *anda*.

Other common derivatives include **enerós**, *inner*, *further in*, from Gmc. comparative *innera*; Gk. and Lat. **endós**, *inner*, *within*, which gives **endostruós**, *diligent*, *industrious*, from Lat. *industrius* (O.Lat. *indostruus*), thus **éndostruā**, *industry*, and Lat. loan word **endogénts**, *indigent*. Extended **ens**, *into*, as Gk. εις (eis), which gives **epensódiom**, *episode*, from IE **epi** and **ensódios**, *entering*, from Gk. εισόδιος (eisodios). Further suffixed **ensō**, *within*, gives **ensoterikós**, *esoteric*, and **ensotropikós**, *esotropic*, from Greek ἐσω.

B. Common IE words for *people*, *race*, *men*, *nation*, apart from **téuta**, **génos**, **man**, **wīros**:

B.1. For Balto-Slavic **rodhs**, *kind*, *sort*, *genre*, *family*, *clan*, and **nórodhs**, *people*, *nation* – look at the parallelism with **génōs** and **gnátiōn** –, compare Lith. *rasmė*, Ltv. *rads*, *rasma*, *raža* (from older ***rádhiā***), O.C.S.,O.Russ. *родъ*, Russ. *род*, *народ*, Pol. *ród*, *naród*, etc. It is deemed to be o-grade form of PIE **redh**, *rise out*, *extend forth*, an Indo-European base akin to PIE verb **wrōdh**, *grow up*, and also *high*, *steep*; compare Skr. *várdhati*, Av. *varait*, Alb. *rit*, and (doubtfully) Arm. *ordi*, "*son*", Lat. *arbor*, "*tree*" (possibly but unlikely PIE *****wrdhōr***, maybe better MIE Lat. loan ***árbōr***), Hitt. *hardu*. A common derivative is zero-grade suffixed **wrdhuós**, *straight*, with MIE comp. elem. ***wrdho-***, as Gk. ὀρθο-, Eng. *ortho-*.

Compare also **wrād**, *root, branch*, as Gmc. *wrōt-* (cf. O.N. *rōt-*), **wŕādīks**, *root*, as Lat. *rādīx*; and zero-grade derivatives **wŕdis**, as Gmc. *wurtiz* (cf. O.E. *wyrt*, O.H.G. *wurz*), **wŕdjā**, *wort*, *root*, as Gmc. *wurtjō* (cf. O.E. *wyrt*), Gk. *rhiza*; or zero-grade suffixed **wrádmos**, *branch*, as Lat. *rāmus*.

A common Indo-European preposition is reconstructed as PIE **anŏ́**, *on*, as Lat. *in-* (in some cases, and also *an-*), Gk. ἀνά, ἄνω, Av. *ana*, also *on*, *up*, *upon*, as Gmc. *ana*, *anō* (cf. Goth. *ana*, O.N. *á*, O.E. *an*, *on*, *a*, O.H.G. *ana*, Du. *aan*), and variant Balto-Slavic form **no**, as Slavic *na* (cf. O.C.S. *на*, Ukr.,Bul.,Russ. *на*, Cz.,Pol. *na*), O.Pruss. *no*, *na*, Lith. *nuõ*, Ltv. *nùo*.

B.2. Tucker suggests from the same PIE base **redh** a common Romance **rádhios**, *staff*, *spoke of a wheel, beam of light*, as Lat. radius, which gives **rádhiā**, *race*, from L.Lat. *radia* into It. *razza*, Fr., Eng. *race*, Spa. *raza*, Pt. *raça*. In any case, whether originally related or not, both words are written this way in Modern Indo-European.

B.3. A common Germanic word is **pĺgom**, *people*, *men*, from Gmc. *folkam* (cf. O.N. *folk*, O.E. *folc*, O.Fris. *folk*, M.Du. *volc*, Ger. *Volk*), which is usually compared with Lith. *pulkas*, O.C.S. *pluku*, both believed to have been borrowed from Proto-Germanic. It is related to **plḗdhūs**, *people*, *multitude*, as Lat. *plēbs*, *plēbēs*, and **plédhuos**,

multitude, as Gk. *πλήθος*, all from PIE root **pel**, *fill*, *be full*. Other derivatives include **plnós**, *full*, as Gmc. *fulnaz*, *fullaz* (cf. Goth. *fulls*, O.N. *fullr*, O.E. *full*, O.Fris. *ful*, O.H.G. *fol*, Ger. *voll*); **pĺio**, *fill*, as Gmc. *fulljan* (cf. O.S. *fulljan*, O.N. *fylla*, O.E. *fyllan*, O.Fris. *fella*, Du. *vullen*, Ger. *füllen*); lengthened **plē**, *fill*, and **plēnós**, *filled*, *full*; **plaús**, *plus*, from Lat. *plūs* (earlier O.Lat. *plous*); o-grade **polús**, *much*, *many*, from Gk. *πολύς*; verb **plēdhuo**, *be full*, as in **plḗdhuōrā**, *plethora*, from Gk. πληθώρα; adjective **plērós**, *full*, as Gk *πληρης*; **plēiōn**, *more*, as Gk. πλεῖον; or **pleistós** (superlative), *most*, as Gk. πλεῖστος.

B.4. Latin *populus*, "*people*", is usually seen as a borrowing from Etruscan. It is, however, reconstructed today as from **qel**-[24], hence **qeqlos**, v.s.

B.5. Indo-European **lúdhis**, *people*, is found in Gmc. *liudi* (cf. Goth. *liudan*, O.N. *ljlēod*, O.H.G. *liut*, Ger. *Leute*, also found in Ger. *Lette*, Eng. *Lett*, mediaeval noun for *Latvian*), Osc. *Lúvfreís*, O. Pruss. *ludis*, Lith. *liaudis*, Ltv. *ļaudis*, OCS *ljudĭje*, Russ. *люди*, Pol. *lud*, O.Ir. *luss*, Welsh *llysiau*, Alb. *lind*. It comes from PIE verb **léudh**, *mount up*, *grow* – compare the parallelism with ***genōs*/*gnatiōn***, ***wrōdh*/*redh*** –, as Skr. *rodhati*, Av. *raodha*. Also, **leudherós**, *free*, maybe originally "*belonging to the people, public*" (although the semantic development is obscure), as in Lat. *līber*, Gk. *ελευθερος*, and common derivatives like **leudherālís**, *liberal*, **leudherā**, *liberate*, **léudhertā**, *liberty*, **deleudherā**, *deliver*, etc.

B.6. Another PIE common root is **kei**, *lie*, *bed*, *couch*, *beloved*, *dear*; as **kéiuom**, *members of a household*, *hind*, O.E. *hīwan*; **kéiuidhā**, *measure of land, household, hide*, O.E. *hīgid*, *hīd*; **kéiuis**, *citizen*, *member of a household*, Lat. *cīuis*, as in **keiuikós**, *civic*, **keiuilís**, *civil*, or **kéiuitā**, *city*; **kéilijos**, *companion*, as Eng. *ceilidh*, from O.Ir. *céle*; **koiná**, *cradle*, from Lat. *cunae*; **koimā**, *put to sleep*, and also **kóimā**, *village*, as in Gk. κοιμη-, κώμη, and common borrowing **koimātḗriom**, *cemetery*, from Lat. *coemeterium*, itself from Gk. κοιμητήριον; zero-grade **kiuós**, *auspicious*, *dear*, as in Skr. *śiva-*; **kéims**, *person*, *servant*, and **kéimiā**, *household*, *domestic servants*, *family*, as O.C.S. сѣмь, сѣмиıа, O.Russ. сѣмиıа, сѣмьца, Ukr. сім'я, Bulg. *семейство*, O.Pruss. *seimīns*, Lith. *šeimà*, *šeimýna*, Ltv. *sàime*. Also, compare Lith. *kaimas*, "*village*".

It gives secondary root (**t**)**kei** (from **ad**+**kei**), *settle*, *dwell*, be home, as in (**t**)**kóimos**, *home*, *residence*, *village*, from Gmc. *khaimaz* (cf. Goth. *haims*, O.N. *heimr*, O.E. *hām*, O.Fris. *hem*, M.Du *hame*, O.H.G. *heim*), which gives **koimghórdhos**, *shelter*, *hangar*, from Gmc. *haimgardaz* into O.Fr. *hangard*; **tkiso**, *found*, *settle*, metathesized form from Gk. κτἰζειν; also possibly Italic suffixed ***sítus*** (from older metathesized ****ktítus***), *location*, *situs*, and ***situā***, *situate*, *locate*; compare from metathesized **tkitis**, Gk. *ktisis*, Skr. *kṣiti*, Av. *šiti*.

B.7. Common PIE **wel**, *crowd*, *throng*, is reconstructed for MIE **wólgos**, *common people, multitude, crowd*, as in Lat. *uulgus*, and adjective **wolgālís**, "*of or pertaining to the common people, common, everyday, ordinary",* then extended with time as pejorative *vulgar*; cf. Skr. *vargaḥ*, "*division, group*", and also Gk. *ειλειν*, M.Bret. *gwal'ch*, Welsh *gwala*.

B.8. Another MIE common loan translation is **swédhnos**, *band of people living together, nation, people*, from Gk. ἔθνος (*ethnos*), lit. "*people of one's own kind*" from PIE reflexive **s**(**w**)**e**-. Compare also derivatives **swedhnikós**, *ethnic*, **swédhniā**, *ethnia*, *race*.

B.9. Latin ***persónā***, *person*, (from Etruscan *phersu*, "*mask*", and this from Gk. πρόσωπον), and ***famíliā***, *family*, *household*, from Lat. *fámolos*, "*servant*", (compare parallelism with Balto-Slavic pair **keims**/**kéimiā**), both of uncertain etymology, are left as loan words in Modern Indo-European.

78. MIE **régios**, *king*, **régiă̆**, *queen*, are Germanic loans from Celtic, in turn derived from PIE lengthened base **rēg**, a common Indo-European word for the tribal king. The correct Latin loan-translations are **rēgs**, *king*, **régīnā**, *queen* (possibly suffixed earlier **régī**-), while those from Sanskrit are **régēn**, *raja*, **régenis**, *rani*; Indo-European **régiom** is the Celtic source for Germanic words meaning *realm*, *kingdom*, *empire*, as Gmc. *rikjam* (cf. O.N. *rīki*, O.E. *rīce*, O.H.G. *rihhi*, Ger. *Reich*).

English "*queen*", from O.E. *cwen*, "*queen, female ruler*", also "*woman, wife*" comes from Gmc. *kweniz*, ablaut variant of *kwenō* (source of Mod.Eng. *quean*), from PIE **cénā**, "*woman, wife*", *vide infra*. Indo-European languages have usually the same words for King and Queen, using the feminine marker when necessary. English, however, had a meaning (and phonetic) shift that could be used in Modern Indo-European – as with "*Chancellor*" instead of "*Prime Minister*" for Germany and Austria – to remember this peculiarity of the English language, hence ***Cénis*** between parenthesis.

79. For **wḯros**, *man, freeman*, as in Eng. *were*-wolf. Compare Gmc. *weraz* (cf. Goth. *wair*, O.E. *wer*, O.N. *verr*), Lat. *uir*, Umb. *viru*, Skr *vīra*, Av. *vīra*, Toch. *wir*, O.Pruss. *wirs*, Lith. *vyras*, Ltv. *vīrs*, Gaul. *uiro*-, O.Ir. *fer*, Wel. *gwr*. Usual derivatives are **wīrīlís**, *virile*, **wḯrtūts**, *manliness*, *excellence*, *goodness*, *virtue*, **wīrtuónts(ós)**, *virtuous, skilled, of great worth, virtuoso*, **dekmwḯrōs**, *decemvir* (*commission of ten men*), or **komwḯriā**, "*men together*", *curia*, *court*. It is found in compound **wirwĺqos** (from shortened ***wíros***), *werewolf*, as Gmc. *wer-wulfaz* (cf. O.E. *werewulf*, O.H.G. *werwolf*, M.Du. *weerwolf*, Swed. *varulf*, and also Frank. *wer-wulf* into O.Fr. *garoul*, then *leu-garoul*, from Lat. *lupus*, itself from **wĺqos**, hence Eng. *loup-garou*, lit. "*wolf-werewolf*"), and **wíralts**, *world*, v.i.

Common IE words for *man*, *male*, apart from **mánus**:

I. The common Romance word comes from Lat. *homō* (cf. Fr. *homme*, It. *uomo*, Spa. *hombre*, Pt. *homem*, Cat. *home*), in turn from IE **dhghómōn**, *man*, "*earthling*", *human being*, (cf. Arm. տղամարդ, *dghamard*, "*man*"), which gives derivatives **dhghomonidós**, *hominid*, dim. **dhghomonkolós**, *homuncule*, **dhghomokḯdiom**, *homicide*, **dhghomonā́tiōn**, *homage* (from Oc. *homenatge*), closely related with **dhghōmā́nos**, *human*, *kind*, *humane*, both related with MIE **dhghómos**, *earth*, *ground*, *soil*, as Lat. *humus*, (cf. Osc. *huntruis*, Umb. *hondomu*) which gives common derivatives as **dhghomilís**, *low*, *lower*, *humble*, and **dhghomílitā**, *humility*, **dhghomiliā**, *humiliate*, **eksdhghomā**, *exhume*, **endhghomā**, *inhume*, **transdhghomā**, *move livestock seasonally*, as in Eng. *transhumance*. They all come from PIE root **dhghem**, *earth*, (as in Pers. *zamīn*, Kashmiri *zamin*), which gives common IE **dhghōm** [gʰo:m] (gen. **dhghmós** [gʰm̥-'os]), *earth*, and other derivatives as (**dh**)**ghmṓn** ['gʰm̥-on], *man*, "earthling", in Gmc. *gumōn* (cf. Goth. *guma*, O.N. *gumi*, O.E. *guma*, O.H.G. *gomo*, found in Eng. *bridegroom*, Ger. *Bräutigam*; Mod. Eng. *groom* was altered 16th c. by folk etymology after *groom* "*boy*, *lad*", itself from a source akin to verb *grow*); metathesized in Greek as *ghdhōm*, Gk. χθών, as in **autodhghṓm**, *autochthon*; zero-grade **dhghm** [gʰm̥], on the ground, as Gk. χαμαι, as in **dhghmléōn**, *chameleon* ("*ground-lion*", *lizard*, **léōn** is from Semitic origin adopted in Greek and Latin), **dhghmmḗlōn**, *chamomile* ("*ground-melon*", from Lat. loan word **mḗlōn**, *melon*, short for Gk. *mēlo-peppōn*, "*apple-gourd*"); the common Balto-Slavic words come from IE **dhghémiā**, *land*, *earth*, as O.Pruss. *same*, Lith. *žemė*, Ltv. *zeme*, O.Russ. *zemi*, Pol. *ziemia*, Cz. *země*, also found as *zemlja*, in O.C.S., Russ., Srb.-Cro., etc. Other common IE

derivatives are Skr. *kṣa*, Phryg. *zemelo*; *zamelon*, Thrac. *semele*; *semela*, Toch. *tkam/keṃ*, O.Ir. *du*, Welsh *dyn*, Alb. *dhè*, Osset. *zæxx*; Hitt. *tekan*, Luw. *dakam-*,

I.1. Common words for *earth*, *land*, apart from **dhghōm**, **polā**, and **léndhom**:

I.1.a. Germanic "*world*" comes from **wíralts**, "*life or age of man*", as Gmc. *wirald-* (cf. O.N. *verold*, O.S. *werold*, O.E. *woruld*, *worold*, O.Fris. *warld*, O.H.G. *weralt*, Du. *wereld*, Ger. *Welt*, Sca. *jord*), a compound of **wīros**, *man*, (cf. Hebrew *adam*, "*man*", and *adamah*, "*earth*" and the opposite with Lat. *homō*, "*earthling*", already seen), and **altós**, *grown up*, hence *old*, *adult*, and *tall*, *high*, *deep*, as Gmc. *althaz* (cf. (cf. Goth. *alþeis*, O.E. *eald*, O.Fris. *ald*, Du. *oud*, Ger. *alt*), Lat. *altos*, as in **eksaltā**, *exalt*, or **altitū́dōn**, *altitude*.

Adjective **altós** comes from PIE root **al**, *grow*, *nourish*, found in **almós**, *nurturing*, *nourishing* (as in ***almā́ mātḗr***, "*nourishing mother*", *university*); Latin verb **alo**, *nourish*, from which pres.part. **alomnós**, *being nourished* (from which **álomnos**, *fosterling*, *step-child*, *alumnus, student*), **alobhilís**, *alible*, **aloméntom**, *aliment*, as well as suffixed compound **adalesko**, *grow up*, as in **adaleskénts**, *adolescent*, or part. **adaltós**, *grown up, adult*; suffixed causative compound **apaleio**, *retard the growth of, abolish*; compound **prṓlēs** (from ***pro-alēs***), offspring; and extended **aldho**, *get well*, as in Gk. ἀλθαία.

The proper IE word for *old* is **senós**, cf. Goth. *sineigs*, ON *sina*, Lat. *senex*, Gk. *henos*, Skr. *sana*, Av. *hana*, Arm. *hin*, Lith. *senas*, Ltv. *sens*, Gaul. *Senognatus*, O.Ir. *sen*, Welsh *hyn*. It is found (from Lat. *senex*, MIE **sénēks**, *an elder*), in **senā́tus**, *senate*, **senilís**, *senile*, **seniós**, older, as in Latin **sénios**, *senior*, *señor*, *signore*, *sir*, *sire*, **senḗktūts**, *senectitude*, etc. A common fem. **sénā** is attested as Gk. *hénē*, Skr. *śanā-*, Lith. *senà*, Lyc. *lada*.

I.1.b. Romance *terra*, "*earth, Earth*", comes from PIE **térsā**, "*dry land*", in derivatives like **tersā́nos**, *terrain*, **suptersaniós**, *subterranean*, **tersaqiós** (from **térsa**+**áqa**), *terraqueous*, etc. PIE **ters**, *dry*, which gives **tŕstus**, *dryness*, *thirst*, Gmc. *thurstuz* (cf. O.E. *thurst*), **trskós**, *dried*, as Gmc. *thurskaz* (cf. O.N. *thorskr*, O.E. *cusk*); **torsē**, *dry*, *parch*, *burn*, as Lat. *torrēre*, also as loan word in **torsénts**, *torrent*, or **torsidós**, *torrid*, p.part. **torstós**, *burnt*, into **torstā**, *toast*, and noun **torstátā**; zero-grade **tŕsos**, *tarsos*, *frame of wickerwork* (originally for drying cheese), hence *a flat surface, sole of the foot, ankle*, Gk. ταρσός.

I.1.c. English "*earth*" comes from Gmc. *erthō* (cf. Goth. *airþa*, O.N. *jörð*, O.E. *eorðe*, M.Du. *eerde*, O.H.G. *erda*), hence MIE **ertā**, "*ground, soil, dry land*", also used for the "*physical world*" (as opposed to the *heavens* or *the underworld*), from PIE root **er-**.

I.1.d. Latin *mundus*, "*universe, world*", lit. "*clean, elegant*" is from unknown origin, hence loan wod MIE **móndos**, which gives **mondānós**, *mundane*, "*belonging to the world*", (as distinct from the Church), used as a translation of Gk. κόσμος (MIE loan word **kósmos**) in its Pythagorean sense of "*the physical universe*" (the original sense of the Gk. word was "*order, orderly arrangement*"). L. *mundus* also was used of a woman's "*ornaments*, *dress*", and is related to the adj. **mondós**, *clean, elegant*.

Proto-Indo-European had a common root **wes**, for *dress*, *clothe*, compare Gmc. *wazjan* (cf. Goth. *gawasjan*, O.N. *verja*, O.E. *werian*, O.H.G. *werian*, Eng. *wear*, Ger. *Wehr*), Lat. *uestire*, Gk. *hennynai*, Skr. *vaste*, Av. *vastē*, Toch. *wäs/wäs*, Arm. *zgenum/zkenum*, Welsh *gwisgo*, Bret. *gwiska*, Alb. *vesh*; Hittite *waš-*. Common Latin derivatives are **wéstis**, *garment*, in **dewestio**, *devest*, **enwestio**, *invest*, **transwestio**.

I.1.e. Greek **gē**, *earth*, possibly from IE ***gā***, (cf. Gk. m.γῆ, f. γαῖα) is also from unknown origin, and is left so in derivatives, as **geō-** (maybe IE ***gaio***-?); compared with Summerian Goddess *Ki-*, also meaning "Earth".

I.1.f. English "*ground*" comes from Gmc. *grunduz* (cf. O.N. *grunn*, O.E. *grund*, O.Fris. *grund*, Du. *grond*, Ger. *Grund*), of unknown origin, MIE ***grúndus***, *foundation*, *ground*, *surface of the earth*, originally *deep place, bottom, bottom of the sea*.

I.2. English "*bride*" comes from Gmc. *bruthiz* (cf. Goth. *bruþs*, O.E. *bryd*, O.Fris. *breid*, Du. *bruid*, O.H.G. *brut*, and from this into Mid.Lat. *bruta*, and from this into O.Fr. *bruy*), possibly originally *daughter-in-law*, later also "*woman being married*", *bride*. In ancient IE custom, the married woman went to live with her husband's family, so the only "newly-wed female" in such a household would be the daughter-in-law. Reconstructed as MIE **bhrútis**, it is probably derived as zero-grade from PIE verb **bhrew**, *boil, bubble, effervesce*, *burn*, with derivatives referring to *cooking* and *brewing*, as **bhrútom**, *broth*, from Gmc. *brutham* (cf. O.E. *broþ*, V.Lat. *brodum*). Other derivatives include extended **bhréuwo**, *brew*, as Gmc. *breuwan* (cf. O.N. *brugga*, O.E. *breowan*, O.Fris. *briuwa*, M.Du. *brouwen*); **bhréutom**, *cooked food*, *leavened bread*, as Gmc. *brautham* (O.E. *brēad*, O.N. *brot*, Dan. *brød*, Ger. *Brot*); variant lengthened **bhrēto**, *warm*, giving o-grade denominative **bhrōtā́**, "*a warming*", *hatching*, *rearing of young*, *brood*, as Gmc. *brōdō*, and verb **bhrōtio**, *rear young, breed*, as Gmc. *brōdjan*, *roast flesh*, or **bhrḗtōn**, *roast flesh*, as Gmc. *brēdōn* (cf. O.H.G. *brāto*, O.Fr. *braon*); **bhrésā**, *burning coal, ember*, hence (from O.Fr. *brese*) *braise*, *breeze*, *braze*; **bhérmōn**, *yeast*, as Gmc. *bermōn* (cf. O.E. *beorma*, M.L.G. *barm*, Du. *berm*), or further suffixed **bherméntom**, *yeast*, *ferment*, as Lat. *fermentum*; extended **bherwē**, *be boiling or fermenting*, as Lat. *feruēre*, as in **bherwénts**, *fervent*, **bherwṓr**, *fervor*, **eghbherwesko**, *effervesce*, etc.; and, as very archaic words for spring, compare **bhrúnōn**, as Gmc. *brunnon*, and suffixed **bhrḗwr**, as Gk. φρέαρ, as in **bhrewtikós**, *phreatic*. From an original PIE root **bher-** are also Skr. *bhurati*, Gk. *phurdēn-migdēn*, Gaul. *Voberā*, O.Ir. *bréo*, M.Ir. *berbaim*, Welsh *beru*, Alb. *burmë*, and also probably lengthened **bhrē**, *smell*, *breathe*, from which **bhrḗtos**, *odor*, *exhalation*, *breath*, as Gmc. *brēthaz* (cf. ON *bráðr*, O.E. *brǣþ*, O.H.G. *brādam*, Ger. *Brodem*).

II. A form almost restricted to West Germanic is **koirós**, *gray*, hence "*gray-haired*", *venerable*, *old*, as Gmc. *khairaz* (cf. O.E. *hār*, O.H.G. *her*, comp. *herro*, "*noble*", Ger. *Herr*, Du. *heer*, MIE **kóireros**), from PIE **koi**, *shine*.

III.A Greek form comes from IE *$h_2$ner*, *man*, with basic sense of *vigorous, vital, strong*, as in **nēr**, Gk. ἀνήρ (*anēr*), and zero-grade in compounds as **nro-**, *andro-*, **-nros**, *-androus*, "*having men*", **-nriā**, *-andry*, etc.

IV. Hindustani *ādmī* (Hindi: आदमी , Urdu آدمی), from Persian آدم itself from Arabic آدَم , also found in Turkish *adam*, cf. אדם (*adam*), which is the origin of the Biblical name Adam.

V. A curious form is Romanian *bărbat* (MIE **bhardhátos**), "*bearded*", from Lat. *barba*, from Italic *farba* (cf. Celtic *barfa*, as in Welsh *barf*), a metathesized form of PIE **bhárdhā**, *beard*, attested in European dialects. Compare Gmc. *bardō* (also "*hatchet*, *broadax*", cf. O.H.G. *barta*, as in *halmbarta*, into M.Fr. *hallebarde*, Eng. *halberd*), O.Pruss. *bordus*, Lith. *barzdà*, Ltv. *barzda*, *bā́rda*, O.C.S. *брада*, Russ. *борода*, Polish *broda*. English "*beard*" comes from **bhárdhos**, Gmc. *bardaz* (cf. Goth. *bars*, O.N. *barðr*, O.E. *beard*, M.Du. *baert*, O.H.G. *bart*),

80. **Dwenós**, *good* (< "*useful*, *efficient*, *working*"), as Lat. *bonus*, comes from PIE **dew**, *do, perform, show favor*; also, compound **dwenignós**, *benign* (from PIE **gen**), or adverbial form **dwénē**, *well*, as in **dwenēdéiktiōn**, *benediction*, **dwenēdhaktṓr**, *benefactor*, etc.; diminutive **dwenelós**, *handsome*, *pretty*, *fine*, as Lat. *bellus*; **dwēio**, *make blessed*, as Lat. *beāre*, in **dwēiatós**, *blessed*, **dwēiatidhakā**, *betify*, etc.; also

possibly but unlikely related to **dunamikós**, *dynamic* (from **dúnamis**, Gk. δύναμις, *force*). The Germanic word for *good* is *gōdaz* (cf. O.Eng. *gōd*, O.N. *gōðr*, Du. *goed*, O.Ger. *guot*, *gigat*, Goth. *gōþs*, *gadilings*, Ger. *gut*, *gätlich*), from Modern Indo-European **ghōdhós**, which comes from PIE root **ghedh**, *to unite, join, fit*. Compare Skr. *gadhjas*, Lith. *guõdas*, Ltv. *gads*, *gùods*, Alb. *ngeh, ngae*, O.C.S. *godŭ*, Russ *годъ*, Polish *gody*, Toch. *kātk*/*kātk*.

81. **Áutom**, *auto*, is a diminutive of **automóghwibhili**, *automobile*, from Gk αὐτο- *self, one's own*, (in turn from αὐτος, *self*, *same*, from IE **au**) and PIE **meghw**, *move*, in **moghwē**, cf. Lat. *mouēre* (cf. also Lat. *uoueō* <****woghw-ējō***), Hitt. mugawar; it is usually reconstructed as from PIE **mew**, *move*, as PIE zero-grade noun **motós**, *moved, movement*, (cf. Lat. *motus*, Gk. *ameusasthai, amuno*, Skt. *-muta*, *mivati*, Lith. *mauti, etc.*). The words **kŕsos** (or ***kárros***) and **kŕsom** (or ***kárrom***), from Celtic and Latin (in turn from PIE **kers**, *run*) cognate with Modern English *car*, mean in Modern Indo-European *charriot, cart, wagon*, originally "*wheeled vehicle*".

For PIE **kers**, compare zero-grade **krso**, *run*, as Lat. *currere*, giving modern derivatives as **kŕsos**, *course*, **krsénts**, *current*, **krsṓr**, *cursor*, **komkrso**, *concur*, **komkŕsos**, *concurso*, **diskrso**, *think up*, **diskŕsos**, *discourse*, **ekskŕsiōn**, *excursion*, **enkrso**, *incur*, **enterkrso**, *mingle with*, **enterkŕsos**, *a running between, interposition*, **obhkrso**, *occur*, **rekrso**, *recur*, etc.; **kŕsos**, or as loan word ***kárros***, *two-wheeled wagon*, giving derivatives as **krsáriā**, *career*, **krsikā**, *carry, charge*, **diskrsikā**, *discharge*, **krsikatósā** (or ***karikatúrā***, from Italian), etc., and **krspéntom**, *two-wheeled carriage*, from which **krspentā́sios**, *carpenter*. See also a possible Germanic cognate **kŕsos**, *horse*.

82. PIE **per** is the root for particles and words meaning "*forward, through*", and a wide range of extended senses such as "*in front of, before, early, first, chief, toward, against, near, at, around*". Derivatives include **péri**, Gmc. *fer-*, *far-* (cf. Eng. *for-*, Du.,Ger. *ver-*), which is used as intensive prefix denoting *destruction*, *reversal* or *completion*; its superlative is **per(e)ro**, *farther away, far*, as Gmc. *fer*(*e*)*ra* (cf. O.N. *fjarre*, O.E. *feorr*, Du. *ver*, Ger. *fern*); **per**, *per-*, *through*, *for*, as Lat. *per*; **péri**, *around*, *near*, *beyond*, *over*, as Gk. περι, Skr. *pari*, O.Iran. *pari*; **per-**, *around*, *again*, as Slavic *per-*. Also, zero-grade **pr**, *before*, *in*, Gmc. *fur*, as Eng. *for*; **prt**, *forward*, as Gmc. *furth*, Eng. *forth*; **pŕtero**, *farther away*, Gmc. *furthera*, Eng. *further*; **pr**, **por**, *forth*, *forward*, as Lat. *por-*; **pŕsōd**, *forward*, *parget*, as Lat. *porrō*; **prmós**, Gmc. *fruma*/*furma*, Eng. *former*; **prmistós**, *foremost*, Gmc. *frumista*/*furmista*; **pristós**, *first*, *foremost*, Gmc. *furista*; **prówariā**, *"forward part of a ship*", *prow*, from Gk. πρώρα; **prowtós**, *first*, *foremost*, as Gk. πρωτο; **pŕa**, *before*, *fore*, as Gmc. *fura*; **pára**, *beside*, *alongside of*, *beyond*, as Gk. παρα; **prō**, *forward*, *away from*, as Gmc. *fra*; **prómo**, *from*, as Gmc. *fram*; **prṓwā**, *lady*, Gmc. *frōwō*, from **prówom**, *lord*, Gmc. *frawan*; **prōwós**, *true*, as Slavic *pravu*; **pro**, *before*, *for*, *instead*, as Lat. *pro*; **pronos**, *leaning*, *forward*, as Lat. *pronus*; **proqe**, *near*, as Lat. *prope*; **proqinqós**, *near*, as Lat. *propinquus*; **proq(i)smós**, *nearest*, as Lat. *proximus*, as in verb **adproqsmā**, *approximate*; **probhwós** (***bhw-o-***, *grow*, from PIE root **bhew**), *growing well or straightforward, upright, good, virtuous*, as Lat. *probus*; **pro**, *before*, *forth*, *in front, forward*, as Gk. *προ*, Skr. *pra-*; **proteros**, *before*, *former*, as Gk. *προτερος*; (**p**)**ro**, intensive prefix as Celtic *ro*; extended forms **prāi**, **prei**, *before*, as Lat. *prae*; **préijos**, *former*, *higher, superior*, as Lat. *prior*; **preiwós**, *single, alone* ("*standing in front*", "*isolated from others*"), as Lat. *priuus*, as in **preiwtós**, *private*; maybe ****propreiwós***, but more likely **prop(a)triós**, *one's own, particular*, as Lat. *proprius*; **preismós**, *first*, *foremost*, as Lat. *prīmus*; **préismkaps** (from ***preismós***+***kaps***), *leader*, *chief*, *emperor*, as Lat. *prīnceps*

(analogous to Ger. *fürsten*, from the same source as Eng. *first*); **preistanós**, *former*, *earlier*, as Lat. *prīstinus*; **préscus**, *old*, *old man*, (**cu**-, "*going*", from verb **cā**, *go*), as in Gk. *πρέσβυς*; **próti**/**pros**, *against*, *toward*, *near*, *at*, as Gk. *προς*. Other derivatives include Skr. *prā*, Lith. *per*, *pro*, Hitt. *per*. From **pr̥̄mo**-, *first*, cf. O.S. *formo*, O.E. *forma* (superl. *fyrmest*), Lith. *pìrmas*, O.Pruss. *pirmas*, probably Lat. *prandium* "breakfast" from ***pr̥̄m-ediom***; and Greek Gk. πρωτος, from *****pr̥̄-to***-, reshaped from original PIE ***pr̥̄-mo***-, hence modern Greeek loan "proto-" properly translated as Europe's IE **pr̥̄mo**-, as in **Pr̥̄mo-Sindhueurōpaiom**.

For IE **cā**, *go*, *come*, and **cem**, *come*, compare Gmc. *kuman* (cf. Goth. *quiman*, O.E. *cuman*, Ger. *kommen*, Eng. *come*), as in **bhicem**, *become*, as Gmc. *bikuman* (from **ámbhi**); **cémōn**, "*he who comes*", *guest*, in **welcémōn**, *welcome*, "*a desirable guest*" (from PIE **wel**, *wish*, *will*), as Gmc. *wilkumōn*; suffixed **cemio**, *come*, as Lat. *uenīre*, in **adcemio**, *advene*, **adcémtos**, *advent*, **adcemtósā**, *adventure*, **adcemtā**, *avenue*, **kikromcemio**, *circumvent*, **komtrācemio**, *contravene*, **komcemio**, *convene*, **komcémtos**, *convent*, **komcémtiōn**, *convention*, **ekcémtos**, *event*, **ekcemtuālís**, *eventual*, **entercemio**, *intervene*, **encemio**, *invent*, **encemtósiom**, *inventory*, **prāicemio**, *prevent*, **procemio**, *come from*, **recemio**, *return*, **supcemio**, *souvenir*, **supcémtiōn**, *subventio*, **supercemio**, *supervene*; suffixed **cmio**, as Gk. *bainein*, *go, walk, step*, with **cátis**, *basis, a stepping, tread, base*, and -**catos**, *going*, and -**catā**, agential suffix, "*one that goes or treads, one that is based*", as in **akrocátā**, *acrobat*, as Gk. ἀκροβάτης, **anacátis**, **diacátis**, **acátiā**, **diacmio**, *go through*, in **diacátā**, *diabetes*; also **cā́mā**, *step*, *seat*, *raised platform*, as Gk. *bēma*.

From PIE **wel**, *wish*, *will*, are derivatives **wel(l)io**, *desire*, as Gmc. *wil(l)jan* (cf. Goth. *wiljan*, O.S. *willian*, O.N. *vilja*, O.E. *wyllan*, O.Fris. *willa*, O.H.G. *wellan*, Du. *willen*, Ger. *wollen*), also **wéliā**, *desire*, *will*, *power*, as Gmc. *wiljōn*, and **wélā**, *well-being, riches, wealth*, as Gmc. *welōn*; o-grade **wolio**, *choose*, as Gmc. *waljan* (cf. Goth. *waljan*, Ger. *wählen*), also **wolós**, *good*, *well*, as Frank. *walaz*, into **wolā**, *take it easy, rejoice*, as Frank.Lat. *ualāre* (then O.Fr. *galer*), as in **wolā́nts**, *gallant*, also from Frankish **wolopā**, *gallop*, *wallop*, from O.Fr. *galoper* (O.N.Fr. *waloper*); from basic form **wel(l)o**, *wish*, *desire*, as Lat. *uelle* (present stem o-grade Lat. *uol*-), as in **weleitā**, *velleity*, **wolítiōn**, *volition*, **wolontāsiós**, *voluntary*, **dwenēwolénts**, *benevolent*, **maliwoléntiā**, *malevolence*; probably extended adjetive **welpís**, *pleasing*, in adverb **wólup**, *with pleasure*, into **wolúptā**, *pleasure*, as Lat. *uoluptās*, into **woluptuónts**(**ós**), *voluptuous*. Compare also Gk. *elpis*, Skt. *vṛnoti*, *varyaḥ*, *varanam*, Av. *verenav*-, Lith. *velyti*, O.C.S. *voljo*, *voliti* "*will*", and *veljo*, *veleti*, " *command*", Welsh *gwell*.

83.Indo-European **épi**, **ópi**, *near, at, against*, is the base for **op** (and reduced prefixal ***op***-), "*before*, *to*, *against*", as Lat. *ob*, *ob*-, also "*on*", as O.C.S. *ob*; **epi**, "*on, over, at*", as Gk. ἐπι, or **opisten**, "*behind, at the back*", as Gk. *opisthen*; zero-grade **pi**, *on*, in Gk. *piezein* (see sed); and **ops**, *extra on the side, with*, as **ópsom**, *condiment*, *cooked food*, as in **opsóniom**, *supply*, as Gk. ὀψώνιον.

84.Proto-Indo-European root **ánt**, *front*, *forehead*, had a common derivative **ánti**, *against*, and also *in front of, before*, *end*; **ántia**, *end*, *boundary*, as Gmc. *andja* (cf. Goth. *and*, O.N. *endir*, O.E. *ende*, O.Fris. *enda*, O.H.G. *endi*); Lat. *ante*, as in **antiénts**, *ancient*, *antiriós*, *anterior*, etc.; **enantios**, *opposite*, as Gk. *εναντιος*; **antiqós**, "*appearing before, having prior aspect*" (in compound with PIE ***oq***-, *see*), *former, antique*, as Lat. *antiquus*; **ńti**, *away from*, *until*, *unto*, as Gmc. *und*; **ántos**, *end*, as Skr. *antah*. Other IE derivatives attested are Osc. *ant*, Toch. *ānt*/*ānte*, Lith. *ant*, O.Ir. *étan*, Hitt. *ḫanta*, Luw. *hantili*, Lyc. *xñtawata*.

The former particle builds a common compound, probably a plural (see plural declension), ***ánt-bhi***, "*from both sides*", giving PIE **ámbhi** (earlier **h₂ŋ̥-bʰi*), *around*, as Gk. ἀμφί, *both*, *both sides*, which gives **ambhícios**, *amphibious*, as Gk. ἀμφίβιος, or **ambhithéatrom**, *amphitheatre*, from Lat. *amphitheatrum*, itself from Gk. ἀμφιθέατρον; MIE **ambhi**, **ambh**, "*around*, *about*", as in Latin, gives **ambholā**, *go about, walk, ambulate*, **ambholā́ntiā**, *ambulance*, **prāiambholós**, *walking in front*, **prāiámbholom**, *preamble*; also, Gmc. *umbi* (cf. O.N. *um*, *umb*, O.E. *bi*, *be*, *ymbe*, Du. *bij*, O.H.G. *umbi*, *bi*, Ger. *um*,*bei*, Eng. *by*,*but*); from Celtic, **ambhágtos**, *embassador*, *sevant*, *vassal*, and **ambhágtiā**, *embassy*, from Lat. *ambactos*, from Celt. *amb(i)actos*. Also, in other IE languages, Skr. *abhitaḥ*, Av. *aiwito*, *aibi*, O.Pers. *abiy*, Toch. *āmpi*, Lith. *abu*, O.C.S. *oba*, Gaul. *ambi-*, O.Ir. *imb-*, Ir. *um*, Welsh *am*.

85. PIE **ad**, *to*, *near*, *at*, *toward*, *by*, gives Gmc. *at* (cf. O.N., Goth. *at*, O.E. *æt*, O.Fris. *et*, O.H.G. *az*), Lat. *ad*, Osc. *adpúd*, Umb. *ař*, Skr. *adhi*, Phryg. *addaket*, Gaul. *ad*, O.Ir. *ad*, Welsh *add*, and Ancient Macedonian *addai*.

86. Compare for PIE root **al**, *beyond*, as in **olse-**, **olsos**, as O.Lat. *ollus*, *ols*, which gives **olteriós**, *ulterior*, **oltmós**, *last*, **oltmā**, *ultimate*, etc. Also, suffixed forms with adj. comp. ***-tero-***, **alterós**, and alternative ***anterós***, "*the other of two*", *second*, *other*, cf. Lat. *alter*, *adulterāre*, Gmc. *antharaz* (Goth. *anþar*, O.S. *athar*, O.N. *annarr*, O.E. *oþer*, Ger. *ander*), Skr. *antaraḥ*, Lith. *antras*, see **dwo**. Other derivatives are **aliós**, **alnós**, *else*, *otherwise*, "*other of more than two*", as well as **alienós**, **alenós**, *foreign*, *alien*; compare Gmc. *aljaz* (Goth. *aljis*, O.N. *allr*, *elligar*, O.E. *elles*, *el-lende*, O.H.G. *all*, *eli-lenti*), Lat. *alius*, *aliēnus*, Osc. *allo*, Gk. *ἄλλος*, Skr. *anja*, *áraṇa-*, Av. *anja-*, *airjō*, O.Pers. *ārija*, Toch. *alje*, *ālak*/*allek*, Phryg. *alu-*, Arm. *ail*, Gaul. *alla*, O.Ir. *oll*,*aile*, Welsh *allan*,*ail*; Lyd. *αλαś*, probably Hitt. *uli-*, *aluś*.

Sometimes said to be derived from PIE **al-**, common noun and adjective **ari(j)ós** comes in fact from a PIE root **(a)re-**, **(a)rī**, (or **rē-**, **rēi-**), "move, pass", cf. Run. *arjostēR*, O.Ind. *ariar(i)yá-*, *ār(i)ya-*, *āryaka*; Av. *airyō*, O.Pers. *ariya-*, Gaul. *ario-*, O.Ir. *aire*; compare also IE superlative **aristós**, Gk. ἄριστος, "*best in birth and rank, noblest*"; hence N. pl. names **Arijánom**, *Iran*, and **Arijanós**, *Iranian*, also '*aryan*', "*the most distinguished, the noblest*", coming from Skr. *ārjaḥ*, "*noble, honorable, respectable",* the name Sanskrit-speaking invaders of India gave themselves in the ancient texts, originally "*belonging to the lords*". Ancient Persians gave themselves the same name (cf. O.Pers. *arija-*, Pahlavi *𐭥𐭩𐭭*, *Parthian aryān*); in Ardashir's time *ērān* (from Avestan gen. pl. *Ariyānām*) retained this meaning, denoting *the people* rather than *the state*.

87. PIE **de** is the base of different prepositions and adverbs; as, o-grade lengthened **dō**, *to*, *toward*, *upward*, Gmc. *tō* (cf. O.S., O.Fris. *to*, O.E. *tō*, Du. *too*, O.H.G. *zuo*, *ze* Ger. *zu*); compound **qā́mdo** (from **qo**), as Italic *quando*; **de**, *from*, *out of*, as **deterós**, and **deteriṓs**, *worse*, which gives **deteriosā**, *deteriorate*. Also, compare Lat. *donec*, Gk. suffix *-de*, Lith. *da-*, O.C.S. *do*, Celtic *dī*, O.Ir. *do*.

88. Preposition **kom**, *beside*, *near*, *by*, *with*, is attested as Latin *cum* (O.Lat. *com*), *co-*, Slavic (cf. O.C.S. *kŭ*, Russ. *к, ко, ко-*, O.Pol. *k, ku*), also Gk. *kata*, Hitt. *katta* (< zero-grade ***km-ta***), in Germanic as participial, collective and intensive prefix *ga-* (cf. Goth., O.H.G. *ga-*, O.N. *g-*, O.E. *ge-*), "*together, with*", also marker of the past participle, and in Celtic *kom-*, O.Ir. *cét-*, Welsh *cant*/*gan*. Other derivatives include Latin **kómtrā**, *against*, *opposite*, as **komtrāsiós**, *contrary*; also, compare usually reconstructed IE ****ksun***, as Gk. ξυν, which is deemed a greek-psi substrate (Villar) from **kom**, also in metathesized **komiós**, *common*, *shared*, as Gk. *κοινός*, hence **Komiā́**, *Koine*, from Gk. κοινή. Also, the ***-m*** is usually lost in final syllables before vowel (as in metric), cf. Lat.

animum aduertere>animaduertere. In Modern Indo-European, the ***-m*** is always written, although it may be pronounced without it.

89.For PIE **eghs**, *out*, and variant form **eks**, compare Lat. *ex*, Oscan *eh-*, Umbrian *ehe-*, Gk. *eks*, Old Prussian *is*, Lith. *iš*, *iž*, Ltv. *is*, *iz*, O.C.S. *iz, izъ, is*, Russ. *iz*, Gaul. *ex-*, O.Ir. *ass*, Welsh *a*, Alb. *jashtë*. For verbal compounds found in different languages, compare **ek(s)bhero**, *carry out* (from **bher**, *carry*), cf. Gk. ἐκ-φέρω, Lat. *ef-ferō*, O.Ir. *as-biur*, or **eksei**, *go out* (from **eí**, *go*), cf. Gk. ἔξ-ειμι, Lat. *ex-eō*, Lith. *iš-eĩti*, O.C.S. *iz-iti*. Derivatives include **eks**, **eks-**, *out of, away from*, as Lat. *ex*, *ex-*; **eks**, **ek**, *out of, from*, as Gk. *ex*, *ek*, as in ***ekso-***, *exo-*, **eksotikós**, *exotic*, **eksoterikós**, *exoteric*, **komekdoká́**, *synecdocha* (see ***dek***), from Gk. συνεκδοχή; suffixed comparative variant **ekstrós**, *outward* (feminine **ekstrā**, *on the outside*), as in **ekstrāniós**, *extrange*, **ekstrnós**, **ekstriós**, *exterior*, **ekstrnālis**, *external*, etc; **ekstmós**, *outermost*, *extreme* (***-mo-*** functioning as superlative, see comparison of adjectives), cf. **entmós**, but also **ekstrēmós**, as Lat. *extrēmus*; **eghskmtós**, *outermost*, *last*, Gk. ἔσχατος, as in **eghskmtologíā**, *eschatology*; Celtic *eks*, *out (of)*, or Balto-Slavic *iz*, *from, out of*.

For PIE **dek**, *take, accept*, compare **dekē**, *be fitting* (from "*be acceptable*"), Lat. *decēre*, as in **dekénts**, *decent*; suffixed causative o-grade **dokē**, *teach* (from "*cause to accept*"), as Lat. *docere*, as in derivatives **dokénts**, **dokilís**, *docile*, **doktṓr**, **doktrínā**, **dokoméntos**, etc.; **doko**, *appear*, *seem*, *think* (from "*cause to accept or be accepted*"), as in **dókmn**, *dogma*, **dokmntikós**, *dogmatic*, **doktologíā**, *doxology* (from **leg**), **parádoktos**, *conflicting with expectation*, as Gk. παράδοξος (from ***para-***, *beside*, see **per**) as in **parádoktom**, *paradox*, as Lat. *paradoxum*, or **wrdhodoktíā** (see ***wrdho-***, *straight*), *orthodoxy*, **wrdhódoktos**, *orthodox*, as Gk. ὀρθόδοξος; suffixed form **dékōs**, *grace*, *ornament*, as Lat. *decus*, *decoris*, and loans **dekosā**, *decorate*, **dekṓs**, *seemliness*, *elegance*, *beauty*, **dekosós**, *decorous*; **deknós**, *worthy, deserving, fitting*, *deign*, **déknitā**, *dignity*, **komdeknós**, *condign*, **deknidhakā**, *dignify*, ***disdeknā***, *disdain*, **endeknā**, *indign*, **endeknā́nts**, *indignant*; reduplicated **didksko**, *learn*, Lat. *discere*, as in loans **di(dk)skípolos**, *disciple*, **di(dk)skiplínā**, *discipline*; Greek words include **pandéktās**, as Gk. πανδέκται, **ekdeko**, *understand*, **komekdeko**, *take on a share of*, as Gk. συνεκδέχεσθαι, and **komekdoká́**, *synecdoche*, as Gk. συνεκδοχή; also, o-grade suffix **dókos**, *beam*, *support*, as Gk. δοκός, in **dwiplodókos**, *diplodocus* (see **dwo**).

90. For PIE **upo**, *under*, *up from under*, *over*, compare Gmc. *upp* (cf. Goth. *iup*, O.E. *up*, *uppe*, O.H.G. *uf*, M.L.G. *up*, Ger. *auf*); **uponos**, "*put or set up*", *open*, as Gmc. *upanaz* (cf. O.N. *opinn*, O.E. *open*, O.H.G. *offan*, Swed. *öppen*, Dan. *aaben*, O.Fris. *epen*); suffixed **upt(o)**, *frequently*, as Gmc. *uft(a)* (cf. Goth. *ufta*, O.N. *opt*, O.Fris. *ofta*, Dan. *ofte*, Ger. *oft*); variant **sup**, as Lat. *sub*, in **súpter**, *secretly*, as Lat. *subter*, and **súpo**, as Gk. ὑπο-; variant **upso** (cf. also Hitt. *upzi*), as Greek **úpsos**, *height*, *top*; from compound ***upo-sto-*** (for **st-** see **stā**), "*one who stands under*", *servant*, young man, as Cel. *wasso-*, into V.Lat. *uassus*, hence MIE **upóstos**, *vassal*; **úpolos**, *opal*, Skr. *upalaḥ*, variant of **uperós**, *lower*, as Skr. *upara-* (from **upo**, Skr. *upa*, "*below*"), later borrowed as Gk. *opallios*, Lat. *opalus*. Compare Gmc. *upp*, Ita. *sub/sup*, Gk. *hupo*, Ind.-Ira. *upa*, Toch. */spe*, BSl. *po*, Cel. wo (cf. Gaul. *Vo-*, O.Ir. *fo*, Welsh *go*).

91. For PIE **-wĕ**, *or*, cf. Lat. *ue*, Gk. ῥἐ, ἤ, O.Ind.,Ira. *vā*, Toch. *wa-t/pa-t*, Cel. *ue*, O.Ir. [*n*]*ó*, [*n*]*ú*, Welsh [*ne-*]*u*.

92.PIE **bhábhā**, *bean*, *broad bean*, as Lat. *faba*, O.Pruss. *babo*, Russ. *боб*, Pol. *bób*, Welsh *ffâen*, Alb. *bathë*; also variant forms **bháunā**, as Gmc. *baunō* (cf. O.N. *baun*, O.E. *bēan*, O.H.G. *bona*, Ger. *Bohne*), and **bhákos**, *lentil*, as Gk. φακός.

93.Indo-European **snéich**, *snow* (and noun **snéichs**, *snow*), as Skr. *snēha*, Av. *snaēža*, Toch. *śiñcatstse*, O.Pruss. *snaygis*, Lith. *sniegas*, Ltv. *sniegs*, O.C.S. *snegu*, Russ. *снег*, Polish *śnieg*, O.Ir. *snechta*, Welsh nyf. Other derivatives are o-grade **snóichos**, as Gmc. *snaiwaz* (cf. Goth. *snaiws*, O.N. *snjór*, O.E. *snāw*, O.S., O.H.G. *sneo*, O.Fris., M.L.G. *sne*, M.Du. *snee*, Du. *sneeuw*), and zero-grade **snichs**, as Lat. *nix*, *niuis*, and **sníchā**, as Gk. *νιφα*.

94.Verb **wegh**, *go, transport in a vehicle, move*, is attested as "*have weight, lift, carry*" in Gmc. *wegan* (cf. Goth. *gawigan*, O.S. *wegan* O.N. *vega*, O.E. *wegan*, O.Fris. *wega*, Du. *wegen*, O.H.G. [*bi*]*wegan*, Ger. *bewegen*, *wiegen*), Lat. *vehō*, Osc. *veia*, Umb. *arˊveitu*, Gk. *ekhos*, Skr. *vahati*, Av. *vazaiti*, Toch. *wkäṁ/yakne*, O.Pruss. *vessis*, Lith. *vežu*, Ltv. *vest*, O.C.S. *vesti*, Russ. *vezti*, Polish *wieźć*, Gaul. *Uecturius*, O.Ir. *fecht*, *fén*, Welsh *gwain*, Alb. *vjedh*, *udhë*. Common derivatives include **wḗghā**, *weight*, *unit of weight, wee*, from Gmc. *wēgō*; **wéghtis**, *weight*, as Gmc. *(ga)wikhtiz* (cf. O.N. *vætt*, O.E. *gewiht*, O.Fris. *wicht*, M.Du. *gewicht*); **wéghos**, *way*, *course of travel*, as Gmc. *wegaz* (cf. Goth. *wigs*, O.E., O.S., Du., O.H.G. *weg*, O.N. *vegr*, O.Fris. *wei*); o-grade **wóghnos**, *wagon*, as Gmc. *wagnaz* (cf. O.N. *vagn*, O.E. *wægn*, O.S., O.H.G. *wagan*, O.Fris. *wein*, Eng. *wain*); **wóghlos**, *populace*, *mob*, *multitude* (<"*moving mass*"), as Gk. *oξλος*; from Lat. *uehere* is p.part. **weghtós**, *carried*, giving **weghtṓr**, *vector*, **wegheménts**, *vehement*, **wéghikolom**, *vehicle*, **komwéghtiōn**, *convection*, etc.; **wéghiā**, *way*, *road*, as Lat. *uia*, giving ***weghiā́tikom***, *voyage*, *travel*, Lat. *uiaticum*, ***weghiātikālís***, *viatical*, **komweghiā**, *convey*, and **komwóghis**, *convoy* (loan-translated from Fr. *convoier*, variant of *conveier*), **deweghiā**, *deviate*, **obhweghiā**, *obviate*, **obhweghiós**, *obvious*, **prāiweghiós**, *previous*, **weghiādéuktos**, *viaduct*, etc.; also, **weghsā**, *agitate* (from "*set in motion*"), as Lat. *uexāre*; also, **komweghsós**, *convex*, ("*carried or drawn together to a point*"), from Lat. *conuexus*.

95.Originally PIE root **ter**, *over*, gives verb **tero**, *cross over, pass through, overcome*, as Skr. *tirati*, *tarati*; also contracted as athematic **trā**, as probable O.Lat. *trāre*, which gave **tran(t)s**, *across*, *over*, *beyond*, *through*, as Lat. *trans*. Other derivatives include zero-grade **tŕilos**, *hole* (<"*a boring through*"), as Gmc. *thurilaz* (cf. O.E. *þyrel*, M.H.G. *dürchel*, Eng. *thrill*); **tŕqe**, *through*, as, Gmc. *thurkh*/*thurukh* (cf. Goth. *þaírh*, O.S. *thuru*, O.E. *þurh*, O.Fris. *thruch*, M.Du. *dore*, Du. *door*, O.H.G. *durh*); also, in **néktār**, *nectar*, *drink of gods,* from **nek**, *death*, and ***-tar***, *overcoming*, as Gk. νέκταρ, and derivative **nektarínā**; verb **trāio**, *protect*, as Iranian *thrāja-*; extended **truks**, *savage*, *fierce*, *grim* (from "*overcoming, powerful*"), as Lat. *trux*, as **trukulénts**, *truculent*; and therefore also nasalized extended **trunks**, *trunk*, *deprived of branches or limbs, mutilated* (from *overcome, maimed*), Lat. *truncus*. Compare all IE derivatives meanig *through*, *beyond*: Gmc. *thurkh*, Lat. *trans*, Umb. *traf*, Gk. *tar*, Skr. *tiras*, Av. *tarə*, O.Ir. tre, Welsh *tra*.

For **neks**, *death*, *dead person*, *murder*, *violent death*, compare ON *Naglfar*, Lat. *nex*, Toch. *näk*, Lith. *našlys*, Ir. *éc*, Welsh *angeu*. Derivatives include **nekrós**, *dead*, *corpse*, as Gk. *νεκρός*; verb **nekio**, *injure*, *harm*, as Skr. *naśyati*, Av. *nasyeiti*, and its o-grade **nokē**, as Lat. *nocēre*, giving common derivatives as **nokénts**, *nocent*, or **n̥nokénts**, *innocent*, or **nokuós**, *nocuous*; also o-grade **noksā́**, *injury*, *hurt*, *damage*, as Lat. *noxa*, in **noksiós**, *harmful*, *noxious*, and **obhnoksiós**, *obnoxious*.

96.Indo-European verb **dō**, *give*, evolved (outside Germanic languages) as Lat. *dare*, Osc. *dede*, Umb. *dadad*, Gk. *δίδωμι*, Skr. *dā*, *dádāti*, Av. *dadāiti*, Pers. *dadātuv*, Pers. *dādan*, Phryg. *dadón*, Arm. *tal*, O.Pruss. *dātwei*, Lith. *dúoti*, Ltv. *dot*, *deva*, O.C.S. *damu*, Russ. *damъ*, Pol. *dać*, Gaul. *doenti*, O.Ir. *dán*, Welsh *dawn*, Alb. *dhashë*, (Tosk *dhënë*, Geg *dhąnë*), Osset. *daettyn*, Kashmiri *dy̆yūn*; Hitt. *dā*, Luw. *da-*, Lyd. *da-*, Lyc. *da*. Derivatives

include zero-grade (as Lat. *dare*) **datós**, *given*, from which ***dátā***, *date* (The Roman convention of closing every article of correspondence by writing "*given*" and the day and month, meaning "*given to messenger*", led to ***data***, "*given* (pl.)"becoming a term for "*the time and place stated*"), **datḗiuos**, *dative* ("*the case of giving*"), **dátom**, *datum*, *trade*, **transdo**, (from ***trans***+***da***), *deliver*, *hand over*, *trade*, part. **transdatós**, *delivered*, *handed over*, from which **transdátiōn**, *delivery*, *surrender*, *a handing over/down*, meaning both in Romance languages and English, as Lat. *traditio*, which gave O.Fr. *tra(h)ison* (Anglo-Fr. *treson*, Eng. *treason*, cf. It. *tradimento*, Spa. *traicio*), and O.Fr. *tradicion* (Eng. *tradition*, Fr. *tradition*, It. *tradizione*, Spa. *tradicio*); **perdo**, do *away with, destroy, lose, throw away*, as in **perdátiōn**, *ruin*, *destruction*, *perdition*; **redo**, *give back*, *return*, *restore*, *giving part*; **redatós**, *rendered*, and derivative **redátā**, *rent*, *payment for use of property* (Romance *rendita* through V.Lat. *reddita*, influenced by Lat. *vendita*, "*sold*", or maybe Lat. *prendita*, "*taken*"); **wesnomdo**, (from ***wésnom***, v.i.), *sell*, *praise*, as Lat. *uendere* (contacted from Lat. *uendumare*, from older *uēnumdare*); also **dṓnom**, *gift*, as in **dōnṓr**, *donor*, **dōnā**, *give*, *present*, *donate*, **komdōnā**, *condone*, **dōnátiōn**, *donation*, **dōnatḗiuos**, *donative*, **perdōnā**, *grant*, *forgive*, *pardon*; **dṓtis**, *dowry*, *marriage*, *portion*, as Lat. *dos*, also Slavic **dōtiā́**, *gift*, *dacha*, as Russ. *dacha*; **dórom**, *gift*, as Gk. *δωρον*; part. **dótis**, *something given*, as Greek δόσις, giving **antídotom**, *antidote*, lit. "*given against*", **anékdotā**, *anecdote*, **apódotis**, *apodosis*, etc.

For PIE **wes**, *buy*, compare **wésnom**, *sale*, from Lat. *uēnum*, as in **wesnālís**, *venal*; suffixed **wosno**, *buy*, as in **wosnā́**, *buying*, **opswosn**, *cooked food*, **opswosno**, *buy food*, hence **opswósniom**, *purchasing of provisions*, as Gk. ὀψώνιον, from which **monopswósniom**, *monopsony*; **wésā**, *sale*, which gives Eng. *bazaar* (see **qel**); suffixed **weslís**, *cheap*, *base*, hence *worthless*, *vile*, as Lat. *ūīlis*, with derivatives like **weslidhakā**, *hold cheap, vilify*, **weslipendo**, *vilipend* (from (**s**)**pen**).

From PIE root **wes**, *live*, *dwell*, *pass the night*, compare Germanic derivatives meaning *to be*, as o-grade *was* (as O.E. *wæs*), lengthened *wēz* (cf. O.E. *wære*), or *wesan* (cf. O.N. *vesa*, *vera*, "*be*"), or Lat. *Vesta*, *household goddess*, **wástus**, *town*, "*place where one dwells*", from Gk. *astu*, into Lat. *skill*, *craft* (*practiced in a town*), as in **wastutós**, *astute*; also, **wésenom**, *house*, as Pers. *vahanam*, as in **diwésenom**/***diwā́n***, *divan*, from O.Ira. *dipivahanam*, "*document house*", from *dipī-*, *writing, document*, from Akkadian *tuppu*.

Indo-European (**s**)**pen**, *draw*, *stretch*, *spin*, gives **spenuo**, *spin*, as Gmc. *spinnan* (cf. Goth. *spinnan*, O.N., O.Fris. *spinna*, O.H.G. *spinnan*, Dan. *spinde*, Du. *spinnen*, Ger. *spinnen*), from which **spéntrā**, "*spinner*", *spider*, as Gmc. *spinthrō* (cf. O.E. *spīþra*, Dan. *spinder*, and other cognates M.L.G., M.Du., M.H.G., Ger. *spinne*, Du. *spin*); extended **pendē** (intransitive), *hang*, and **pendo**, *cause to hang, weigh*, p.part. **penstós** (<****pendto***-), with frequentative **penstā**, *weigh*, *consider* , as Lat. *pensāre*, as in **pendénts**, *pendant*, **péndolom**, *pendulum*, **pénstiōn**, **pénstom**, *weigh*, *peso*, **adpende**, *append*, **adpéndīks**, *appendix*, **kompendiā**, *compend*, **kompéndiom**, *compendium*, **kompenstā**, *compensate*, **dependē**, *depend*, **dependo**, *pay*, *expend*, **ekspendo**, *expend*, **enpendo**, *inpend*, **propendē**, *propend*, **rekompénstā**, *recompense*, **supspendo**, *suspend*, etc.; suffixed **péniā**, *lack*, *poverty* (< "*a strain, exhaustion*"), as Gk. *πενια*, usually found as suffix -**peniā**; **peno**, *to toil*, and o-grade **pónos**, *toil*, verb **pono**, *toil*, as in **geoponikós**, *geoponic*, **lithoponos** (from Gk. loan word ***líthos***, *stone*), *lithopone*; o-grade (***s***)***pon***-, as in **spono**, *span*, *stretch*, *bind*, as Gmc. *spannan* (cf. O.E. *spannen*, O.H.G. *spannan*, M.Du. *spannen*), **sponā́**, *span*, Gmc. *spanō* (cf. O.E. *spann*; Gmc. word was borrowed into M.L. *spannus*, hence It. *spanna*, O.Fr. *espanne*, Fr. *empan* "*distance*"); also, **spongā́**, *clasp*,

spangle, from Gmc. *spangō* (cf. M.Du. *spange*); **póndos**, *weight*, giving Latin expression ***lībra póndō***, "*balance by weight*" (borrowed into Gmc. *punda*, "*pound*", cf. Goth. *pund*, O.Fris., O.N. *pund*, O.H.G. *pfunt*, Ger. *Pfund*, M.Du. *pont*); **póndōs**, *weight*, giving derivatives (affected by rhotacism, cf. Lat. *pondus*, *ponder*-), **pondesā**, *weigh*, *ponder*, as in **prāipondesā**, *preponderate*; also, compare ***sponde***, "*of one's own accord*", as Lat. *sponte* (maybe from Gmc. *spanan*, "*entice*"), as in ***spondaniós***, *spontaneus*.

97. Indo-European **bháres**-/**bhars**-, *spelt*, *barley*, *grain*, is the root for Gmc. *bariz*/*barz* (cf. Goth. *barizīns*, O.N. *barr*, and also O.E. *bær-lic*, i.e. "*barley-like*"), Lat. *far* (stem *farr*-), Osc.,Umb. *far*, Phryg. *brisa*, OCS *brašĭno*, Welsh *bara*. Latin derivatives include **bhar(s)ínā**, *farina*, **bhar(s)inākiós**, *farinaceous*, **bharsā́gō**, *farrago*, *medley*, *mix of grains for animal feed*.

98. PIE verb **bhél** means *thrive*, *bloom*, *sprout*, as in **bhóliom**, *leaf*, as Lat. *folium*, Gk. *φυλλον*, as in **eksbholiā**, *exfoliate*, **debholiā**, *defoliate*, **perbholiā**, *perfoliate*, **prtbhóliom**, *portfolio*, etc; suffixed o-grade **bhlōuo**, *to flower, blow*, as Gmc. *blōwan* (cf. O.E. *blawan*, O.H.G. *blaen*), **bhlṓmōn**, *flower*, *blossom*, as Gmc. *blōmōn* (cf. Goth. *blōma*, O.S. *blomo*, O.N. *blómi*, Du. *bloem*, O.H.G. *bluomo*, Eng. *bloom*); **bhlōs**, *flower*, *blossom*, as Gmc. **bhlōs**- (cf. O.E. *blōstm*, *blōstma*, Eng. *blossom*), Lat. *flōs* (stem *flōr*- due to rhotacism), as in **bhlōsā́**, *flora*, **bhlōsālís**, *floral*, etc.; **bhlṓtom**, *blood*, as Gmc. *blōthan* (cf. Goth. *bloþ*, O.N. *blóð*, O.E.,O.Fris. *blōd*, M.Du. *bloet*, O.H.G. *bluot*), **bhlōdio**, *bleed*, as Gmc. *blōthjan* (cf. O.N. *blæða*, O.E. *blēdan*, Ger. *bluten*), **bhlōtisā**, *bless*, lit. "*treat or hallow with blood*", (originally a blood sprinkling on pagan altars, this word was chosen in O.E. Bibles to translate Lat. *benedicere* and Gk. *eulogein*, and is not found with this sense in other Germanic dialects); **bhlótos**, *blade*, *leaf*, from Gmc. *blathaz* (cf. O.N. *blad*, O.Fris. *bled*, Ger. *blatt*). Other derivatives include Oscan *Fluusaí*,Toch. *pält*/*pilta*, O.Ir. *bláth*, Welsh *blawd*.

A proper PIE word for *blood* is **kréwis** (earlier root **kreuh₂*), as in O.E. *hrot*, Lat. *cruor*, Gk. *κρέας*, O.Ind. *kravíṣ*, Av. *xrū-*, *xrūm*, O.Pruss. *krawian*, Lith. *kraujas*, Ltv. *krevele*, OCS *krъvь*, O.Pol. *kry*, Russ. *krovь*, O.Ir. *cró*, Welsh *crau*. A common adjective is o-grade **krowós**, *raw*, *uncooked*, "*bloody*", as Gmc. *khrawaz* (cf. O.N. *hrár*, O.E. *hrēaw*, M.Du.*rau*, O.H.G. *hrāo*, Eng. *raw*, Ger. *roh*), Lat. *crudus*, O.Ind. *kruras*, Av. xrūra-.

99. IE verb **der**, *split*, *peel, flay*, as Gmc. *teran* (cf. Goth. *gatairan*, O.E. *teran*, O.S. *terian*, M.Du. *teren*, O.H.G. *zeran*), Gk. *δερειν*, Skr. *darati*, Arm. *terem*, O.C.S. *dera*, and **dérom**, *piece*, as Bret. *darn*; **dŕtom**, "*something separated or discarded*", *turd*, Gmc. *turdam* (cf. O.E. *tord*, O.N. *tord*-, M.Du. *torde*, Du. *tort*-); **der(r)is**, *leather covering*, *derris*, from Gk. *δερρις*; **dérmn**, *skin*, *derma*-, as Gk. δέρμα, in compounds **dérmnto**-, *dermato*-.

English "*tear*" (*drop from eye*), comes from PIE **dákrus**, attested as Gmc. *takhruz* (cf. Goth. *tagr*, O.N. *tár*, O.Fris. *tar*, O.E. *tēahor*, O.H.G. *zahar*), Lat. *lacrĭma* (from suffixed ***dákru-mā***, O.Lat. *dacruma*, compare with evolution of O.Lat. *dingua* -> Lat. *lingua*), Gk. *δάκρυ*, Skr. *aśru*, Av. *asrūazan*, Toch. *ākär*/*akrūna*, Arm. *arc'unk'*, Lith. *ašara*, Ltv. *asara*, O.Ir. *dér*, Welsh *deigryn*.

100. PIE root **gno**, *know*, gives derivatives **gnēuo**, as Gmc. *knē*(*w*)*an*, (cf. O.E. *cnāwan*, O.H.G. *bichnaan*, *irchnaan*), **gn̥o**, *know*, *know how to*, *be* (*mentally*) *able to*, Gmc. *kunnan* (cf. Goth. *kannjan*, O.N. *kenna*, O.E. *cunnan*, O.Fris. *kanna*, O.H.G. *irchennan*), o-grade causative **gónio**, *make known, declare*, as Gmc. *kannjan* (cf. O.N. *kenna*, O.E. *cennan*, Eng. *ken*), **gntós**, *known*, *well-known, usual, excellent, familiar*, as Gmc. *kunthaz* (cf. O.E. *cūth*, Eng. *couth*), **gn̥titā**, *knowledge*, *acquaintance*, *friendship*, *kinfolk*, as Gmc. *kunthithō* (cf. O.E. *cyththu*); **gnōsko**, **komgnōsko**, *get to know, get acquainted with*, as in **gnōtítiā**, *notice*, **gnṓtiōn**, *notion*,

gnōtosiós, *notorious*, **komgnítiōn**, *cognition*, **rekomgnōsko**, *recognize*, etc.; suffixed ***-ro-***, as **n̥gnōrā**, *not to know, disregard, ignore*, or **gnā́ros**, *knowing*, *expert*, and verb **gnar(r)ā**, *tell, relate, narrate*; **gnōdhlís**, *knowable*, *known*, *famous*, *noble*, as Lat. *nōbilis*; part. **gnōtós**, *known*, noun **gnṓtis**, *knowledge*, *inquiry*, **gnṓmōn**, *judge*, *interpreter*, **prognṓtis**, **diagnṓtis**, **agnṓtiā**, etc., as Gk. γνῶσις, γνώμων; **gn̥tis**, *knowledge*, as Av. *zainti-*; also probably **gnṓtā**, *note*, *mark*, *sign*, *cypher*, as Lat. *nota*, as in **adgnōtā**, *annotate*, **komgnōtā**, *connote*, etc., and also **gnórmā**, *carpenter's square, rule, pattern, precept, norm*, as in **gnormālís**, *normal*, **apgnormālís**, *abnormal*, **eghnormís** (from ***eghs*+*gnorm-***), *irregular*, *extraordinary*, *very large*, possibly a borrowing from Etruscan through Greek **gnṓrmōn**, γνώμων, *carpenter's square, rule*. For IE derivatives, compare Lat. *nōscō/cognōscō*, Umb. *naratu*, Gk. *γιγνωσκειν*, Skr. *jānā́ti*, Av. *paitizānənti*, O.Pers. *xšnāsātiy*, Toch. *knān/nān*, Arm. *canot'*, O.Pruss. *posinnāts*, Lith. *žinóti*, *žinaũ*, Ltv. *zināt*, *zinu*, O.C.S.,O.Russ. знати, знаѭ, Russ. *знать*, Polish *znać*, Ir. *gnath*, Welsh *gnawd*, Alb. *njeh*, Kashmiri *zānun* Osset. *zon*; Hitt. *kanes*.

101. PIE root **ni**, *down*, *below*, gives derivatives Skr. *ni*, Gk. *neiothen*, O.C.S. *nizu*, Russ. *низ*. A common derivative is **nitero-**, *down*, *downwards*, *below*, *beneath*, as **niteros** in Gmc. *nitheraz* (cf. O.S. *nithar*, O.N. *niðr*, O.E. *niþera*, *neoþera*, O.Fris. *nither*, Du. *neder*, Ger. *nieder*), or **niterom** in Skr. *nitaram*.

For PIE **ńdher**, *under*, also possibly derived from **ni**, compare Gmc. *under* (cf. Goth. *undar*, O.N. *undir*, O.Fris. *under*, Du. *onder*, O.H.G. *untar*), Pers. *zēr*, Arm. *ěndhup*; also, compare **ńdhos**, *below*, as Skr. *adhah*; **ndhrós**, *lower*, as Av. *aδara-*, Lat. *īnferus*, and **ndhriós**, *inferior*; **ndhr̥nos**, *lower*, *inferno*, and **ndhrnālís**, *infernal*; **ńdhrā**, *infra*, *below*.

English *hell*, a translation of Lat. *infernus*, comes from an o-grade noun derived from PIE **kel**, *cover*, *conceal*, *save*, (cf. Skr. *cala*, O.Ir. *cuile*), viz. **koliā́**, *the underworld* (from "*concealed place*"), Gmc. *khaljō* (cf. O.N. *hel*, O.E., O.Fris. *helle*, Ger. *Hölle*, Goth. *halja*; Eng. *hell* may be from O.N. *Hel*, *the underworld, goddess of death*, another transfer of a pagan concept and its word to a Christian idiom); **kol(l)ā́**, *covered place, hall*, as (dialectally geminated) Gmc. *khallō* (cf. Goth. *halja*, O.N. *höll*, O.E. *heall*, O.H.G. *halla*, Du. *hal*); suffixed **koleiós**, *sheath*, as Gk. κολεός; zero-grade **kĺos**, *hole*, *hollow*, as Gmc. *khulaz* (cf. Goth. *us-hulon*, O.N. *holr*, O.Fris., O.H.G. *hol*, O.E. *hol*, *hulu*, M.Du. *hool*, Ger. *hohl*, Eng. *hole*, *hull*); extended **klām**, *in secret*, as Lat. *clam*, in **klamdestēinós**, *clandestine* (possibly a merge of ***klam-de-*** and **entestēinós**, *internal*, from **entos**, *within*, which gives pl. **entestḗina**, *intestine*), **kalupio**, *cover*, *conceal*, as Gk. *kaluptein*, part. **kaluptós**, *covered*, as in **(a)sukalúptos**, from Lat. *eucalyptus*, and MIE **apokalúptis**, *revelation*, from Gk. ἀποκάλυψις, also *apocalypsis*, from Church Lat. *apocalypsis*; **kélmos**, *helmet*, *helm*, "*protective covering*", as Gmc. *khelmaz* (cf. Frank. *helm*, O.E. *helm*, O.H.G. *helm*, M.Fr. *helmet*, dim. of *helme*); **obhkolo**, *cover over*, and part. **obhkoltós**, *covered*, *occult*, from which **obhkoltā**, *to occult*; suffixed **kólōs**, from Lat. *color*; **kélnā**, *storeroom*, *chamber*, *cellar*, as Lat. *cella*; **kéliom**, *lower eyelid*, *cilium*; lengthened-grade **kēlā**, *hide*, like in **komkēlā**, *conceal*.

102. A Proto-Indo-European stem **(s)klau**, *hook*, *crooked or forked branch* (used as a bar or bolt in primitive structures) is reconstructed for **kláustrom**, *bar*, *bolt*, *barrier*, as Lat. *claustrum*, and **kláustrā**, *dam*, *wall*, *barricade*, *stronghold*, for Lat. *claustra*; **kláwos**, *nail*, for Lat. *clauus*; **kláwis**, *key*, for Lat. *clauis*; **skláuso**, *close*, Gmc. *skhleusan* (cf. O.E. *beclysan*, O.H.G. *sliozan*, Ger. *schlieel*); also, compare Gk. *kleidos*, *klobos*, Lith. *kliuti*, *kliaudziu*, *kliuvu*, O.C.S. *kljucu*, *kljuciti*, O.Ir. *clo*, M.Ir. *clithar*.

PIE verb **bhec**, *run*, *flee*, is attested in Balto-Slavic as Lith. *begu*, O.C.S. *begu*, *bezati*; also **bhécios**, *stream*, (possibly from an unattested verb **bhécio**) in Gmc. *bakjaz* (cf. O.N. *bekkr*, Eng. *beck*); and in Greek with the meaning of *flee in terror*, also o-grade verb **bhoco**, *put to flight, frighten*, and noun **bhócos**, *panic*, *flight*, *fear*, as Gk. φόβος (hence **-bhocíā**, Gk. -φοβία).

103. For PIE **ka(u)put**, *head*, and also fig. *top*, *upper end*, *chief person*, *leader*, compare Gmc. *khaubuthan* (Goth. *haubiþ*, O.N. *haufuð*, O.E. *heafod*, O.H.G. *houbit*, O.Fris. *haved*, Ger. *Haupt*), Skr. *kapucchala*, Lat. *caput*.

104. PIE verb **dem**, domesticate, gives o-grade **domio**, *tame*, *domesticate*, as Gmc. *tamjan* (cf. Goth. *gatamjan*, O.E. *temja*, O.E. *tem*, O.H.G. *zemmen*); **domós**, *domesticated*, *tame*, Gmc. *tamaz* (cf. O.N. *tamr*, O.S., O.Fris., M.L.G., M.Du., O.E. *tam*, O.H.G. *zam*, Ger. *zahm*); **domā**, *tame*, *subdue*, as Lat. *domāre*; **dḿo**, *tame*, as Gk. δαμαν, with derivative **ndmánts** [n̥-dm̥-'ants], *not malleable*, *adamant*, (lit. "*not domesticable*") and also *diamond*, from Vulg.Lat. *diamas,-antis*, altered from Lat. *adămas,-antis*, from Gk. ἀδάμας. Other derivatives include Skr. *dāmyati*, Av. *dam*, Pers. *dām*, O.Ir. *damnaim*, Welsh *addef*, Osset. *domun*; Hitt. *damaašzi*.

For **spek**, *observe*, *look at*, compare **spékōn**, *watcher*, *spy*, as Gmc. *spekhōn* (cf. Frank. *spehon*, O.H.G. *spehon*, M.Du. *spien*, Ger. *spähen*, *Spion*, Eng. *spy*); from Lat. *specere* are **spékimēn**, **spéktrom**, **spekolā**, *especulate*, **spékolom**, **adspéktos**, *aspect*, **ekspektā**, *expect*, **perspektḗiuā**, *perspective*, **respektā**, *look*, *respect*, **supspektā**, *suspect*, etc.; **spékiēs**, *seeing*, *sight*, *form*, *species*, as in **spekiālís**, *special*; **speks**, *watcher*, "*he who sees*", in Lat. compounds; **dēspekā**, *despise*, *look down on*; metathesized Grek forms as **spekio** (Gk. *skepio*), *examine*, *consider*, as in **spektikós**, *skeptic*, Gk. σκεπτικός; or o-grade **spókos** (Gk. *skopos*), *one who watches*, or *object of attention, aim, target*, (as Eng. *scope*) and verb **spokē**, *see*, as in modern **jorospókos**, *horoscope*, lit. "*time-watcher*", from Gk. ὡροσκόπος, **qēlespókiom**, from Mod.Lat. *telescopium*, or **epispókos**, *overseer*, *bishop* (Eng. *bishop* comes from O.E. *bisceope*, itself from Vulgar Latin *ebiscopus*), **epispokālís**, *episcopal*, etc. – the change *spek->skep* happened comparatively late in Greek to be reconstructed in a proper common IE language.

105. For PIE **sals**, *salt*, compare Lat. *sāl*, Umb. *salu*, Gk. *hals*, Skr. *salila*, Illyr. *Salapia*, Toch. *sāle/sālyiye*, Arm. *aġ*, O.Pruss. *sal*, Lith. *saldus*, Ltv. *sāļš*, OCS *soli*, Russ. *соль*, Polish *sól*, O.Ir. *salann*, Welsh *halen*, Alb. *gjelbson*. It gives derivatives as **sáldom**, Gmc. *saltom* (cf. O.S., O.N., O.Fris., Goth. *salt*, O.E. *sealt*, O.H.G. *salz*, Du. *zout*), zero-grade **sĺdiā**, *salt*, *salt marsh*, *souse*, as Gmc. *sultjō* (cf. M.E. *cylte*, Dan.,Nor. *sylt*, Eng. *silt*, and O.Fr. *sous*, into Eng. *souse*), **saldo**, *to salt*, as Lat. *sallere*, and p.part. **salstós** (<****saldtós***), as in **sálstā**, *sauce*, *salsa*; from Lat. *sāl* is **salásiom**, *salary*, **salátā**, *salad*, or **salámis**; it gives also words for sea, from "*salty water*", as in Greek, or in Latin **sálom**.

PIE root **sol** (or **solh₂*) means *whole*, and is attested in common derivative **soluós**, *whole*, *intact*, *uninjured*, as Gk. ὁλος (Ion. οὖλος), Skr. *sarvah*, Av. *haurva*, O.Pers. *haruva*, giving modern words like **soluokáustom**, *holocaust* (from neuter Lat. *holocaustum*, itself from Gk. ὁλόκαυστος, "*burned hole*"), **soluograbhikós**, *holographic* (for **gerbh-**, v.i. *A*), or **katsoluikós**, *universal*, *catholic* (as Lat. *catholĭcus*, Gk. καθολικός, for ***kat***, v.i. *B*). Also, compare **solidós**, *solid*, in **komsolidā**, *consolidate*, **solidāsiós**, *jointly liable* (source akin to Eng. *soldier*), **sol(i)dā́tos**, *soldier*, from Lat. *solidātus* (from ***sólidos***, a Roman gold coin, also *salary*, lit "*one having pay*", cf. It. *soldato*, Fr. *soldat*, Spa., Pt. *soldado*, Swe., Nor., Ger. *soldat*, Du. *soldaat*, Russ., Ukr. *солдат* etc.); **sólos**, *whole*, *entire*, *unbroken*, as **solikitós**, *solicit*, *solicitous*, or **solemnís**, *solemn*, from Lat. (dialectal

geminated form) *sollus*; as zero-grade **sálūts**, *health*, as in **salutā**, *greet*; also in **saluós**, *whole*, *safe*, *healthy*, *uninjured*, from Lat. *salvus* (into O.Fr. *sauf*, and then to Eng. *safe*).

A. For PIE **gerbh**, *scratch*, compare Gmc. *kerban* (cf. O.E. *ceorfan*, O.H.G. kerban, Eng. *carve*, Ger. kerben); zero-grade **gŕbhis**, *a cutting(off)*, as Gmc. *kurbiz* (O.E. *cyrf*, Eng. *kerf*); o-grade **gróbhis**, *edible crustacean*, as Gmc. *krabiz/krab(b)* (cf. O.E. *crabba*, O.N. *krafla*, O.H.G. *kerbiz*, L.Ger. *krabben*, Eng. *crab*, *crayfish*, *crawl*); **grbho**, *scratch*, *draw*, *write*, as **gŕbhmn** ['gr̥bʰ-mn̥], *picture*, *letter*, piece of writing, and **gŕbhmā**, *line*, with derivatives as (loan words) **grbhmntikā́**, *grammar*, from Gk. γραμματική, and **ghŕbhikos**, *graphic*, **anágrbhmn**, *anagram*, **epígrbhmn**, *epigram*, **n̥ghrbhíā**, *agraphia*, **epigrbhā́**, *epigraph*, as Gk. ἐπιγραφή, **parágrbhos**, *paragraph*, **prógrbhmn**, *programme*, etc; also, W.Gmc. *grafa*, "*count*" (cf. M.Du. *graave*, M.L.G. *grave*, Ger. *graf*, Eng.-*grave*), possibly a borrowing from ***grbhéus***, Gk. *grapheus*, "*scribe*". For other IE derivatives, compare O.Pruss *gīrbin*, Ltv. *grīpsta*, O.C.S. *žrěbŭ*, Russ. *žrebij*, Arm. *kerel/gerel*, Alb. *gërvish*.

B. For PIE **kat-**, *down*, compare Greek **kata**, *down*, and suffixed form **kátolos**, *young puppy*, *young of animals* ("*dropped*"), as Latin *catulus*.; also found in Ice. *haðna*, M.H.G. *hatele*, Sla. *kotiti sę* (cf. Russ. *kotítьsja*), dial. *koťьka*, Sr.-Cr. *kot*, Pol. *wy-kot*

106. For Indo-European **bhlēig**, *shine*, compare Gmc. *blīkh(j)an* (cf. O.N. *blíkja*, O.Ice. *bleikr*, O.H.G. *blīhhan*, *bleih*, O.E. *blīcan*, Ger. *Blech*), Lith. *blaikštaũs*, *blaikštýtis*, *blyškéti*, Ltv. *bližģēt*, *blaiskums*, O.C.S. *блѣскъ*, *блисцати*, Russ. *blesk*, Pol. *blask*.

107. PIE verb **bhel**, *blow*, *swell*, *inflate*, is the root for various derivatives including round objects and the notion of tumescent masculinity; as, **bhĺā**, *round vessel*, *rounded object, bowl*, *bole*, *boll*, as in Gmc. *bullō* (cf. O.N. *bolle*, *bolr*, O.E.,O.H.G. *bolla*, M.H.G. *bole*, M.Du. *bolle*, *bille*); zero-grade and **bhĺōn**, *fuller*, as Lat. *fullō*; **bhĺōnos**, *bull*, as Gmc. *bullōnaz* (cf. O.N. *boli*, O.E. *bula*, M.Du., Ger. *bulle*), **bhĺokos**, *bull*, as Gmc. *bullukaz* (cf. O.E. *bulluc*), **bhĺnos**, *phallus*, as Gk. φαλλός; o-grade (dialectally geminated -l in Germanic) **bhól(l)os**, *ball*, **bhól(l)ā**, *ball*, *bullet*, *round roll*, **bhól(l)ikos**, *testicles*, *bollix* (cf. O.E. *beallucas*); **bholtós**, *bold*, from Gmc. *balthaz* (cf. Goth. *balþei*, O.N. *ballr*, *baldr*, O.E. *bald*, *beald*, O.H.G. *bald*); suffixed **bhólnis**, *bellows*, *inflated ball*, as Lat. *follis* (cf. Eng. *follicle*, *folly*, *fool*); possibly **bhálaniā**, *whale*, from Gk. φάλαινα.

108. MIE **dī́mōn**, *time*, is a loan translation from Germanic *tīmōn*, (cf. O.Eng. *tīma*, O.N. *timi*, Swe. *timme*), and is derived from PIE root **dā**, *divide*, as in **dā́mos**, *people*, *land* (from "*division of society*"), from Gk. δημος, as in **dāmokratíā**, *democracy* v.i., **dāmogrbhíā**, *demography*, **epidāmíā**, **pandāmíā**, **dāmagṓgos**, etc.; alternative root **dajo**, *divide*, as in **geōdáisia**, *earth division, geodesy*; **dáimōn**, *divider*, *provider*, hence *divinity*, later "*demon*, *daimon*", v.i.; **d(á)itis**, *division of time, time, season*, as Gmc. *tīdiz* (cf. O.S., O.E. *tid*, Du. *tijd*, O.H.G. *zīt*, Ger. *Zeit*, Eng. *tide*), and verb **dītio**, *happen*, from "*occur in time*", Gmc. *tīdjan* (cf. O.E. *tīdan*).

It is unrelated to Lat. *tempus*, which has an unknown origin. For the Latin word and its derivatives, Modern Indo-European uses loan word ***témpōs***; as, ***komtemposāsiós***, *contemporary*; ***témposā***, *temple* (cf. Lat. *tempora* > V.Lat. *tempula*); ***tempesā***, *temper*, *moderate*, *regulate*; ***tempositiā***, *temporize*, etc.

PIE **krátos**, *power*, *strength*, (like Gk. κράτος) gives suffix ***-kratíā***, *power*, *rule*, as Gk. -κρατία, adjective **kratús**, *strong*, as Gk. κρατυς or alternative **kartús**, *hard*, as Gmc. *kharthus* (cf. Goth. *hardus*, O.N. *harðr*, O.E. *heard*, O.H.G. *harto*, Du. *hard*), maybe from PIE root ***kar-***.

Greek δαιμων meant *divinity*. For Greeks and Romans *dæmons* were *supernatural beings* "*replete with knowledge*", "*divine power*", "*fate*" or "*god*", not necessarily evil. Within the Christian tradition, ideas of "demons" derived as much from the literature that came to be regarded as apocryphal and even heretical as it did from the literature accepted as canonical. It happened more or less like with PIE **djḗus** (originally meaning *heaven, sky,* hence *sky-god*, cf. O.E. *Tig*, Lat. *deus*, Gk. *Ζεύς*, Skr. *devaḥ*, Lith. *devas*, O.C.S. *deivai*), reduced in its Persian meaning as a special (bad) kind of divinity, giving *daēva-*, "*spirit, demon*", so in *Asmodeus*, Old Persian *Æshma,* later *Æshmadæva*.

109. PIE root **bher-**, with derivatives meaning *brown*, *shining*, gives **bhrūnós**, *brown*, *shining*, as Gmc. *brūnaz* (cf. O.E. *brūn*, O.N. *brúnn*, M.Du. *bruun*, adopted into Romance languages through M.L. *brunus*, cf. It., Sp. *bruno*, Fr. *brun*); reduplicated **bhébhrus**, *brown animal*, *beaver*, as Gmc. *bebruz* (cf. O.E. *beofor*, O.H.G. *bibar*, Low Ger. *bever*), Lith. *bebrus*, Cz. *bobr*, Welsh *befer*; **bhérā**/**bhérnus**, *bear*, lit. "*brown animal*" (as O.E. *bera*, O.H.G. *bero*, from Gmc. *berō*, or O.N. *björn*, from Gmc. *bernuz*). Compare Lat. *fiber*, Gk. *phrynos*, Skr. *bhallas*, *babhrus*, Av. *bawra*, Toch. *parno*/*perne*, *paräṁ*/*perne*, O.Pruss. *bebrus*, Ltv. *bērs*, *bebrs*, Lith. *bėras*, *bebras*, Russ. *bobr*, Gaul. *Bibrax*, Welsh *befer*.

110. Indo-European **línom**, *flax*, although sometimes considered a borrowing from a non-Indo-European language, is found in many IE dialects; as, Gmc. *linam* (cf. Goth. *lein*, O.E. *lin*, O.H.G. *lin*, O.N. *lín*, Ger. *Leinen*, Eng. *linen*), Lat. *līnum*, Gk. *linon*, O.Pruss. *linno*, Lith. *linas*, Ltv. *lini*, O.C.S. *lĭnŭ*, Russ. *lën*, Polish *len*, O.Ir. *lín*, Welsh *llin*, Alb. *liri*/*lîni*.

For PIE **wĺnā**, *wool*, compare Gmc. *wulnō* (cf. Goth. *wulla*, O.N. *ull*, O.E. *wull*, O.Fris. *wolle*, M.Du. *wolle*, O.H.G. *wolla*, Du. *wol*, Ger. *Wolle*), Lat. *lāna*, *uellus*, Gk. *lēnos*, Skr. *ūrṇā*, Av. *varənā*, Pers. *gurs*, O.Pruss. *wilnis*, Lith. *vilna*, Ltv. *vilna*, O.C.S. *vlŭna*, Russ. *volna*, Pol, *wełna*, Lith. *vilna*, O.Ir. *olan*, Welsh *gwlan*; Hitt. *hulana*.

111. PIE **chen**, *strike*, *kill*, *slay*, as Gk. *θείνω*, *φόνος*, Skr. *hánti*, Av. ǰainti, O.Pers. *ajanam*, Arm. *gan*, O.Pruss. *guntwei*, *gunnimai*, Lith. *genù*, *giñti*, *ginù*, *gìnti*, Ltv. *dzęnu*, *dzìt*, O.C.S. гънати, женѫ, O.Russ. *гънати*, *жену*, Cz. *hnáti*, *ženu*, Polish *gnać*, O.Ir. *gonim*, Ir. *gandr*, *gonadh*, Alb. *gjanj*; Hitt. *kwen*, Lyd. *qẽn-*; Slavic *гънапъ*, which stands out in a Satem dialect, appears to be from a source akin to O.Ind. (*ā*)*ghnānás*, Av. *avaġnāna-*, an original ***ghn-*** form, which didn't undergo the satemization trend. It gives derivatives as o-grade **chónōn**, *slayer*, *cause of ruin or destruction*, as Gmc. *banōn* (cf. Goth. *baŋja*, O.N. *bani*, O.E. *bana*, O.Fris. *bona*, O.H.G. *bana*), which gives also MIE loan word **chonā́**, *way*, *road*, as in **autochonā́**, *Autobahn*, cf. M.H.G. *ban*, *bane*, Ger. *Bahn*, "*way, road*" (from "*strike*" in a technical sense like "*swath*"); suffixed **chńtiā**, *war*, *battle*, as Gmc. *gundjō* (cf. O.Ice. *gandr*, O.E. *gūþ*, O.N. *gunnr* into O.E. *gunne*, giving Mod. Eng. *gun*), also in **chntiāpánōn**, *standard*, "*battle flag*", as O.H.G. *gundfano*, It. *gonfalone* (for ***pan-***, v.i.); suffixed form **chend**, giving prefixed verbs in Latin as **dēchendo**, *ward off, defend*, and **obhchendo**, *strike against*, *be offensive, offend*; also, suffixed zero-grade **chńtros**, *poison*, as Pers. *zahr*, O.Ira. *jathra-*.

112. PIE **génus**, *knee*, perhaps originally *angle*, gives Lat. *genū*, Gk. *gonu*, Skr. *jānu*, Av. *znum*, Pers. *zānu*, Illyr. *Genusus*, Toch. *kanweṃ*/*kenīne*, Arm. *cunr*, Russ. *звено*; Hitt. *genu*, Palaic *ginu-*. Variants include Greek o-grade forms, as **gónus**, *knee*, which gives **polúgonom**, *polygonum*, and **gṓniā**, *angle*, *corner*, which gives **gonós**, *angled*, and derivative neuter suffix **-gonom**, Eng. *-gon*; also, alternate form **gnew-**, giving neuter noun

gnéwom, *knee*, as Gmc. *knewam* (cf. Goth. *kniu*, O.N. *kne*, O.E. *cnēo*[*w*], O.Fris. *kni*, M.Du. *cnie*, O.H.G. *kniu*), and extended verb **gnewio**, *kneel*, "*with bent knee*", as Gmc. *knewjan* (cf. Goth. *knussjan*, O.E. *cneow*[*l*]*ian*, Eng. *kneel*), or Gk. *γνυξ*.

Another meaning for PIE **génus** is *jawbone*, *cheek*, *jaw*. Compare Gmc. *gennuz* (from variant **génwus**, cf. Goth. *kinnus*, O.N. *kinn*, O.E. *cin*, O.H.G. *chinni*, Eng. *chin*, Ger. *Kinn*), Lat. *gena*, Gk. *genus*, Skr. *hanu* (from alternative form **ghénus**), Av. *zanu*, Pers. *goune*(*h*), Phryg. *azon*, Toch. *śanwem*, Arm. *cnaut*, Lith. *žandas*, Ltv. *zods*, Welsh *genou*, O.Ir. *gin*, and Ancient Macedonian *kanadoi*. A common derivative is zero-grade alternative **gńdhos**, *jaw*, from Greek.

113. PIE **chers**, *heat*, *warm*, gives common derivatives as Germanic alternative forms **chrenuo**, *burn*, *be on fire*, intransitive, as Gmc. *brennan* (cf. Goth. *brinnan*, O.N. *brenna*, O.E. *beornan*, *byrnan* O.H.G. *brinnan*), and **chrenuio**, *burn*, *kindle*, transitive, as Gmc. *brannjan* (cf. O.E. *bærnan*); **chróndos**, *burning or flaming torch*, hence also *sword*, as Gmc. *brandaz* (cf. O.E. *brand*, *brond*, Du. *branden*, also Frank. *brand*, into O.Fr.,O.Prov. *brand*); **chermós**/**chormós**, *warm*, *hot*, and **chérmā**, *heat*, neuter **chérmom**, giving **-chermiā**, Eng. *-thermy*, as Gk. *θερμος*. Also, Lat. **chórkaps**, (***-kaps*** is Lat. agential suffix, *-keps*, "*-taker*", from PIE **kap**), *forceps*; **chórnos**, *oven*, as Lat. *furnus*; **chórniks**, *arch*, *vault* (from "*vaulted brick oven*"), as in **chornikā**, *fornicate*; **chŕtom**, *clarified butter, ghee*, as Skr. *ghṛtam*. Other known derivatives are Skr. *ghṛṇa*, Av. *garəma*, O.Pers. *garmapada*, Pers. *garm*, Phryg. *germe*, Thrac. *germas*, Arm. *jerm*, O.Pruss. *goro*, Lith. *garas*, Ltv. *gars*, Russ. *žar*, O.Ir. *fogeir*, Welsh *gori*, Alb. *zjarr*, Kashmiri *germi*, *garū'm*; Hitt. *war*.

114. Indo-European verb **éus**, *burn*, is attested in Gmc. *uzjan* (cf. ON *usli*, and in compound [*aim*]*uzjo*, cf. as O.N. [*eim*]*yrja*, O.H.G. [*eim*]*uria*, O.E. [*æm*]*erge*, Ger. [*Amm*]*ern*, Eng. [*emb*]*er*), Lat. *ūrō*, Gk. *heuō*, Skr. *oṣati*, Lith. *usnis*, Ltv. *usna*, Alb. *ushël*.

115. PIE root **noch-**, *naked*, gives **nochetós**/**nochotós**, as Gmc. *nakwethaz*/*nakwathaz* (cf. Goth. *naqaþs*, O.N. *nökkviðr*, O.Swed. *nakuþer*, O.E. *nacod*, O.Fris. *nakad*, O.H.G. *nackot*, M.Du. *naket*), **nochedós**, as Lat. *nūdus*, **nochmós**, metathesized in Gk. *γυμνος* (*gumnos*), as in **nochmasíā**, *gymnastics*, **nochmástā**, *gymnast*, from Gk. γυμναστής, etc., and **nochnós**, as Skr. *nagna*, Av. *maġna*, O.Pers. *nagna-*; compare also Lith. *nuogas*, Ltv. *nogs*, OCS *nagŭ*, Russ. *nagoj*, Polish *nagi*, O.Ir. *nocht*, Welsh *noeth*, Kashmiri *naṅgay*, Hitt. *nekumant*.

116. Indo-European **cer**, *mount*, gives also **corā́**, *mountain*; cf. Hom.Gk. βορέης, Att.Gk. βορέᾱς, βορρᾶς, O.Ind. *giríṣ*, Av. *gairi-*, O.Pers. *gar*, *gīr*, Arm. *ler*, O.Pruss. *garian*, Lith. *girià*, *guras*, O.C.S. ropa, ropъ, Russ. *гора*, Pol. *góra*, Alb. *gur*.

English word "*mount*" comes from Anglo-Fr. *mount*, itself from O.Fr. *mont* and O.E. *munt*, both from Lat. *mons*, *montis*, MIE **móntis**, *mountain*, (cf. Welsh *mynydd*), which gives **montanós**, *mountanious*, **móntaniā**, *mountain* (from V.Lat. *montaněa*, feminine noun of V.Lat *montaneus*, in turn from Lat. *montanus*), **montíkolos**, *monticule*, **montā**, *go up*, *ascend*, *climb*, *mount*, as in **admontā**, *amount*. It is derived from PIE base **men**, *stand out*, *project*, source of some Western Indo-European words for projecting body parts, as zero-grade **mńtos**, *mouth*, Gmc. *munthaz* (cf. Goth. *munþs*, O.N. *munnr*, O.E. *muþ*, O.Fris. *muth*, M.Du. *mont*, Ger. *Mund*), or **méntom**, *chin*, as Lat. *mentum*; **mńā**, *projecting point*, *threat*, Latin *minae*, giving **mnā́kiā**, *menace*, **prōmnā**, *drive* (*animals*) *onward*, (from **prō**, *forth*, and **mnā**, *drive animals with shouts*), as in **prōmnā́tā**, *promenade*; **mnē**, *project*, *jut*, *threaten*, as **ekmnē**, *stand out*, giving **ekmnénts**, *eminent*, **enmnē**, *overhang*,

giving **enmnénts**, *inminent*, or **promnē**, *jut out*, as in **promnénts**, *prominent*, or **promntósiom**, *promontory*, from p.part. **promntós**.

A proper PIE word for "*mouth*" is **ōs**, as in O.E. *ōr*, ON *oss*, Lat. *ōs*, Skr. *ās*, *oṣṭha*, Av. *aosta*, O.Pruss. *austo*, Lith. *uosta*, Ltv. *osta*, Russ. *usta*, Kamviri *âša*, Hitt. *aiš*. Derivatives affected by rhotacism are usually from Lat. stem *ōr*-, as in **ōsālís**, *oral*, **ōsidhákios**, *orifice*, but most are not affected, as dim. **ṓskillom**, *swing* (from "*small mask of Bacchus*"), giving verb **ōskillā**, *oscillate*, and noun **ōskillā́tiōn**, *oscillation*; also, **ṓskolom**, *osculum*, giving **enōskolā**, *provide with an opening, inosculate*, and also **ṓstiom**, *door*, *ostium*, giving **ōstiā́sios**, *doorkeeper*, *ostiary* (M.Eng. *hostiary*), etc.

117. PIE root **cṓus**, fem. *cow,* or masc. *bull*, *ox*, perhaps ultimately imitative of lowing (cf. non-IE Sumerian *gu*, Chinese *ngu*, *ngo*), gives Gmc. *kōuz* (>*kūz*, cf. O.N. *kú*, O.E. *cū*, O.H.G. *cuo*, Eng. cow, Ger. *Kuh*), Lat. *bōs* (stem *bou*-), Gk. *bous*, Skr. *gauḥ*. Derivatives include **coukánā**, *horn*, *trumpet*, "*bellower*" (compound with ***kan***-, singer, v.i.), **coukanatṓr**, *buccinator*; **cóucalos**, *gazelle* (orig. "*wild cow*"), later *buffalo*, as Gk. βούβαλος (compare with Lat. *būbulus*, and as alternative **cówalos** with Skr. *gavalaḥ*, all referring to wild animals); suffixed **cóunos**, *ox*, as Pali *goṇa*-; **cṓuros**, *wild ox*, as Skr. *gauraḥ*; zero-grade suffixed **cwā**, as in compound **smkmtómcwā**, *hecatomb*, "*sacrifice of a hundred oxen*" (see **sem**, one, **kmtóm**, hundred), Gk. ἑκατόμβη. Compare all IE derivatives: Gmc. *kōuz*, Lat. *bōs*, Osc. *buv*-, Umb. *bum*, Gk. *βονς*, Skr. *gaus*, Av. *gáus*, Pers. *gāv*, Thrac. *bonassos*, Toch. *ko*/*keŭ*, Arm. *kov* Ltv. *govs*, Russ. *govjado*, O.Ir. *bó*, Welsh *buw*, Kamviri *go*, Kashmiri *gāv*, Osset. *gal*.

118. Noun **ármos**, *arm*, *upper arm*, earlier **h₂rmo*-, is attested as Gmc. *armaz* (cf. Goth. *arms*, O.N. *armr*, Eng. *earm*, O.H.G. *aram*, O.S., M.Du., *arm*, O.Fris. *erm*), Lat. *armus*, Gk. ἁρμός, Skr. *irmas*, Arm. *armunk*, O.C.S. *ramo*, O.Prus. *irmo* Osset. *arm*. Interesting derivatives include **árma**, (pl. of **ármom**), *tools*, *arms*, **armatós**, *armed*, **armátā**, *army*, **armátolos**, *armadillo*, **armatósā**, *armature*, loan word ***alármā*** (from O.It. *allarme*, from *all'arme*, "*to arms*", which could be loan-translated as ***ad armā***), **disarmā**, *disarm*, loan word ***gendárme*** ("*mounted soldiers, men-at-arms*", from O.Fr. *gent-d'armes*, which could be loan-translated as **gntármā**); **armoníā**, from Gk. ἁρμός, *joint*, *shoulder*. Base ***arm***- comes ultimately from PIE root ***ar***-, which gives derivaitves like **ártis**, *art*, *skill*, *craft*, from Lat. *ars*, as in verb **artio**, *instruct in the arts*, as Lat. *artīre*, and its p.part. **artitós**, *skilled in the arts*, which gives **artitiános**, *artisan* (from It. *artigiano*, from V.Lat. *artitiānus*), **artístā**, *lettered person*, *artist*, from Med.Lat. *artista*; further suffixed **artiós**, *fiting*, *even*, as Gk. ἄρτιος; **ártus**, *joint* (Lat. *artus*, translation of Gk. *arthron*, v.i.) as in **artíkolos**, *joint*, *article*; **artós**, *tight*, as in **artā**, *compress*, and **komartā**, *coarctate*; **árdhrom**, *joint*, from Gk. ἄρθρον, as in **ardhrótis**, **enardhrótis**, **komardhrótis**, etc.; suffixed superlative **aristós**, *best*, as in **aristokratíā**, *aristocracy*, from Gk. ἀριστοκρατία.

Probably from the same root are (then o-grade suffixed form) **ōrdhio**, *begin to weave*, as Lat. ōrdīrī; further suffixed **ṓrdhōn**, *order* (originally a row of threads in a loom), from Lat. *ōrdō*, as in loan words **ōrdhonā**, *order*, **ōrdhonatós**, *ordinate*, *orderly*, **komōrdhonā**, *coordinate*, **supōrdhonā**, *subordinate*, **enōrdhonā**, *inordinate*, **ōrdhonāsiós**, *ordinary*, etc.; or differently suffixed **ōrnā**, *adorn*, *ornate*, as Lat. *ōrnāre*.

Also variant form **rē**, *consider*, *reckon*, *confirm*, *ratify*, as Lat. *rērī*, as in **ratós**, *calculated*, which gives **rátiōn**, *calculation*, *ration*, *ratio*, *reason*, or **rátā**, *rate*, (Med. Lat. *rata*, from Lat. *prō ratā parte*, "*according to a fixed part*", MIE ***prō rátā párti***); suffixed **redho**, *advise*, *explain*, *counsel*, and **rédhos**, *counsel*, *opinion*, as Gmc.

redan, *redaz* (cf. Goth. *rapjo*, O.N. *radan*, *redan*, O.Fris. *reda*, Du. *raden*, O.H.G. *radja*, *reda*, *ratan*, Eng. *read*, *rede*, *dread*, Ger. *reden*, *Rede*, *raten*), as in **redhislio**, *riddle*, Gmc. *redisljan* (cf. O.E. *rædels*, O.S. *radisli*, M.Du. *raetsel*, Du. *rakadsel*, O.H.G. *radisle*, Ger. *Rätsel*, Eng. *riddle*).

119. For PIE **bhrā́tēr**, *brother*, compare Gmc. *brothar* (cf. Goth. *brōþar*, ON *bróðir*, O.E. *brōþor*, O.H.G. *bruoder*), Lat. *frāter*, Osc. *fratrúm*, Umb. *fratrom*, Gk. φρᾰ́τηρ (*phrātēr*), Skr. *bhrātṛ*, Av. *brātar*, O.Pers. *brātar*, Pers. *barādar*, Kurd. *bra*, Phryg. *brater*, Illyr. *bra*, Toch. *pracer/procer*, Arm. եղբայր (*ełbayr* <**erbair*), O.Pruss. *brāti*, *bratrīkai*, Lith. *broterėlis*, *brolis*, Ltv. *brātarītis*, *brālis*, OCS *братръ*, *братъ*, Russ. *брат*, Polish *brat*, Gaul. brātir, O.Ir. bráthir Welsh *brawd*, Kamviri *bṛo*, Kashmiri *boy*, Osset. *ærvad* Lyd. *brafr-*, Venetic *vhraterei*,. Derivatives include common **bhrātríā**, *brotherhood* ,*phratry*, as O.Cz. *bratřie*, O.Pol. *braciá*, Gk. φρᾱτρία; O.Ind. bhrātryam; also, Latin derivatives **bhrā**, *fra*, *monk*, **bhrāternālís**, *fraternal*, **bhrātérnitā**, *fraternity*, **bhrāternitiā**, *fraternize*, **kombhrā́tēr**, *confrere*, **bhrātrikī́diom**, *fratricide (the killing)*, **bhrātrikī́dā**, *fratricide (the killer)* .

120. For **cénā**, *woman*, *wife*, originally maybe "*honoured woman*", compare Gmc. *kwenōn* (cf. Goth. *qino*, O.N. *kona*, O.S. *quan*, O.E. *cwene*, O.H.G. *quena*, Eng. *quean*), Gk γυνή, O.Ind. *janis*, *gnā*, Av. *jainish, gənā*, Pers. زن (*zæn*), Phryg. *bonekos*, Toch. *śäṁ/śana*, Arm. *kin*, O.Pruss. *genno*, O.C.S. *žena*, Russ. *žena*, Polish *żona*, Alb. *zonjë*, O.Ir. *ben*, Welsh *benyw*; Luw**.** *wanatti*. Derivatives include West Gmc. **cḗnis**, *woman*, *wife*, *queen*, as Gmc. *kwēniz* (cf. Goth. *qéns*, O.E. *cwen*, see "*queen*"), and Greek **cńā** [gʷn̥-ā], giving ***-cnā***, *-gyne*, ***cno-***, *gyno-*, ***-cnós***, *-gynous*, ***-cnia***, *-gyny*, and derivatives with ***cnai-ko-*** (see *a-declension* in nouns for more on this special derivative, which appears also in Armenian, and which gives Mod.Gk. *γυναίκα*), *gyneco-*, as **cnaikokratíā**, *gynecocracy*, **cnaikologíā**, *gynecology*, etc., as well as V.Gk. *γυννίς*, *effeminate*, etc.

For other IE derivatives meaning "*woman*, *wife*" compare:

I.Latin has:

I.A. From PIE **dhē(i)**, *suck*, *suckle*, (also "*produce*, *yield*"), as **dhḗmnā**, *woman*, lit. "*she who suckles*", as Lat. *femina* (cf. Fr. *femme*, Rom. *femeie*, as Mod.Eng. *female*), **dhēmnāinós**, *feminine*, **ekdhēmnā**, *effeminate*, similar to **dhḗlus**, *female*, *fruitful* as Gk. *θήλυς*. Other derivatives from the same root include **dhḗtos**, *pregnancy*, *childbearing*, *offspring*, with adj. **dhētós**, **-ā́**, **-óm**, *pregnant*; suffixed reduced **dhēkuondós**, *fruitful*, *fecund*; **dhḗnom**, *hay* (from "*produce*"), as Lat. *fēnum*, *faenum*; **dhēl(l)ā**, *suck*, as in **dhēl(l)átiōn**, *fellatio*; **dhēlī́ks**, *fruitful, fertile, lucky, happy*, as Lat. *felix*, as in **dhēlīkitā**, *happiness*, *felicity*, **n̥dhēlīkitā**, *unhappiness*, *infelicity*, **dhēlīkitā**, *felicitate*; **dhēlā́**, *mother's breast*, *nipple*, as Gk. θηλή, hence **endodhēlā́**, *endothelium*, **epidhēlā́**, *epithelium*, **medhjodhēlā́**, *mesothelium*. Other derivatives include Gmc. *dē-/dā-* (Goth. *daddjan*, O.Swed. *dia*, O.H.G. *tila*), Skr. *dhayati*, *dhayah*, O.C.S. *dojiti*, *dojilica*, *deti*, Russ. *дemь*, Pol. *dzieję*, O.Prus. *dadan*, Lith. *dele*, O.Ir. *denaim*, *dinu*.

I.B. From **dómūnos**, *lord* (cf. O.Ind. *damūnas*, Lat. *dominos*), is **dómūnā**, *woman*, *woman in charge*, *lady*, Lat. *domina* (cf. It. *donna*, Cat. *dona*, also found as Fr. *dame*, Spa. *doña/dueña*, Pt. *dona*), derived from **dṓmos**, *house*, already seen. From Fr. *dame* are loan words as Nor. *dame*, Ger. *Dame*, etc. as well as Eng. *madame*, *madam*, *ma'am*, from O.Fr. *ma dame*, lit. "*my lady*", from L. *mea domina* (cf. It. *madonna*), MIE ***mā dómūnā***.

I.C. Lat. *mulier* (cf. Spa. *mujer*, Pt. *mulher*, Rom. *muiere*) is reconstructed as MIE **mliḗr**. Although probably unrelated, compare ***melg***, *to milk* (in parallel with the pair ***dhē-dhḗmnā***), as in zero-grade **mĺgē**, *to milk*, as

Lat. *mulgēre*; full grade **mélg**, *to milk*, as Gmc. *melkan* (cf. O.N. *mjolka*, O.E.,.O.H.G. melcan Du., Ger. *melken*), and **mélugs**, *milk*, as Gmc. *meluks* (cf. Goth. *miluks*, O.N. *mjölk*, O.E. *meoluc*, *milc*, O.H.G. *miluh*, Du. *melk*, Ger. *Milch*); compare Lat. *mulgeō*, Gk. *amelgō*, Skr. *marjati*, Toch. *malke/malkwer*, Lith. *melžti*, Russ. *molozivo*, O.Ir. *bligim*, Welsh *blith*, Alb. *mjelalso*. Also, variant **melks**, *milk*, compare Gk. ἀμέλγω, Lith. *malkas*, *melzu*, Ltv. *malks*, O.C.S. млѣко, Russ. *молоко*, Polish *mleko*.

A similar (maybe related through an earlier zero-grade *-(***m**)***lk-t-**) PIE word is (**ga**)**lakts**, *milk*, as Gk. *galakt-*, Lat. *lact-*, also Hitt. *galank*, found in (**ga**)**laktiós**, *milky*, **galaktikós**, *galactic*, **galáktiā**, *galaxy*, etc.

PIE **mélits** (early **mélh₁-it-*), *honey*, could be also originally related; compare Gmc. *miliths* (cf. Goth. *miliþ*, Eng. *mildēaw*, O.H.G. *milltou*, Eng. *mildew*, Ger. *Mehltau*), Lat. *mel*, Gk. *melitos*, Arm. *mełr*, Gaul. *Melissus*, O.Ir. *mil*, Welsh,Cor. *mel*, Alb. *mjal*; Hitt. *milit*, Luw. *mallit-*, Palaic *malit-*.

And all the aforementioned PIE bases may have been originally (but unlikely) derived from root **mel**/**mol** (from older **melh₁*), *to grind, rub, crush*, with derivatives referring to various ground or crumbling substances. Common derivatives include **méluōn**, *flour*, *meal*, as Gmc. *melwan* (cf. Goth. *malan*, O.N. *mala*, O.E. *melu*, O.H.G. *malan*, Eng. *meal*, Ger. *malen*), **mĺdā**, *soil*, *earth*, as Gmc. *muldō* (cf. Goth. *mulda*, O.N. *mold*, O.Fris.,O.E. *molde*, O.H.G. *molta*); **molā́**, *millstone*, *mill* (*coarse meal customarily sprinkled on sacrificial animals*), as in Lat. *molere*, which gives **molāsís**, *molar*, **molínom**, *mill*, *moulin*, **enmolā**, *immolate*, **ekmolo**, *grind out*, as in **ekmoloméntom**, *emolument*, *gain*, originally *a miller's fee for grinding grain*; suffixed **mélijom**, *millet*, as Lat. *milium*; suffixed variant **málnios**, *hammer*, *mallet*, Lat. *malleus*; zero-grade Greek **mĺā**, **mĺos**, *millstone*, *mill*; extended **mlĺnos**, *pancake*, as O.Russ. *blinu*. Also, compare Umb. *kumaltu*, Toch. *malyw-/mely-*, Arm. *malem*, Lith. *malti*, Ltv. *malt*, OCS *melję*, Russ. *melju*, Polish *mleć*, O.Ir. *melim* Welsh *malu*, Alb. *miell*; Hitt. *mallanzi*.

PIE root **mel** means also:

a. IE (**s**)**mel**, "soft", with derivatives referring to soft or softened materials of various kinds. Extended as **meldo**, *melt*, as Gmc. *meltan*; **meldio**, *milt*, as Gmc. *miltja* (cf. O.E., M.Du. *milte*), **móldos**, *malt*, as Gmc. *maltaz* (cf. O.N. *malt*, O.E. *malt*, *mealt*, Ger. *Malz*); suffixed variant **mlédsnos**, *slime*, as Gk. *blennos*; **mldús**, *soft*, as Lat. *mollis*; nasalized variant **mlandós**, *smooth*, *caressing*, *flattering*, *soft-spoken*, as Lat. *blandus*; variant form **smeld**, *smelt*, as Gmc. *smelt* (cf. O.E. *smelt*, *smylt*, O.H.G. *smalz*, M.Du, M.L.G. *smelten*, Ger. *Schmelz*, and O.Fr. *esmail*), also loan word (from a Gmc. source into It. *smalto* or Prov. *esmalt*), **smáldos**, *smalt*, *enamel*, *glaze*; extended **meldhiós**, *mild*, as Gmc. *mildjaz* (cf. Goth. *mildiþa*, O.N. *mildr*, O.E. *milde*, O.Fris. *milde*, O.H.G. *milti*, Du. *mild*); **máldhā**, *mixture of wax and pitch*, as Gk. *maltha*; **mélskos**, *mild*, *mellow*, as Gmc. *milskaz* (cf. O.E. *melisc*, *mylsc*, Eng. *mulch*), mlakos, soft, as Gk. **mlakós** [mḷ̊-a-'kos], *soft*, as Gk. μαλακός, as in **mlakologíā**, *malacology*, **osteomlákiā**; Celtic **móltōn**, *sheep*, as O.Fr. *moton* into Eng. *mutton*; zero-grade **mlús**, *blunt*, *dull*, *dim*, as Gk. *amblus*. Other derivatives include Skr. *mrduḥ*, Lat. *molere*, Gk. *myle*, O.C.S. *mlato*, also borrowing Finnish *mallas*.

English "*soft*" comes from O.E. *softe* "gentle, easy, comfortable", from W.Gmc. *samfti*, MIE from Gmc. *samftijaz* "*level, even, smooth, gentle, soft*" (cf. O.S. *safti*, O.H.G. *semfti*, Ger. *sanft*, M.Du. *sachte*, Du. *zacht*), MIE **sombhtís**, **sombhtijós**, from IE base **som**- "*fitting*, *agreeable*", as in modern English compound **sombhtoworā́**, *software*.

For PIE **wer**, *perceive*, *watch out for*, compare (**kom**)**worós**, *watchful*, *aware*, *alert*, *wary*, as Gmc. (*ga*)*waraz* (cf. Goth. *wars*, O.N. *varr*, O.S. *giwar*, O.E. (*ge*)*wær*, O.H.G. *giwar*, M.Du. *gheware*, Eng. *wary*, Ger. *gewahr*); suffixed **wórtos**, *guard*, watching, *keeper*, as Gmc. *wardaz* (cf. O.S. *ward*, O.N. *vörðr*, O.E. *weard*, O.H.G. *wart*, also Fr.,Da. *garde*, Spa.,Pt. *guarda*, also into Eng. '*lord*' and '*steward*'), and **wortā**, *guard*, *ward*, as Gmc. *wardōn* (cf. O.N. *varða*, O.S. *wardon*, O.E. *warian*, *wearian*, O.Fris. *wardia*, O.H.G. *warten*, M.Du. *waerden* Ger. *warten*, O.N.Fr. *warder*, O.Fr. *guarder*); **worā́**, *goods*, *protection*, *ware*, as Gmc. *waro* (cf. O.E. *waru*, O.Fris. *were*, M.Du. *were*, M.H.G., Ger. *ware*, Du. *waar*, Swed. *vara*, Dan. *vare*), as in English loan translations ***sombhtworā́***, *software*, and ***kartuworā́***, *hardware* (see **kratós**); also, suffixed **wóruos**, *guard*, as Gk. *ouros*; variant **sworā**, see, as Gk. *horān*, in **panswóramn**, *panorama*; suffixed **werē**, *respect, feel awe for*, as Lat. *uerērī*, in **rewerē**, *revere*.

b. MIE **mel**, *strong*, *great*, **meliós**, *better* (originally "*stronger*"), as Lat. *melior*, in **meliosā**, *meliorate*; suffixed zero-grade **mltos**, *much*, *many*, as Lat. *multus*; compare also Osc. *moltam*, Umbr. *motar*, *mutu*, Gk. *mela*, Ltv. *milns*.

c. IE **mel**, *false*, *bad*, *wrong*, gives Latin **mális**, *ill*, **malós**, *bad*, (< ***mali-gnós***, *harmful,* from PIE **gen**), as in **malghábitos**, *malady*, from **mali-ghabitós**, *in poor condition* (see **ghabh**), **malā́ria**, "*bad air*", *malaria* (from ***malā́-āweriā***), **malidhaktṓr**, *malefactor*, **malidhakós**, *malefic*, etc.; zero-grade **mls**, into **mlsbhāmós**, "*speaking evil*", *blaspheme* (from **bhā**, *speak*); **meliós**, *treacherous*, as Av. *mairiia-*, into Eng. '*markhor*'.

II. Germanic has:

II.A. English "*wife*" is possibly from PIE nominal root **ghwībhs**, *shame*, *pudenda*, as Toch. *kip*/*kwipe*, "*female pudenda*", giving (**gh**)**wī́bhom**, *woman*, *wife*, (with semantic weakening from the original meaning) from Gmc. *wībam* (cf. O.N. *vif*, O.S., O.Fris., O.E. *wif*, Dan., Swed. *viv*, M.Du. *wijf*, O.H.G. *wib*, Ger. *Weib*). Some reconstruct this root as ultimately from the same source as general IE **cénā**, *woman*.

English "*woman*" is an especial compound restricted to English and Dutch, lit. "*woman-man*", O.E. *wīfmann*, from *wīf* ('*adult female*', Eng. *wife*) and *mann*, later *wimman* (pl. *wimmen*), as Du. *vrouwmens*, "*wife*"; it was originally opposed to *wæpen-mann,* "*weapon-man*", *male*, with clear sexual overtones.

MIE **wébnom**, *weapon*, is the regular IE reconstruction of Gmc. *wepnam* (cf. O.S. *wapan*, O.N. *vapn*, Dan. *vaaben*, O.Fris. *wepin*, M.Du. *wapen*, O.H.G. *waffen*, Ger. *Waffe*), without known derivatives outside Germanic.

II.B. Indo-European **prṓwā**, *mistress*, *woman*, gives Gmc. *frawō* (cf. O.H.G. *frouwa*, M.H.G. *vrouwe*, Ger. *Frau*, Du. *vrouw*, Yiddish *froy*), and comes from PIE **per**.

III.Common Hindustani *aurat* (cf. Urdu عورت, Hindi औ) comes from Pers. عورت, in turn from Arabic عَوْرَة (*imperfection*), although the usual Persian word is *zæn*, from Indo-European **cénā**.

121. Proto-Indo-European **ékwos** may have been a suffixed form ***eku***- akin to the lengthened o-grade adjective **ōkús**, *swift, fast* (as Lat. *ocior, ocius*, Gk. ὠκὺς, Skr. *āśús*); compare Gmc. *ekhwaz* (cf. Goth. *aiƕa*, O.N. *iór*, O.Eng. *eoh*) Lat. *equus*, Gk. ἵππος, Skt. *aśva*, Av. *asva-*, Phryg. *es'*, Pers. *aspa*/*asb*, Kamviri *ušpa*, Toch. *yuk/yakwe*; Old. Pruss. *awinan*, Lith. *ašva*, Gaul. *epos*, O.Ir. *ech*/*each*; Welsh *ebol*; Arm. *ēš*, Thrac. *esvas*, Venetic *ekvon*; Hitt. *aśuwas* Lyc. *esbe-*. Common words derived from Greek are **ekwopótmos**, *hippopotamus* (from Gk. **pótmos**, *river*, from **pet**, v.i.), lit. "*river-horse*", **ekwokámpos**, *hippocampus*, **ekwodrómos** (from Gk. -δρόμος, *racecourse*), *hippodrome*, **ekwogrū́ps**, *hippogriff* (from It. *grifo*, Lat. *gryphus*, Gk. *grūps*).

For PIE **pet**, *rush*, *fly*, compare derivatives **pétrā**, *feather*, as Gmc. *fethrō* (cf O.N. *fjöðr*, O.E. *feðer*, M.Du. *vedere*, Ger. *Feder*), **peto**, *go toward*, *seek*, as Lat. *petere*, as in **petítiōn**, **petolánts**, *petulant*, **adpeto**, *strive after*, **adpetítos**, *strong desire, appetite*, **kompeto**, *compete*, **enpeto**, *attack*, **énpetus**, *impetus*, **enpetuós**, *impetuous*, **repeto**, *repeat*; **pétnā**, *feather*, *wing*, as Lat. *penna*, *pinna*, as in diminutive **petnā́kolom**, *pinnacle*; **propetiós** (in compound with ***pro***-, *forward*), *favorable*, *gracious*, *propitious*, originally a religious term meaning "*falling or rushing forward*", hence "*eager*," "*well-disposed*" said of the gods; also, from alternative root **pte**-, **ptérōn**, *feather*, *wing*, and **ptérūks**, *wing*, as Gk. *πτερον*, as in compounds **ptero**- and -**pteros**, -**pterūks**; **ptílōn**, *soft feathers, down, plume*; **ptḗnos**, *winged*, *flying*; reduplicate **pipto**, *fall*, and verbal adjective **ptōtós**, *falling*, *fallen*, and nominal derivatives **ptṓtis**, *fall*, *ptosis*, and **ptṓmn**, *a fall, fallen body, corpse*, as in **kompipto**, *converge*, *coincide*, from which **komptōtós**, *intersecting*, and **n̥komptōtós**, *not intersecting, asymptote*, and also **kómptōmn**, *a happening, symptom of a disease*; o-grade **pótmos** (in compound with Gk. suffix -*amo*-), "*rushing water*", *river*; **péttrom**, *feather*, *leaf*, as Skr. *pattram*.

Modern English "*horse"* comes from Gmc. *khursaz* (cf. O.Eng. *hors*, O.N. *hross*, O.Fris. *hors*, M.Du. *ors*, Du. *ros*, O.H.G. *hros*, Ger. *Roß*), which has an uncertain origin; following Germanic phonetic changes it should be translated as MIE **kŕsos**, which is possibly related with PIE **kers**, *run* (cf. O.N. *horskr*, Lat. *currere*, Lith. *karsiu*, Celtic *karr*), hence maybe originally the same PIE word **kŕsos**, giving Celtic ***kárros***, *wagon*.

122. For PIE **gher**, *grasp*, *enclose*, compare derivatives as verb **ghrdhio**, *gird*, *girt*, and noun **ghrdhs**, *girdle*, *girth*, as Gmc. *gurd*- (cf. O.N. *gjördh*, O.E. *gyrdan*, *gyrdel*); suffixed o-grade **ghórtos**, enclosure, hence *garden*, *pasture*, *field*, as Gmc. *gardaz* (cf. Goth. *gards*, O.N. *garðr*, O.E. *geard*, O.Fris. *garda*, O.H.G. *garto*, Du. *gaard*), Lat. *hortus*, Gk. *khortos*, O.Ir. *gort*, Bret. *garz*, and also, with a wider meaning of *house*, *village*, *town*, *city*, compare Goth. *garþs* and O.Ice. *gerði*, Phryg. *-gordum*, Gk. *κορθίλαι*, Alb. *garth*, *-dhi*, Toch. *kerciye*, and (not satemized) O.Ind. *gr̥hás*, Av. *gərədō*, Lith. *gar̃das, gardinỹs*, O.C.S. *ɛradъ*, Rus. *ɛorod*, *-ɛrad*, Pol. *gród*, hence Proto-Balto-Slavic *gardŏs*, suggesting an irregular evolution (for satemized Baltic forms, cf. O.Pruss. *sardis*, Ltv. *zardi*). Also, prefixed and suffixd zero-grade **komghŕtis**, *enclosure*, *yard*, *company of soldiers*, *multitude*, *cohort*, as Lat. *cohors*, *cohortis*, or *cors*, *cortis*, hence also *court*, as in **komghrtisíā**, *courtesy*, *curtsy*, or **komghrtítiā**, *cortege*, **komghrtitiā́nos**, *courtier*, (from It. *cortigiano*) and **komghrtitiā́nā**, *courtesan*; and Greek **ghóros**, dancing ground, dance, dramatic chorus, as in **ghorā́lis**, *choral*, *chorale* (for Med.Lat. *cantus chorālis*, MIE ***ghorālís kántos***), or **ghorístā**, *chorister*, etc.

123. Adjective **swādús**, *sweet*, *pleasant*, is the origin of Gk. ἡδυς, Skr. *svādu*, Av. *x^{w}āsta*, Toch. *swār*/*swāre*, Lith. *sūdyti*, Polish *słodki*, Gaul. *Suadu*, O.Ir. *sant*, Welsh *chwant*, and even of further suffixed **swāduís*, *delightful*, as Lat. *suāuis*. Also, compare derivatives from PIE root **swād**-, as **swādiós**, *sweet*, as Gmc. *swotijaz* (cf. Goth. *sutis*, O.N. *sötr*, O.S. *swoti*, O.E. *swēte*, O.H.G. *suozi*, M.Du. *soete*, Eng. *sweet*, Ger. *süß*); **swādē**, *advise*, *urge* (<"*recommend as good*"), as in modern derivatives **swā́stiōn** (<****swādtio***-), *advice*, **disswādē**, **perswādē**; also, **swā́dōs**, *pleasure*, *aedes*, as Gk. ἡδος, and further suffixed **swādonā́**, *pleasure*, as Gk. ἡδονή, giving modern derivatives **swādonikós**, *hedonic*, and **swādonísmos**, *hedonism*.

124. PIE root **neqt**- comes probably from an older verbal root **nec**, *be dark, be night*. Common words attested are usually from o-grade **nóqts**/**nóqtis** (but compare older Hitt. *nekuz*, maybe from IE II ***néqus***), as Gmc. *nakhts* (cf. Goth. *nahts*, O.N. *natt*, O.E. *niht*, *neaht*, O.H.G. *naht*, O.Fris., Du., Ger. *nacht*), Lat. *nox* (stem *noct*-),

Gk. *vvξ*, Skr. *nakti*, Toch. *nakcu/nekcīye*, Old Prussian *naktin*, Lith. *naktis*, Ltv. *nakts*, O.C.S. *nosti*, Russ. *ночь*, Polish *noc*, O.Ir. *innocht*, Welsh *nos*, Alb. *natë*. Derivatives include **nóqtuā**, *night owl*; and suffixed plain verbal root **necrós**, *black*, as Lat. *niger*, as in **denecrā**, *blacken*, *soil*, hence *denigrate*.

125. For PIE **mreghús**, *brief*, compare zero-grade **mrghijós**, "*short-lasting*", hence *pleasant*, as Gmc. *murgijaz* (cf. Goth. *gamaurgjan*, O.E. *myrige*, O.H.G. *murgi*, Eng. *merry*), or extended **mreghuís*, as Lat. *brevis*; compare also Gk. *brakhus*, Av. *mərəzujiti*.

126. Indo-European **kan**, *sing*, gives Gmc. *khannjo* (cf. O.E. *hana*, O.H.G. *henna*, M.Du. *henne*), *khan(e)nī* (cf. O.E. *hen, henn*), Lat. *canere*, frequentative **kantā**, as Lat. *cantāre*, as in **kantā́tā**, **adkántos**, *accent*, **enkantā**, *enchant*, **enkantā́tiōn**, *incantation*, **enkántēiuos**, *incentive*; suffixed **kánā**, *singer*; **opskan**, "*one that sings before the augurs*", as Lat. *oscen*, *a singing bird used in divination*; **kánmēn**, *song*, *poem*, *charm*, Lat. *carmen*.

127. Different PIE words for "*ship*, *nave*":

I.For Indo-European **nā́us/náwis**, *ship*, *nave*, possibly from an earlier verbal root **nau**, *swim*, compare O.E. *nōwend*, ON *nōr*, Lat. *nauis*, Gk. *vavς*, Skr. *nāu*, Av. *navāza*, O.Pers. *nāviyā*, Arm. *nav*, Ir. *nau*, Welsh *noe*, Alb. *anije*, Osset. *nau*. Common derivatives include **nawālís**, *naval*, **nawigā**, *navigate*, **náwigiom**, *ship*, (pl. **náwigia**, *ships*, from which Eng. *navy*); from Gk. ναυς, ναύτης, are MIE **náutā**, *sailor*, *mariner*, **nautikós**, *nautical*, **nautílos**, *sailor*, *nautilus*, **āweronáutā**, *aeuronaut* (see **wer**, *air*), **aqanáutā**, *aquanaut* (see **aqā**, *water*), **astronáutā**, *astronaut* (see **astḗr**, *star*), **kosmonáutā**, *cosmonaut* (from Gk. ***kósmos***, *cosmos*).

I.1. The English term "*mariner*" comes from PIE **móris**, *sea*, *lake*, *pond*, as Gmc. *mariz* (cf. Goth. *marei*, O.N. *marr*, O.E. *mere*, O.H.G. *marī*, M.Du. *meer*, Ger. *Meer*), Lat. *mare*, Skr. *maryādā*, O.Pruss. *mary*, Lith. *marios*, Ltv. *mare*, O.C.S. *morje*, Russ. *more*, Polish *morze*, Gaul. (*Are*)*morici*, O.Ir. *muir*, Welsh *môr*, Alb. *përmjerr*; giving derivatives **móriskos**, *marsh*, *water-logged land*, as Gmc. *mariskaz* (cf. O.E. *mersc*, *merisc*, O.Fr. *maresc*, *mareis*, Du. *mars*, Ger. *Marsch*); **morinós**, *marine*, **moriqéltosā**, *mariculture*, **oltrāmorinós**, *ultramarine*.

I.2. For IE **áwis** (earlier **h₂ewis*), *bird*, compare Lat. *avis*, Umb. *avif*, Gk. *aetos*, Skr. *vis*, Av. *vīš*, Arm. *hav*, Lith. *višta*, Ltv. *vista*, Ir. *aoi*, Welsh *hwyad*; derivatives include **awiāsiós**, *aviary*, **awiqéltosā**, *aviculture*, **awiátiōn**, *aviation*, and MIE loan word for *aeroplane*, **awiőn** (cf. Fr. *avion*, Spa. *avión*, Pt. *avião*, Rom.,Slo. *avion*); **awispéks**, *augur*, *auspice* ("*observer of birds*", see **spek**, *observe*).

Possibly from o-grade are **ówjom**, *egg* (alsoa alternative form **ójjom**, both from earlier **h₁óh₂wiom*), as Gmc. *ajjam* (cf. Goth. *ada*, O.N. *egg*, O.E. *ǣg*, O.H.G. *ei*, Eng. [*cockn*]*ey*) Lat. *ōuum*, Gk. *ōion*, Pers. *xāyah*, Kurd. *hék*, Arm. *dzu*, O.C.S. ajĭse, Rus. *jajco*, Ir. *ubh*, Welsh *ŵy*, Bret. *ui*, Alb. *ve*,*vo*. From Latin are **owjalís**, *oval*, **ówjolos**, *ovule*, *ovolo*, or **owjásios**, *ovary*; from dim. **owjókos**, O.Ira. *āvyakah*, are MIE '*partial*' loan word ***owjā́r*** or '*full*' loan word ***kawjā́r***, *caviar*, from M.Pers. *khāvyar*, through Turkish into French *caviar*.

For "*aeroplane*", different words exist in MIE, as loan words (from English using Latin words) **āweroplánom**, from **ā́wēr**+**plánom** (cf. Lat. *aeroplanum*, Eng. *airplane*, Gk. *αεροπλάνο*, It.,Spa.,Pt. *aeroplano*, Lith. *aeroplanas*, Russ. *аэроплан*, Pol. *aeroplan*, Alb. *aeroplan*, even Saami *jarplan*, Hebrew *ăvirōn*, etc.), Germanic **pleukomāghanā́**, from **pléuk**+**māghanā́** (cf. Ger. *Flugmaschine*, Da. *flyvemaskine*, *flyver*, Swe. *flygmaskin*, Fris. *fleanmasine*) or ***plánom*** (cf. Swe. [*flyg*]*plan*, Eng. *plane*), Balto-Slavic [**somo**]**lékts** (m., cf. Lith. *lėktuvas*, Russ. *самолёт*, Ukr. *літак*, Pol. *samolot*, Cz. *letadlo*, *letoun*, Slk. *lietadlo*, Bulg. *самолет*, Slo. *letalo*).

An Indo-European root (**á**)**wer**, *raise*, *lift*, *hold suspended*, older *$h_2$wer*, is reconstructed for different Greek derivatives: **awero**, *raise*, and **awrtériā**, *windpipe*, *artery*, also **metáworos**, *meteor*, "*lifted in the air*" (from **méta**-, *meta*-, and -**aworós**, *lifted*), Gk. μετέωρος; **ā́wēr**, *air* (from lengthened ***āwer***-), as in **āweriālís**, *aerial*, or ***malā́-ā́weriā***, *malaria*, lit. "*bad air*" (see Lat. **malós**, *bad*); zero-grade **áurā**, *breath, vapor*, *aura*.

For Indo-European **pleu**, *flow*, compare metathesized Lat. *pluere*, *rain*, as in **plewiós**, *rainy*, *pluvious*, **plewiālís**, *pluvial*; Greek **pléutis**, *sailing, pleusis*; zero-grade suffixed **plúos**, *trough*, *basin*, dissimilated in Greek *pyelos*; suffixed **pléumōn**, "*floater*", *lung*, as Lat. *pulm* (from *plumon*), Gk. *pneumōn* (influenced by **pneu**, "*breath*"), *Skr. kloman*, *O.Pruss.* plauti, *Lith. plaučiai*, *Ltv. plaušas*, *Russ. pljuče*, *Serb. pluća*, as in **pleumonós**/**pleumonāsiós**, *pulmonary*, or **pleumoníā**, *pneumonia*; o-grade **plóutos**, *wealth*, *riches* (<"*overflowing*"), as in **ploutokratíā**, *plutocracy* (see **kratos**), as Gk. πλουτοκρατία; o-grade lengthened **plōwo**, flow, as Gmc. *flōwan* (cf. O.N. *floa*, O.E. *flōwan*, O.H.G. *flouwen*, Du. *vloeien*), suffixed **plṓtus**, *flowing water*, *deluge*, *flood*, as Gmc. *flōthuz* (cf. Goth. *fiodus*, O.N. *floð*, O.E. *flōd*, O.Fris. *flod*, M.Du. *vloet*, Ger. *Flut*); extended **pleuko**, *soar through air*, *fly*, also *swim*, as Gmc. *fleugan* (cf. O.N. *flügja*, O.E. *flēogan*, O.H.G. *fliogan*, M.Du. *vlieghen*, Ger. *fliegen*), Lith. *plaukiu*, and **pléukā**, *fly*, *flying insect*, as Gmc. *fleugōn* (cf. O.S. *fleiga*, O.N. *fluga*, O.E. *flēoge*, M.Du. *vlieghe*, Ger. *Fliege*), and also maybe **pleuko**, *flee, take flight*, as Gmc. *fleukhan* (cf. O.N. *flöja*, O.E. *flēon*, O.H.G. *fliohan*, Du. *vlieden*, Ger. *fliehen*, although sometimes reconstructed as Gmc. *thleukhan*, as Goth. *þliuhan*, then later influenced by this root), causative **ploukio**, *put to flight*, as Gmc. *flaugjan* (cf. O.E. *flygan*, *flegan*, Eng. *fley*), **pléukikā**, *arrow*, from Gmc. *fleugika* (cf. Frankish into O.Fr. *flèche*, It. *freccia*, Spa.,Pt. *flecha*); zero-grade **plúktis**, *flight*, as Gmc. *flugtiz* (cf. O.E. *flyht*, *fluht*, Low Ger. *flugt*, Ger. *Flucht*); also **plúgos**, *bird*, dissimilated as Gmc. *fuglaz* (cf. Gothic *fugls*, O.E. *fugol*, O.N. *fugl*, M.Du. *voghel*, Ger. *vogel*, Goth. *fugls*), also in **plúgilos**, *wing*, as Gmc. *flugilaz* (cf. M.H.G. *vlügel*, Ger. *Flügel*); extended **pleudo**, *float*, *swim*, as Gmc. *fleutan* (cf. O.E. *flēotan*), and **pléutos**, *fleet*, *swift*, as Gmc. *fleutaz* (cf. O.N. *fljōtr*, O.E. *fleot*), also as zero-grade **plud(i)o**, *float*, as Gmc. *flotōn* (cf. O.E. *flotian*, Fr. *flotter*, Spa. *flotar*, also from same root Lith. *plaukti*, Du. *vloeien*),

PIE **pneu**, *breath*, is probably an imitative root, which appears in **pneuso**, *sneeze*, as Gmc. *fneusan* (cf. O.N. *fnysa*, O.E. *fnēosan*, O.H.G. *fnehan*, Eng. *sneeze*), zero-grade **pnus(k)o**, *sneezing*, *snore*, as Gmc. *fnus(k)an* (affected by rhotacism, cf. O.E. *fnora*, similar to M.H.G. *snarchen*, Du. *snorken*, Ger. *schnarchen*, Swed. *snarka*), and variant **pneso**, *snort*, *gnash one's teeth*, as Gmc. *fnesan* (cf. O.E. *fnæran*, Eng. *sneer*). Modern Greek derivatives include o-grade **pnówiā**, -**pnowiā**, *breathing*, and **pnowā́**, *breath*, as in **n̥pnówiā**, *apnea*, (**a**)**supnówiā**, *eupnea*, **superpnówiā**, *hyperpnea*, **supopnówiā**, *hypopnea*, etc.; also, **pnéumn**, *breath*, *wind*, *spirit*, as in **pneumo**-, **pneumnto**-.

Also, a Modern Indo-European reconstructed **lúptus**, *air*, *sky*, is the source of Gmc. *luftuz* (cf. Goth. *luftus*, O.E. *lyft*, O.N. *lopt*, O.H.G. *luft*, Du. *lucht*).

For **magh**, *be able, have power*, compare Gmc. *magan* (cf. Goth. *magan*, O.N. *mega*, O.E. *magan*, O.H.G. *magan*, Ger. *mögen*, Eng. *may*, also into V.Lat. *exmagāre*, MIE [**d**]**eksmaghā**, "*deprive of power*", *frighten*, O.Fr. *esmaier*, Anglo-Norman *desmaiier*, Eng. *dismay*, Spa. *desmayar*), Att.Gk. μῆχος, Dor.Gk. μᾶχος, Skr. *magha*, Toch. *mokats*, Arm. *mart'ans*, Lith. *mãgulas*, *magùs*, *mégstu*, *mégti* Ltv. *megt*, Sla. *mogǫ*, *mogti*, (cf. O.C.S. *могѫ*, *мошти*, O.Russ. *могу*, *мочи*, Russ. *мочь*, Pol. *móc*, *mogę*, Sr.-Cr. *могу*, *моћи*, Cz. *mohu*, *můžeš*,

moci); **mághtis**, *power*, as Gmc. *mahtiz* (cf. Goth. *mahts*, O.N. *mattr*, O.E. *miht*, *meaht*, O.Fris., M.Du. *macht*, Ger. *Macht*, Eng. *might*), **mághinom**, *power*, *strenght*, as Gmc. *maginam* (cf. O.E. *mægen*, O.N. *megenn*, Eng. *main*); suffixed lengthened **māghaná́**, *machine*, *device*, "*that which enables*", from Att.Gk. *μηχανή*, Dor.Gk. *μαχανά̄*, **māghanikós**, *mechanic*, and **māghanísmos**, *mechanism*, from Mod.Lat. *mēchanismus*, or ***māghano***-; suffixed **mághus**, *magus*, *member of a priestly caste, magician*, (from "mighty one"), as O.Pers. *maguš* (said by ancient historians to have been originally the name of a Median tribe, borrowed into Gk. μάγος and then into Lat. *magus*), as in **maghikós**, *magic*, or **mághikā**, *sorcery*, *magic*, (as O.Fr. *magique*, from Lat. *magice*, from Gk. *magikē*, fem. of *magikos*) or **Mághes**, *Magi*.

Common MIE **lekto**, *fly* (cf. O.C.S. летѣти, лештѫ, Russ. *лететь*, Pol. *lecieć*, *lecę*, also O.C.S. лѣтати, Russ. *летать* Pol. *latać*), and noun **lekts**, "*flyer*", *airplane*, (cf. Russ. *лёт*, Sr.-Cr.,Slo. *lèt*, Pol. *lot*, Cz. *let*) is reconstructed for Balto-Slavic common words, cf. Lith. *lekiù*, *lẽkti*, *lakstýti*, Ltv. *lèkt*, *lęcu*, *lècu*, *lę̃kat*; compare also O.H.G. *lecken*, Nor. *lakka*, Ger. *löcken*, Lat. *lōcusta*, Gk. ληκᾶν, λάξ, λακτίζω.

I.3. PIE (**a**)**stḗr**, earlier **h₂ster*, is found in Gk. ἀστήρ, **asterískos**, *asterisk*, **asterowéidā**, *asteorid* (in compound with Gk. *-o-ειδης*, IE ***-o-weidā***, from **wéidos**, *shape*, *form*, from **weid**, *see, know*) as Gk. ἀστεροειδής, ***astro***-, as Gk. ἀστρο-, **astrālís**, *astral*, **ástrom**, as Gk. *astron*, into Lat. *astrum*, as in **disástrom**, *disaster*; suffixed **stersā**, Gmc. *sterzōn* (cf. Goth. *stairno*, O.S. *sterro*, O.N. *stjarna*, O.E. *steorra*, O.Fris. *stera*, O.H.G. *sterro*, Du. *ster*, Ger. *Stern*), **stérlā**, as Lat. *stēlla*, as in **sterlalís**, *stellar*, **komsterlátiōn**, *constellation*. Also, compare Skr. *tāras*, *stṛ́bhis*, Pers. *setāre*, Kurd. *stérk*/*estére*, Oss. *sthaly*, Toch. *śre*/*śćirye*, Arm. *astł*, Welsh *seren*, Kam. *ṛ̂što*, Hitt. *šittar*.

II. Indo-European **bheid**, *split*, as Gmc. *bītan* (cf. Goth. *beitan*, O.E. *bītan*, O.Fris. *bita*, M.Du. *biten*, Ger. *beissen*), zero-grade **bhídis**, *bite*, *sting*, as Gmc. *bitiz* (cf. O.E. *bite*), or **bhídā**, *bit, a pice bitten off*, as Gmc. *bitōn* (cf. O.N. *biti*, O.E. *bite*, *bita*), **bhidhrós**, *bitter*, *sharp*, as O.E. *bit(t)er*, **bhoidhio**, *harass or hunt with dogs*, as Eng. *bait* or *abet* , Gmc. *baitjan* (cf. O.N. *beita*, O.Fr. *beter*), **bhóids**, *boat* (< "*dugout canoe*" or "*split planking*"), as Gmc. *bait-* (cf. O.E. *bāt*, Ger., Du. *boot*, Da.,Nor.,Swe. *båt*, also O.Fr. *batel*, Fr. *bateau*, It. *battello*, Spa. *bote*, Sco. *bàta*, Welsh *bad*, Hi. pot, even Estonian *paat*, Japanese *bōto*, etc.); also nasalized zero-grade **bhindo**, *split*, as Lat. *findere*, with p.part. **bhistós** (<****bhidto***-) giving **bhístiōn**, *fission*, **bhistṓsā**, *fissure*.

III.Greek *baris* "*Egyptian boat*", from Coptic *bari* "*small boat*", was adopted as **bár(i)kā** in Latin, as O.Fr. *barge* (from M.L. *barga*, and into Bret. *bag*, Eng. *barge*), Gk. *βάρκα*, It. *barca*, Spa., Pt. *barco*, *barca*, Rom. *barcă*, Alb. *varkë*, Slo. *barka*.

IV. Germanic "*ship*" is reconstructed as MIE **skibs**, *ship*, *boat*, from Gmc. *skip-* (cf. O.N., O.S., Goth. *skip*, O.E., M.Du. *scip*, O.H.G. *skif*, Dan. *skib*, Swed. *skepp*, Du. *schip*, Ger. *Schiff*, Yid. *shif*), possibly a zero-grade extended derivative from **skei** (in turn derived from PIE **sek**), *cut, split*, giving suffixed **skéinā**, *shin*, *shinbone*, (as O.E. *scinu*), or **ekskéinā**, *backbone*, *chine*, as O.Fr. *eschine*; from Lat. *scire*, "*know*" (from "*separate one thing from nother, discern*"), are MIE **skejéntia**, *knowledge*, *learning*, *science*, **komskejéntiā**, *conscience*, inchoative **skeisko**, *vote for*, giving **skéitom**, *decree*, from which **pledhuweskéitom**, *plebiscite* (see **plēdhūs**, *people*); **skíjenā**, *knife*, as O.Ir. *scīan*, Eng. *skean*; **skeido**, *separate*, *defecate*, as Gmc. *skītan* (cf. O.N. *skīta*, O.E. *scītan*, O.H.G. *skīzzan*, Eng. *shīt*); **skidio**, *split*, as (aspirated) Gk. *σχιζειν*, found in **skísmn**, *schism*, **skidio-**, *schizo-*; nasalized zero-grade **skindo**, *split*, as Lat. *scindere*, p.part. **skistós** (<****skidto***-), in **skístiōn**, *scission*, also in

ekskindo, *exscind*, **prāiskindo**, *prescind*, ***reskindo***, *rescind*; extended **skeito**, *separate*, as Gmc. *skaithan* (cf. Goth. *skaidan*, O.S. *skethan*, O.E. *scēadan*, *scadan*, O.Fris. *sketha*, M.Du. *sceiden*, O.H.G. *sceidan*, Du. *scheiden*, Ger. *scheiden*), **skéitom**, *log*, *stick*, *snowshoe*, hence *ski*, as O.N. *skīdh*, from Gmc. *skīdam*, also as MIE loan word ***skī*(*t***); **skóitom**, *shield* (< "*board*"), as Lat. *scūtum*; extended skeipo, slice, split, as Gmc. *skīfan*, as in O.N. *skīfa*, M.E. *sheve*, M.L.G. *schever*, Eng. *sheave*, *skive*, *shiver*.

V. For Slavic "*lod-*" (cf. O.C.S. *алъдии*, *ладии*, O.Russ. *лодья*, *лодъка*, Ukr. *лодь*, Bel. *лоде́ка*, Pol. *łódź*, Cz. *loď*, *lodí*, Sr.-Cr. *lađa*, Slo. *ládja*, Bul. *ла́дя*) a common Slavic *oldī*, MIE **óldīs**, is reconstructed (cf. Lith. *aldijà*, *eldijà*), also attested as O.E. *ealdoð*, "*alviolum*", Swe. *ålla*, Da. *aalde*, *olde*, Nor. *olda*, dial. *olle*.

VI. Common Greek loan words for "*boat*", also "*crab*, *beetle*", are **karábiōn**, as Gk. καράβιον, borrowed in O.C.S., Russ. *корабль*, O.Pol. *korabia*, Ukr. *корабель*, Slk. *koráb*, Sr.-Cr. *korab*, *корабаљ*, also Rom. *caraban*, also **kárabos**, as Gk. *κάραβος*, borrowed in Lat. *carabus* (cf. Fr. *caravelle*, It. *caravella*, Spa. *carabela*, Pt. *caravela*,), Alb. *karabishte*, even Arab *qārib*, as well as (probably) **skarabáios**, *scarab*, as V.Lat. *scarabaius* (cf. Fr. *scarabée*, It. *scarabeo*, Spa. *scarabajo*, Pt. *escaravelho*, also in Gk. *Σκαραβαίος*, Russ.,Bul. *скарабей*, Sr.-Cr. *skarabej*, etc.). Probably unrelated to Eng. "*crab*", from IE **gerbh**, "*scratch*".

VII. For Persian کشتی (kešti), "ship", found in Hindustani kašti (cf. Hi. कश्ती, Ur. کشتی), from a source akin to Indo-Iranian *kath*, "*wood*", MIE **kadh**, **kástis** (<****kadhti***-), possibly non-IE, but maybe a secondary root derived from an earlier ****ka***-, related to *forest*, *wood*; compare with Indo-European roots ***kat-*** ("*hut*", cf. Lat. *casa*, Av. *kata-*, Pers. *kad*, v.s.), ***kaito-*** ("*forest*", v.i) and ***kald-*** ("*wood*", as O.C.S. *klada* "*beam*, *timber*", Gk. *klados* "*twig*", O.Ir. *caill* "*wood*", and zero-grade **kÍdom**, Gmc. *khultam,* cf. O.E.,O.Fris., M.Du. *holt*, O.H.G. *holz*)

Indo-European root ***kaito-***, *forest*, *uncultivated land*, also *wood*, is attested (in Celtic and Germanic) as Gaul. *kaito-briga* (Lat. *cēto-briga*), O.Welsh *coit*, O.Cor. *cuit*, Bret. *coet*, and also from **káitis**, Gmc. *khaithis* (cf. Goth. *haiÞi,* O.N. *heiðr*, O.E. *hæð*, O.H.G. *heida*, Eng. *heath*, Ger. *heide*), and loan-translated Germanic **káitinos**, *heathen*, as Gmc. *khaithinaz* (cf. Goth. *haiÞnō*, O.N. *heiðinn*, O.E. *hæðen*, O.H.G. *heidan*), from Lat. *paganus*, from Lat. *pagus*, "*land*".

Proto-Indo-European **pag**, also **pak**, *fasten*, gives **pakio**, *join*, *fit*, as gmc. *fōgjan* (cf. O.E. *fēgan*, Eng. *fay*), nasalized **panko**, *seize*, as Gmc. *panhan* (cf. O.E. *fang*, *feng*, Du. *vangen*, O.H.G. *fangen*), and **pango**, *fasten*, as Lat. *pangere*, as in **enpango**, *impinge*, or loan words **kompagtós**, *compact*, **enpágtos**, *impact*; **pāks**, *peace* (from "*a binding together by treaty or agreement*"), as Lat. *pax*, in **pakidhakā**, *pacify*, **pakidhakós**, *pacific*; **pakisko**, *agree*, as Lat. *pacīscī*, as **paktós**, *agreed*, **páktom**, *pact*; **pákslos**, *stake* (*fixed in the ground*), *pole*, as Lat. *pālus*, in MIE **pákslikiā**, *palisade* (from V.Lat. *pālīcea*, into Prov. *palissada*, Fr. *palissade*, Spa. *palizada*), **enpakslā**, *impale*, **tripaksliā**, *work hard* (from **tripáksliom**, *instrument of torture*, from ***tri-paksli***, *having three stakes*, Lat. *tripaliāre*, Fr. *travailler*, It. *travagliare*, Spa. *trabajar*, Pt. *trabalhar*, Cat. *treballar*, Filipino *trabaho*, etc., also Eng. *travel*, from Fr. *travail*); loan **pákslā**, *spade*, as Lat. *pāla*; lengthened-grade **pā́gos**, *"boundary staked out on the ground," district, village, country* (cf. Fr. *pays*, It. *paese*, Pt.,Spa.,Cat. *país*, Rom. *pajais*), as in **pāgānós**, *country-dweller, civilian*, then extended as *pagan*, and **pāgénts**, *inhabitant of a district* (as Lat. *pāgēnsis*, M.Fr. *paisant*, Eng. *peasant*, Spa. *paisano*, Cat. *pagès*, etc.), **pā́ginā**, "*trellis to which a row of vines is fixed*", hence (by metaphor) *column of writing*, *page*, as Lat. *pāgina*; **prōpāgā**, *propagate* (from "*fix*

before", with **prō**-, *before*); **pagno**, *fasten, coagulate*, as in **pāgtós**, *coagulated*, Gk. πηκτός, or **pāgtinā**, *pectin*, and **págos**, *mass*, *hill*.

VIII. Common Slavic word *cheln*, "*boat*", (cf. Russ. *челн*, Ukr. *човен*, Cz. *člun*, Slk. *čln*, Slo. *čoln*), MIE ***tsheln***, was the name used by the Cossacks of Zaporizhian Sich within the first military campaigns of the Russian Navy against the Tatars and Turks, using sailboats and rowboats, in the 16th-17th centuries.

IX. Persian *qayeq* and Greek *καΐκι*, "*boat*", are from a source akin to French *caique*, It. *caicco*, i.e. probably Turkish *kayik*, O.Turkish *qayghug*, maybe from an old Turkic (or otherwise old Asian) word, possibly related to American Indian *kayak*, and American Spanish *cayuco*. Hence, MIE ***kájik***, *boat*, *caique*, ***kájak***, *kayak*.

A PIE root similar (but unrelated) to these non-IE words is **kaikós**, *blind*, as Goth. *haihs*, Lat. *caecus*, Gk. *kaikias*, Skr. *kekara*, Lith. *keikti*, Polish *Kajko*, O.Ir. *caech*, Welsh *coeg*.

A common Iberian word for "*bat*" is MIE ***kaikomūs***, "*blind mouse*" (cf. Gl.-Pt. *morcego*, Spa. *murciégalo*, Cat. *muricec*), from PIE **mūs**, *mouse*, Gmc. *mūs* (cf. O.N.,O.Fris., M.Du., O.E., O.H.G. *mūs*, Eng. *mouse*, Ger. *Maus*), Lat. *mūs*, Gk. *mūs*, Skr. *mūṣ*, Av. *mus*, Pers. *muš*, Arm. *muk*/*mug*, Lith. *musė*, O.C.S. *mysu*, Russ. *мышь*, Polish *mysz*, Alb. *mi*, Kamviri *musa*. Compare for MIE ***pleukomūs***, ***lektomūs***, "*flying mouse*", as Da. *flagermus*, Nor. *flaggermus*, Swe. *fladdermus*, Fae. *flogmús*, Du. *vleermuis*, Ger. *Fledermaus*, Russ. *летучая мышь*, Bel. *лятучая мыш*,; cf. also Sr.-Cr. *slepi miš*, *šišmiš*, etc. Also, cf. words for *night*, Gk. *νυχτερίδα*, Lat. *uespertilio*.

X. Persian *jahāz*, also found in Hindustani (cf. Hi. जहाज, जहाज़, Ur. جہاز), is of Arabic origin.

XI. English *vessel* comes from O.Fr. *vessel*, in turn from V.Lat. *uascellum* "*small vase or urn*" , also "a ship" (cf. Fr. *vaisseau*, It. *vascello*, Cat. *vaixell*, Spa. *bajel*, and, from Lat. pl.n. *uascēlla*, Spa. *vajilla*, Pt. *baixela*), dim. of *uasculum*, itself a dim. of *uās* "*vessel*" (cf. Fr. *vase*, It.,Spa.,Pt. *vaso*, Cat. *vas*), hence MIE loan words ***wās***, *vessel*, *vase*, ***wáskolom***, *vessel*, *ship*.

128. Indo-European words for "*war, battle*":

I.A common PIE word seems to have been **kóros**, *war*, *strife*, as O.Pers. kāra, Pers. kārzār, Kurd. *šer*, O.Pruss. *kargis*, Lith. *karas*, Ltv. *kaŗš*, Russ. *карa*, Pol. *kara*; with derivatives **kórios**, *armed force*, *war-band*, *host*, *army*, *troop*, as Gmc. *kharjaz* (cf. Goth. *harjis*, O.N. *herr*, O.E. *here*, O.H.G. *heri*, Eng. *heriot*, Ger. *Heer*), Lith. *karias*, Gaul. [*Tri*]*corii*,O.Ir. *cuire*; **koriános**, *ruler*, *leader*, *commander*, as Gk. *koiranos*; **koriobhérghos**, "*army hill*", *hill-fort, later shelter, lodging, army quarters*, as Gmc. *kharjabergaz* (cf. O.N. *herbergi*, O.E. *herebeorg*, Du. *herberg*, Ger. *Herberge*, Swedish *härbärge*; meaning shift in Eng. *harbor*, into Welsh *harbwr*, see **bhergh**, v.i. for Germanic *haven*, "*harbour*"); **koriowóldhos**, *army-commander, herald* (**woldho**, *rule*, *power*, see **wal**), as Gmc. *kharja-waldaz* (cf. Anglo-Norman *herald*, Ger. [*Wappen*]*herold*, Fr. *héraut*, It. *araldo*, Spa. *heraldo*, Pt. *arauto*, etc.), **korionéstom**, "*army provisions*", *harness* (from **néstom**, *food for a journey*, see **nes**), as Gmc. *kharja-nestam* (cf. O.Fr. *harneis*, Eng. *harness*); denominative **korio**, *harry*, *ravage*, *plunder*, *raid*, as Gmc. *kharjōn* (cf. O.E. *hergian*); **korikrénghos**, "*host-ring*", *assembly*, *public square* (**krénghos**, *ring*, see **sker**), as Gmc. *kharihring* (cf. O.It. *aringo*, *arringa*, Prov. *arenga*, Eng. *harangue*, Spa. *arenga*, etc.).

I.1. PIE **wal**, *be strong*, is found as suffixed stative **walē**, Lat. *ualēre*, as in **walós**, *strong*, **wálōs**, *strength*, **komtrāwálōs**, *countervail*, **walénts**, *brave*, *valiant*, **waléntiā**, *valence*, **ambhiwaléntiā**, *ambivalence*, **walidós**, *valid*, **ņwalidós**, *invalid*, ***adwális***, *avail* (from Fr. *aval*), **komwalēsko**, *convalesce*, **ekwaluā**, *evaluate*, **prāiwalē**, *prevail*, **walideiko**, *say farewell*, (see **deik**, *show*), **walidéiktiōn**, *valediction*, **aiqiwalē**,

have equal force (as Lat. *aequi-*, Eng. *equi-*), **aiqiwalénts**, *equivalent*; extended o-grade **woldho**, *rule*, *govern*, as Gmc. *waldan* (cf. O.S., Goth. *waldan*, O.N. *valda*, O.E. *wealdan*, *wieldan*, O.Fris. *walda*, O.H.G. *waltan*, Ger. *walten*, Eng. *wield*), and suffixed **wólstis** (<****wold-ti***-), *rule*, as Sla. *volstь* (cf. O.C.S. *vlasti*, Russ. *волость*, *власть*), as in **opwólstis**, *oblast*, Sla. *ob- volstь* (cf. O.C.S. область, O.Russ. *оболость*, Cz. *oblast*, etc.).

PIE verbal root **deik**, *show, pronounce solemnly*, gives Lat. *dīcere*, *say*, *tell*, as in borrowings **déiktiōn**, *diction*, **deiktā**, *dictate*, **déiktātos**, *dictate*, **déiktom**, *dictum*, **addeiktós**, *addict*, **dwenideiko** (see **dwenós**, *good*), *bless*, **dwenēdéiktiōn**, *benediction*, **komdéikiōn**, *condition*, **komtrādeiko**, *contradict*, **ekdeiko**, *edict*, **enterdéiktom**, *interdict*, **jowosesdeikós**, *juridicial*, (Lat. *iūs*, *iūris*, corresponds to MIE ***jówos***, ***jowosés***, see rhotacism), **jowosesdéiktion**, *jurisdiction*, **malideiko**, *maledict*, **prāideiko**, *predict*, **wērideiko**, "*tell the truth*" (see **wērós**, *true*), **wērideikós**, *veridical*, **wēridéiktos**, *verdict*; suffixed zero-grade verb **dikā**, *proclaim*, Lat. *dicāre*, as in **apdikā**, *abdicate*, **dedikā**, *dedicate*, **prāidikā**, *predicate*; agential sufix **-dik-**, in **éndiks**, *index, indicator, forefinger*, **endikā**, *indicate*, also **jówosdiks**, *judge*, Lat. *iūdex*, **jowosdikiālís**, *judicial*, **prāijowosdikā**, *prejudge*, **prāijowosdíkiom**, *prejudice*; **wíndīks**, *surety*, *claimant*, *avenger*, as Lat. *uindex*, as in **windīkā**, *vindicate*, *avenge*, *take revenge*; **deikno**, *show*, **déikmn**, *sample*, *pattern*, as in **deíktis**, *deixis*, **deiktikós**, *deictic*, **paradéikmn**, *paradigm*, **apódeiktis**, *proof*, *demonstration*, *policy* (cf. Gk. ἀπόδειξις, into Lat. *apodixa*, "*receipt*", then It. *polizza*, into Fr. *police*, Spa. *póliza*, etc.); zero-grade **díkā**, *justice, right, court case*, as in **komdikós**, *syndic*, as Gk. σύνδικος, **dhesodíkā**, *theodicy*, and **diko**, *throw* (from "*direct an object*"), as in **dikskos**, *disk*, Gk. δίσκος; o-grade **doikuā**, *toe* ("*pointer*"), as Gmc. *taihwo* (cf. O.N. *ta*, O.E. *tahe*, O.Fris. *tane*, O.H.G. *zecha*, M.Du. *te*). Variant form **deig-** gives o-grade **doigio**, *show*, *instruct*, as Gmc. *taikjan* (cf. Goth. *ga-teihan*, O.E. *tǣcan*, O.H.G. *zihan*, Eng. *teach*, Ger. *zeihen*), **dóignom**, *mark*, *sign*, *token*, as Gmc. *taiknam* (cf. Goth. *taikns*, O.S. *tekan*, O.N. *teikn*, O.E. *tācen*, tācn, O.H.G. *zeihhan*, O.Fris., M.Du. *teken*, Du. *teken*, Ger. *zeichen*), zero-grade **dígitos**, *finger* (from "*pointer, indicator*").

Indo-European **wērós** (earlier **werh₁-o-*), *true*, *trustworthy*, and **wḗrā**, *faithfulness*, *faith*, hence *pledge*, *agreement*, *promise*, *treaty*, gives Gmc. *wēro-* (cf. O.E. *wǣr*, O.Du., O.H.G. *war*, Du. *waar*, Ger. *wahr*), Lat. *verax* (cf. O.Fr. *verai*, Anglo-Fr. *verrai*, O.E. *verray*, Eng. *very*), O.C.S. вѣра, Russ. *вера*, Pol. *wiara*, Bul. *вяра*, Welsh *gwyr*, O.Ir. *fir*. Derivatives include **wērā́ks**, *truthful*, *veracious*, **wḗritā**, *verity*, **wēridhakā**, *verify*, etc.

I.2. PIE **nes**, *turn out well, rest*, *return safely home*, gives O.Gk. *nehomai* (**ninsomai*), O.Ind. *nasate*, Toch. *nas-*/*nes-*; also, suffixed **néstom**, *food for a journey*, as Gmc. *nestam* (cf. O.E., O.H.G., O.N. *nest*), as in **korionéstom**, *harness* (for **kóros**, *war*, v.s.); o-grade **nóstos**, *a return home*, as Gk. νόστος, found in common **nostalgíā**, in compound with Gk. borrowing **-algíā**, Gk. αλγία, from **álgos**, *pain*, Gk. ἄλγος.

I.3. PIE (**s**)**ker**, *turn*, *bend*, gives Germanic nasalized extended **skreng**, *wither*, *shrivel up*, as Gmc. *skrink*, **kréngā**, *a crease*, *fold*, (cf. O.N. *hrukka*, Eng. *ruck*), and **krengio**, *wrinkle* (cf. Frank. *hrukjan*, O.Fr. *fronce*, Eng. *flounce*), as Gmc. *khrunk-*; nasalized extended **krénghos**, *circle*, *something curved, ring*, as Gmc. *khringaz*, (cf. O.E. *hring*, O.N. *hringr*, O.Fris. *hring*, M.Du. *rinc*, Ger. *Ring*), also found in O.Fr. *renc*, *reng*, "*line*, *row*", which gives loan words **krenghs**, *rank*, *range*, **adkrengho**, *arrange*; extended kreukios, back, as Gmc. *khrugjaz* (cf. O.N. *hryggr*, O.E. *hrycg*, O.Fris. *hregg*, O.S. *hruggi*, O.H.G. *hrukki*, Du. *rug*, Eng. *ridge*, Ger. *Rücken*); suffixed variant **kurwós**, *bent*, *curved*, as Lat. *curuus*, as in **kúrwā**, *curve*, **kurwatós**, *curved*, or **kurwatósā**, *curvature*; suffixed extended **krísnis**, *hair*, as Lat. *crīnis*, **krístā**, *tuft*, *crest*, as Lat. *crista*, **kripsós**, *curly*, as

metathesized Lat. *crispus*, hence MIE **krispós**, *crisp*; expressive **krisā**, *wiggle the hips during copulation*, as Lat. *crīsāre*, in **krísom**, *crissum*; reduplicated **kíkros**, *ring* (metathesized as **kirkos* in Latin), also *circus*, **kíkrolos**, *circle*, **kikrom-**, *circum-*, **kíkrā**, *go around*, hence *search*, **rekikrā**, *research*; suffixed o-grade **korōnós**, *curved,* as in **korṓnā**, *anything curved, kind of crown*; variant **kurtós**, *convex*, as in **kurtósis**.

Another similar PIE root is (**s**)**ker**, *cut*, also "*shear*, *separate*" as in Gmc. *skeran* (cf. O.E. *scieran*, *sceran*, Low Ger.,Du. *scheren*, Eng. *shear, sheer*), Gk. *keirein*, Skr. *krnati*, *krntati*, Lith. *skiriu*, O.Ir. *scaraim*, Welsh *ysgar*, *ysgyr*, Hitt. *karsh*; **skéros**, *share*, *portion*, *division*, as Gmc. *skeraz* (cf. O.N. *skör*, O.E. *scēar*, *scearu*, *scaru*, O.H.G. *scara* , Ger. *Schar*); **skḗrā**, *scissors*, as O.E. *scēar*, in **skērbhérghs**, "*sword protector*", *scabbard*, as Gmc. *skerberg* (cf. O.H.G. *scarberc*, O.Fr *escauberc*, see **bhergh**); **skŕā**, *notch, tally, score*, from Gmc. *skuro* (cf. O.N. *skor*, O.E. *scoru*); **skóriom**, *low reef* ("*something cut off*"), as Gmc. *skarjam* (cf. O.N *sker*, Eng. *scar*, *skerry*), **skórpos**, *diagonally-cut end of a board*, as Gmc. *skarfaz* (cf. O.N. *skarfr*, Eng. *scarf*), suffixed o-grade **skórdos**, *cut*, *notch*, as Gmc. *skardaz* (cf. O.E. *sceard*, Eng. *shard*); **skrdós**, *short*, and **skŕdos**, *skirt*, *shirt* ("*cut piece*"), as Gmc. *skurtaz* (cf. O.N. *skyrta*, Swed. *skjorta*, O.E. *scort*, *sceort*; *scyrte*, M.Du. *scorte*, M.H.G. *schurz*, Du. *schort*, Ger. *Schurz*); extended **skermo**, *protect*, as Gmc. *skirman* (cf. O.H.G. *skirmen*, O.Fr. *eskermir*), as in MIE **skérmā**, *skirmish* (cf. Eng. *skirmish*, Du. *schermutseling*, Swe. *skärmytsling*, O.It. *scaramuccia*, Spa. *escaramuza*, etc.), **skérmos**, *shield*; variant form **kórōn**, *flesh*, as Lat. *caro* (stem *carn-*), as in **koronālís**, *carnal*, **koronā́tiōn**, *carnation*, **koron(es)lechā́lis**, *carnival*, (cf. O.It. *carnevale*, haplology from Lat. *carneleuare*) also MIE partial loan ***karnichā́lis***, **koroniuorós**, *carnivorous*; **kóriom**, *leather* (from "*piece of hide*"), as Lat. *corium*; **krtós**, *short*, as Lat. *curtus*; Greek **kórmos**, *trimmed tree trunk*, **kóris**, *bedbug* (from "*cutter*"); **skŕā**, *shore*, as Gmc. *skurō* (cf. O.E. *scora,* M.L.G. *schor*, M.Du. *scorre*); **kórteks**, *bark* ("*that which can be cut off*"); **kértsnā**, *meal* ("*portion of food*), as Lat. *cēna*; **skerbhós**, *cutting*, *sharp*, as Gmc. *skarpaz* (cf. Goth. *skarp-*, O.S. *scarp*, O.N. *skarpr*, O.E. *scearp*, O.Fris. *skerp*, Du. *scherp*, Ger. *scharf*), **skróbā**, "*pieces*", *remains*, as Gmc. *skrapo*, **skróbho**, *scrape*, as Gmc. *skraban*, **skróbis**, *trench*, *dith*, as Lat. *scrobis*, or **skrṓbhā**, *a sow* (from "*rooter, digger*"), as Lat. *scrōfa*; extended suffixed **epikrsiós**, *at an angle*, *slanted*, "*biased*", as Gk. *epikarsios* (cf. Fr. *biais*, Eng. *bias*).

I.4. Germanic "*haven*" comes from IE **kápnā**, *harbour*, perhaps "*place that holds ships*", from P.Gmc. **khafnō* (cf. O.N. *hofn*, O.E. *hæfen*, M.L.G. *havene*, Ger. *Hafen*, also O.N. *haf*, O.E. *hæf*, "*sea*"), from PIE **kap**, *grasp* (compare with **ghabh**) cf. Skr. *kapati*, Gk. *kaptein*, Ltv. *kampiu*, O.Ir. *cacht*, Welsh *caeth*. Common derivatives include **káptiom**, *handle*, as Gmc. *khaftjam* (cf. O.E. *hæft*, O.H.G. *hefti*, Du. *hecht*, Eng. *haft*, Ger. *Heft*); basic form **kap**, *have*, *hold*, as Gmc. *khabb-* (cf. Goth. *haban*, O.N. *hafa*, O.S. *hebbjan*, O.E. *habban*, O.Fris. *habba*, Eng. *have*, Ger. *haben*); **kapigós**, "*containing something*", *having weight*, *heavy*, as Gmc. *khafigaz* (cf. cf. O.N. *hebig*, O.E. *hefig*); **kápokos**, *hawk*, as Gmc. *khabukaz* (cf. O.N. *haukr*, O.E. *h*[*e*]*afoc*, M.Du. *havik*, Ger. *Habicht*, compare with Russ. *kobec*); **-kaps**, "*taker*", as Lat. *-ceps*; **kapio**, *take*, *seize*, *catch*, *lift*, as Gmc. *hafjan* (cf. Goth. *hafjan*, O.N. *hefja*, O.E. *hebban*, Du. *heffen*, Ger. *heben*), Lat. *capere*, as in **kapā́ks**, *capable*, *capacious*, **káptiōn**, *caption*, **kaptēiuā**, *captivate*, **kaptēiuós**, *captive*, **kaptós**, *captive*, **kaptṓr**, *captor*, **kaptosā**, *capture*, **antikapio**, *anticipate*, **komkapio**, *conceive*, **dekapio**, *deceive*, **ekskapio**, *except*, **enkapio**, *incept*, **enterkapio**, *intercept*, **preismkáps**, *prince*, **moineskáps**, *citizen*, **moineskápiom**, *city*, *municipality*,

obhkapā, *occupy*, **partikapā**, *participate*, **perkapio**, *cerceive*, **rekapio**, *receive*, *recover*, *recuperate*, **supkaptibhilís**, *susceptible*; variant Greek **kōpā́**, *oar*, *handle*.

PIE **ghabh**, also **ghebh**, *give* or *receive*, has derivatives as Gmc. *geban* (cf. Goth. *giban*, O.N. *gefa*,O.E. *giefan*, O.H.G. *geban*, Eng. *give*, Ger. *geben*), Lat. *habēre*, Oscan *hafíar*, Umbrian *habe*, Skr. *gabhasti*, Lith. *gabana*, Ltv. *gabana*, O.C.S. *gobino*, Gaul. *gabi*, O.Ir. *gaibid*, Welsh *gafael*, Alb. *grabit/grabis*. Common derivatives include **perghebho**, *give away, give up, leave off, remit*, as Gmc. *fargeban* (cf. Eng. *forgive*, Du. *vergeven*, Ger. *vergeben*); **ghébhtis**, *something given* (or *received*), *gift*, as Gmc. *giftiz* (cf. O.N. *gipt*, *gift*, O.Fris. *jefte*, M.Du. *ghifte*, Ger. *Mitgift*), **ghóbholom**, *something paid* (or *received*), *tribute*, *tax*, *debt*, as Gmc. *gabulam* (cf. O.E. *gafol*, M.H.G. *gaffel*, Eng. *gavel*, Ger. dial. *gaffel*); **ghabhē**, *hold*, *possess*, *have*, *handle*, and **ghabitā**, *dwell*, as Lat. *habēre*, *habitāre*, in **ghabhilís**, *habile*, *able*, **ghábitos**, *habit*, **ghabhitābhilís**, *habitable*, **ghabhitā́nts**, *habitant*, **ghábhitā**, *habitat*, **eksghabhē**, *exhibit*, **enghabē**, *inhibit*, **proghabē**, *prohibit*; **deghabhe**, *owe*, as Lat. *debere*, as in **deghabitós**, *due*, **deghábhitom**, *debit*, **deghábhita** (n.pl), *debt*.

The proper PIE term for debt seems to be **deléghlā**, cf. O.Ir. *dligim*, Goth. *dulgs*, O.Sla. *dlъgъ*, and also Lat. *in-dulgeō*, Gk. ἐν-δελεχής, Alb. *glatë*, etc., presumably from extended **d(e)legh-**, from **del**, *long*, see **dlongho-**.

I.5. For PIE **bhergh**, *hide*, *protect*, compare Gmc. *bergan* (cf. Goth. *bairgan*, O.N. *bjarga*, O.H.G. *bergan*, Ger. *bergen*), OCS *brěgą*, Russ. *bereč'*, as in zero-grade **bhrghio**, *bury*, Gmc. *burgjan* (cf. O.E. *byrgan*, Eng. *bury*).

Related PIE **bhergh**, *high*, with derivatives referring to *hills* and *hill-forts*, gives Lat. *fortis*, Skr. *barhayati*, Av. *bərəzant*, Pers. *burj*, Thrac. *bergas*, Illyr. *Berginium*, Toch. *pärk/pärk*, Arm. *bardzut'iun*, Russ. *bereg*, Gaul. *Bergusia*, O.Ir. *brí*, Welsh *bre*, *bera*, Alb. *burg*; Hitt. *parku*, Lyc. *prije*;*pruwa*, A.Mac. *Berga*. Common MIE derivatives include borrowing **isobhérghs**, *iceberg* (for MIE loan ***iso***-, Gmc. *isa-*, "*ice*", cf. O.N. *iss*, O.E. *is*, O.Fris. *is*, Du. *ijs*, Ger. *Eis*), zero-grade **bhrghs**, *hill-fort*, *castle*, hence *fortified town*, *city*, as Gmc. *burgs* (cf. Goth. *baurgs*, O.N. *borg*, O.E. *burg*, *burh*, *byrig*, O.H.G. *berg*, Eng. *borough*, Ger. *Burg*, into Lat. *burgus*, O.Fr. *burg*, O.Spa. *burgo*, etc.), **bhrghwórōn**, "*city protector*", *townsman*, as Gmc. *burg-warōn* (see **wer**, cf. O.H.G. *burgari*, Eng. *burgher*); suffixed zero-grade **bhrghtís**, *strong*, **bhŕghtiā**, *force*, as Lat. *fortis*, *fortia* (some relate it to **dher**), in **ekbhŕghtis**, *effort*, **enbhrghtiā**, *enforce*, **bhrghtidhakā**, *fortify*, **reenbhrghtiā**, *reinforce*, etc.

The proper IE word for "ice" is **jeg**, which gives Lith. *iža*, Ltv. *ieze*, Russ. *ikra*, O.Ir. *aig*, Welsh *ia*, and suffixed **jégilos**, *ice, icicle, glacier*, as Gmc. *jekilaz* (cf. O.N. *jaki*, dim. *jökull*, O.E. *gicel*, O.H.G. *ichil*, M.E. [*is*]*ykle*, Ger. *gicht*, *oighear*, Eng.dial. *ickle*, Eng. [*ic*]*icle*).

PIE root **gel-**, *cold*, gives Lat. *gelū*, Oscan *gelan*, Lith. *gelmenis*, Gk. *gelandron*; extended adjective **goldós** gives Gmc. *kaldaz* (cf. Goth. *kalds*, O.N. *kaldr*, O.E. *cald*, *ceald*, O.H.G. *kalt*), O.C.S. *hlad*, Pol. *chłód*.

PIE **dher**, *hold firmly*, *support*, gives **dhermós**, *firm*, *strong*, as Lat. *firmus*, in **addhermā**, *affirm*, **komdhermā**, *confirm*, **n̥dhermós**, *infirm*, *ill*, **n̥dhermāríā**, *infirmary*; suffixed zero-grade **dhrónos**, *seat*, *throne* (from "*support*"); suffixed **dhérmn**, *statute*, *law*, as Skr. *dharma* ("*that which is established firmly*"); suffixed **dhérenā**, *a holding firm*, Prakrit *dharana*; **dhóros**, *holding*, as Ira. *dāra-*, Pers. *-dār*.

IE **wer**, *cover*, gives **wériā**, *defence*, *protection*, as Gmc. *werjōn* (cf. Goth. *warjan*, O.N. *ver*, O.E. *wer*, O.Fris., M.Du. *were*, O.H.G. *wari*, Eng. *weir*, Du. *weer*, Ger. *Wehr*); compound **apwerio**, *open*, *uncover*, (***ap***-, *off*, *away*, see **apo**), as Lat. *aperīre*, as in **apwertós**, *opened*, *overt*, **apwertósā**, *aperture*, *overture*; **opwerio**, cover (***op***-,

over, see **epi**), as Lat. *operire*, as in **komopwerio**, *cover*; **wḗrtros**, *enclosure*, as Skr. *vatah*; o-grade **wornio**, *take heed*, *warn*, as Gmc. *warnōn* (cf. O.E. *warenian*, O.N. *varna*, O.H.G. *warnon*, Eng. *warn*, Ger. *warnen*), in **worónts**, *warrant*, *authorization*, (cf. O.N.Fr. *warant*, O.Fr. *garant*), **worontíā**, *warranty*, *guaranty* (cf. O.N.Fr. *warantir,* Fr. *garantie*), **woro**, *guard*, *protect* (cf. O.Fr. *garer, guerrer*), in **worótikom**, *garage*, **worio**, *defend*, *protect* (cf. O.Fr. *guarir*), **wórisōn**, *garrison*, **wornio**, *to equip* (cf. O.Fr. *guarnir*).

Derivatives of PIE **apo**, or **ap**-, *off*, *away*, are Gmc. af- (cf. Goth.,O.N. *af*, O.E. *of*, *æf,* O.Fris. *af*, *of*, O.H.G. *ab, aba,* Eng. *of*, *off*, Du. *af*, Ger. *ab*), Lat. *ab*, Gk. *apo*, Ind.-Ira. *apa*, Bl.-Sl. *po*. Common MIE words include **apton**, *behind*, as Gmc. *aftan* (cf. O.E. *æftan,* Eng. *aft, abaft*), **aptero**, *after*, *behind*, as Gmc. *aftar* (cf. O.E. *æfter*), **apuko**, *turned backward*, as Gmc. *afugo* (cf. O.N. *öfugr*, O.E. *awk*); variant **po**-, *on*, *in*, as Balto-Slavic *po*, Latin extended **post**, also in verb ***posino*** (from Lat. *pōnere*, from *po+sinere*, "*leave*, *let*", of obscure origin), p.part, ***positós***, both giving common MIE **pógrom**, **posteriós**, *posterior*, **postmr̥tim**, (see PIE **mer**), *postmortem*, ***positósā***, *posture*, ***posítiōn***, ***adposine***, ***adposítiōn***, ***komposino***, *compose*, ***komposítiōn***, ***komtrāpositós***, ***deposino***, ***depositós***, ***disposino***, *dispose*, ***eksposino***, *expose*, ***enposino***, *impose*, ***enpositós***, *imposed*, ***enpósitom***, *impost*, ***enterposino***, *interpose*, ***obhposino***, *oppose*, ***obhposítiōn***, ***supposino***, *suppose*, ***supposítiōn***, *supposition*, ***transposino***, *transpose*, etc.

For PIE **mer**, *rub away, harm*, compare **morā́**, *goblin*, *incubus*, as Gmc. *marōn* (cf. O.E. *mare*, *mære*, Eng. [*night*]*mare*), O.Ir. *Morri*[*gain*], Bulg., Serb., Pol. *mora*, Fr. [*cauche*]*mar*; **mr̥o**, *waste away, wither*, as in **mrasmós**, *marasmus*, as Gk. μαρασμός; **mrtā́riom**, *mortar* (from "*ground down*") as Lat. *mortāriom*; extended **mordē**, *bite*, as Lat. *mordēre*, as in **mordā́ks**, *mordacious*, **remordē**, *remorse*, etc.; suffixed **mórbhos**, *disease*, as Lat. *morbus*, in **morbhidós**, *morbid*. Probably the same root is **mer**, *die* (cf. Hitt. *mer*), with derivatives **mr̥trom**, *murder*, as Gmc. *murthra-* (cf. Goth *maurþr*, O.N. *morð*, O.E. *morðor*, O.Fris. *morth*, M.Du. *moort*, Ger. *Mord*, also in M.Lat. *murdrum*, O.Fr. *mordre*), **mr̥tis**, *death*, as Lat. *mors*, O.Ind. *mr̥tiṣ*, Lith. *miř̃tis*, Ltv. *miř̃te*, Sla. *mьrtь* (cf. O.C.S. [*sъ*]*mrьtь*, *sъ* from *svo-*, reflexive ***swe***-, Russ. *смертьь*, O.Slo. smr̂ti, Pol. *śmierć*, Cz. *smrt*, etc.), with common Latin derivatives **mrtālís**, *mortal*, **mrtidhakā**, *mortify*, **admortisā**, *amortize*; **mrio**, *die*, with irregular p.part. **mrtuós**, *death*, as Lat. *morire*, *mortuus*, in **mrtuāsiós**, *mortuary*, **mribhundós**, *moribund*, **mrtuótikom**, *mortgage* (from O.Fr. *mort* and *gage,* "*pledge*", from Frank. *wadja*, "*pledge*", IE ***wotio***); common adjectives **mrwós**, *death*, **mrtós**, *mortal*, as Gk. *βροτος*, **n̥mrtós** [n̥-mr̥-'tos], *inmortal*, *undying*, hence also *divine*, as Lat. *inmortalis*, Gk. ἄμβροτος, Skr. *amrtam*; **mortiós**, *mortal*, as O.Pers. *martiya*, into Gk. *manticore*. Other IE derivatives include Skr. *marati*, Av. *miryeite*, O.Pers. *amariyata*, Pers. *mordan*, Kurd. *mirin*, Arm. *meṙnil*, Lith. *mirti*, Ltv. *mirt*, O.C.S. *mrьtvŭ*, Russ. *meret'*, Pol. *mord*, *umrzeć*, Gaul. *marvos*, O.Ir. *marb*, Welsh *marw*, Kamviri *mṛe*, Osset. *maryn*.

MIE ***assassinós*** via Fr. and It., from Arabic *hashishiyyin* "*hashish-users*" pl. of *hashishiyy*, from *hashish* (Arabic *hashish* "*powdered hemp*", lit. "*dry herb*", from *hashsha* "*it became dry, it dried up*"). A fanatical Ismaili Muslim sect of the time of the Crusades, with a reputation for murdering opposing leaders after intoxicating themselves by eating hashish. The pl. suffix *-in* was mistaken in Europe for part of the word (cf. *Bedouin*).

II. IE **wers**, *confuse*, *mix up*, (compare with IE **ers**), gives common **wérsos**, *confusion*, and loan word fem. MIE **wérsā** (see rhotacism), both from Gmc. *werzaz* (cf. O.S. *werran*, O.H.G. *werran*, Ger. *verwirren*; Eng. *war* is from O.E. *wyrre*, *werre*, from O.N.Fr. *were*, from Frank. *werra*, as O.H.G. *werra*, *strife*, borrowed in Fr.

guerre, It.,Spa.,Pt,Cat. *guerra*); comparative **wersiós**, *worse*, and superlative **wersistós**, *worst*, as Gmc. *wersizōn*, *wersistaz* (cf. Goth. *wairsiza*, O.S. *wirs*, *wirsista*, O.N. *verri*, *verstr*, O.E. *wyrsa*, *wyrsta*, O.Fris. *wirra*, *wersta*, O.H.G. *wirsiro*, *wirsisto*); **wŕstis**, *sausage* (from "*mixture*"), as Gmc. *wurstiz* (cf. O.H.G. *wurst*)

PIE **ers**, *be in motion*, gives variant **rēs**, *rushing*, *race*, as Gmc. *rēsan* (cf. O.N. *rás*, O.E. *ræs*, M.Du. *rasen*, Ger. *rasen*); suffixed **ersā**, *wander*, Lat. *errāre*, as in **ersātikós**, *erratic*, **ersā́ta**, *errata*, **ersāniós**, *erroneous*, **ersṓr**, *error*, **apersā́tiōn**, *aberration*; zero-grade **ŕsis**, *poet*, *seer*, Skr. *rsiḥ*.

III.Indo-European **wen**, *strive afte*r, *wish*, *desire*, *be satisfied*, is the source for **wóinos**, *soldier*, and **wóinā**, *war*, as Sla. *voin'* (O.C.S., O.Russ. *воинъ*, Ukr. *воїн*, Sr.-Cr., Slo.,Bul. *vojnik*, Cz.,Slk. *vojin*) and *vojna*; with similar meanings of *hunt*, *chase*, *pursue*, cf. O.N. *veiðr*, O.E. *waþ*, O.H.G. *weida*, Lat. *venāri*, Gk. ἴεμαι, O.Ind. *vēti*, Av. *vayeiti*, Lith. *vejù*, *výti*, O.Ir. *fíad*. Other IE derivatives include **wénos**, *desire*, as Skr. *vanas*; **wénuo**, *win*, Gmc. *winn*(*w*)*an* (cf. f. Goth. *gawinnen*, O.S. *winnan*, O.N. *vinna*, O.E. *winnan*, O.Fris. *winna*, O.H.G. *winnan*, Du. *winnen*), suffixed zero-grade **wńiā**, *pleasure*, *joy*, as Gmc. *wunjō* (cf. O.E. *wen*, *wynn*, Ger.*Wonne*); stative **wnē**, *be content, rejoice*, extended as *be accustomed to, dwell*, as Gmc. *wunēn* (cf. O.E. *wunian*, O.S. *wunon*, O.Fris. *wonia*, O.H.G. *wonen*, Eng. *wont*); suffixed causative o-grade **wonē**, *accustom, train, wean*, as Gmc. *wanjan* (cf. O.N. *venja*, O.E. *wenian*, Du. *vennen*, O.H.G. *giwennan*, Ger. *gewöhnen*); **wḗnis**, *hope*, and verb **wēnio**, *expect*, *imagine*, *think*, as Gmc. *wēniz* and *wēnjan* (cf. Goth. *wenjan*, O.S. *wanian*, O.N. *væna*, O.E. *wenan*, O.Fris. *wena*, O.H.G. *wanen*, Ger. *wähnen*, Eng. *ween*); suffixed zero-grade **wnsko**, *desire*, *wish*, **wńskos**, *wish*, as Gmc. *wunskan*, *wunskaz* (cf. O.N. *æskja*, O.E. *wyscan*, M.Du. *wonscen*, O.H.G. *wunsken*); **wénōs**, *love*, giving **wenesā**, *worship*, *venerate*, **wenesiós**, *venereal*, etc., with rhotacism as Lat. *uenus*, *ueneris*; **wenésnom**, *poison* (originally *love poison*), as Lat. *uenēnum*, **wéniā**, *favor*, *forgiveness*, Lat. *uenia*; **wenā**, *hunt*, from Lat. *uēnārī*; **wénom**, *forest*, as Skr. *vanam*.

IV. Indo-European **cer**- (or **g^{w}erh$_{2}$*), *heavy*, gives **crús**, *heavy*, *venerable*, as Goth. *kaurus*, Gk. βαρύς, Skr. *guruh*, **cṛuspháirā**, *barysphere* (from Gk. ***spháirā***, *sphere*), **cṛútonos**, *baritone*, and extended Lat. **g^{w}ruís*, *heavy*, *weighty*, *grave*, as Lat. *gravis*, **cŕuitā**, *gravity*, **cruā**, *burden*, **adcruā**, *aggravate*, etc.; **cŕōs**, *weight*, *heaviness*, as Gk. βάρος, as in **wiswocŕōs**, *isobar* (from Gk. *īsós*, *equal*, probably either from **widwós**, *who has seen*, from **weid**, *know*, *see*, or ***wiswós***, *all*, as O.Ind. *visvaḥ*); **udcri** (see **ud**); **crūtós**, *heavy*, *unwieldy*, *dull*, *stupid*, *brutish*, as Lat. *brūtus*; **cŕigos**, *strenght*, *vigor*, **cŕigā**, *strife*, as in **crīgátā**, *brigade*, found in Celt. *brīgo* (cf. Prov. *briu*, Spa. *brío*), Gmc. *krīg* (cf. O.H.G. *krēg*, *chrēg*, M.H.G. *kriec*, Sca. *krig*, Ger. *Krieg*), Cel. *brīgā* (cf. O.Ita. *briga*, Fr. *brigade*); **cérnā**, *millstone*, as Gmc. *kwernōn* (Goth. *quirnus*, O.N. *kvern*, O.E. *cweorn*, O.Fris. *quern*, O.H.G. *quirn*, Eng. *quern*, Ger. *Querne*), Skr. *grava*, Arm. *erkan*, O.Pruss. *girnoywis*, Lith. *girna*, *girnos*, Ltv. *dzirnus*, O.C.S. *zrunuvi*, Russ. *žërnov*, Pol. *żarno*, O.Ir. *braó*, Welsh *brevan*.

V. Indo-European **dwéllom**, *war*, also *duel* (O.Lat. *duellum*, Lat. *bellum*), is maybe cognate with O.Ind. *dunoti*, *duta*-, O.Gk. *du*, *duero*, Alb. *un*, from a PIE verbal root **du** meaning *torment*, *pain*; common Latin loans include ***dwelligeránts***, *belligerent* (from Lat. ***dwelligerā***, *make war*, from Lat. *gerere*, "*wage*"), ***kástos dwélli***, *casus belli* (see **kad**).

For PIE **kad**, *fall*, *befall*, also *die*, compare Lat. *cadere*, O.Ind. *sad*, Arm. *chacnum*, M.Ir. *casar*, Welsh *cesair*, Corn. *keser*, Bret. *kasarc'h*; Latin derivatives include **kadáuēr**, *cadaver*, **kadénts**, *cadent*, **kadéntiā**, *cadence*, *chance*, **adkado**, *happen*, **adkadénts**, *accident*, **enkado**, *happen*, **enkádents**, *incident*, **dekado**, *decay*,

obhkado, *fall*, **obhkádents**, *occident*, and from p.part. **kastós** (<****kadto***-), giving **kastkátā**, *cascade*, **kástos**, *case*, **kastuālís**, *casual*, **kastuístā**, *casuist*, **obhkástos**, *sunset*, **obhkástiōn**, *occasion*, etc.;

A similar but probably unrelated PIE root is **dheu** (older **dheuh₂*), *die*, also **dhwei**, found as **dhoutós**, *dead*, Gmc. *dauthaz* (cf. O.E. *dēad*), o-grade **dhóutus**, *death*, (with suffix -***tus*** indicating "*act, process, condition*"), as Gmc. *dauthuz* (cf. O.E. *dēath*); suffixed o-grade **dhowio**, *die*, as O.N. *deyja*; extended zero-grade **dhwino**, *diminish*, *languish*, as Gmc. *dwinan* (cf. O.E. *dwinan*, Du. *dwijnen*, Eng. *dwindle*). The verb comes probably from **dhew**, *close*, *finish*, *come full circle*; cf. Lat. *funus*, *-eris*, Arm. *di* (gen. *diog*), Cel. *dwutu-* (cf. OIr *duth*). Derivatives include suffixed zero-grade **dhū́nos**, *enclosed*, *fortified place*, *hill-fort*, as Gmc. *dūnaz* (cf. O.E. *dūn*, M.Du. *dūne*, Eng. *down*, *dune*); also, from the same source is Celtic *dūnos*, "*hill, stronghold*", borrowed in Gmc. *tūnaz* (cf. O.E. *tun*, Eng. *town*); **dhū́nōs**, *funeral*, as Lat. *fūnus*.

The same IE root **dhew** means also "*run*, *flow*", as in Gmc. *dauwaz*, (cf. O.E. *deaw*, M.Du. *dau*, Eng. *dew*), Skr. *dhautiḥ*, M.Pers. *davadan*; and also "*shine, be light*", as O.Gk. *theousan*, O.Ind. *dhavala-*, Av. *fraavata*.

VI. Common Greek loans are ***pólemos***, *war*, Gk. *πόλεμος*, giving ***polemikós***, *hostile*, hence *polemic*.

129. For PIE **swésōr**, (possibly from reflexive **swe**, and **ésōr**, *woman*, then lit. "*woman of one's own kin group*" in an exogamous society, see also ***swe-kuro***-), with zero-grade alternative **swésr**, compare Gmc. *swestr-* (cf. Goth. *swistar*, O.N. *systir*, O.S. *swestar*, O.E. *sweostor*, *swuster*, O.Fris. *swester*, M.Du. *suster*, O.H.G. *swester*, Du. *zuster*, Eng. *sister*, Ger. *Schwester*), Lat. *soror*, O.Gk. *eor*, Skr. *svasṛ*, Av. *xvaŋhar*, Pers. *xāhar*, Toch. *ṣar/ṣer*, Arm. *k'uyr*, O.Pruss. *swestro*, Lith. *sesuo*, O.C.S. *sestra*, Russ. *cecmpa*, Pol. *siostra*, Gaul. *suiior*, O.Ir. *siur*, Welsh *chwaer*, Kamviri *sus*. It gave common derivatives latin **swesrikī́diom**, *sororicide*, **swesorālís**, *sororal*, suffixed **swesrī́nos**, *cousin*, from Lat. *sobrīnus*, "*maternal cousin*".

130. For PIE **súnus**, also **súnjus**, *son*, compare Gmc. *sunuz* (cf. Goth. *sunus*, O.N. *sonr*, O.E. *sunu*, O.S., O.Fris. *sunu*, O.H.G. *sunu*, M.Du. *sone*, Dan. *søn*, Swed. *son*, Du. *zoon*, Ger. *Sohn*), Gk. *huios*, Skr. *sunus*, Av. *hunush*, Arm. *ustr*, Lith. *sunus*, O.C.S. *synu*, Rus., Pol. syn, from PIE root **su**, *give birth*, Skr. *sauti*, O.Ir. *suth*.

I. For Romance words from Lat. *filius*, MIE **dhḗilios**, "*suckling*", *son*, and **dhḗiliā**, *daughter*, as in **dhēiliālís**, *filial*, **addheiliā**, *affiliate*; probably from PIE **dhēi**, *suck*, although some relate it to PIE **bhew**, *be*, *exist* (in both IE ***dh***- and ***bh***- evolved as Lat. *f*-), thus maybe IE ****bhílios*** – but, v.i. for Slavic derivative '*diti*' meaning "*child, son*", from the same root ***dhēi***.

For IE **bhew**, *be*, *exist*, *grow*, and common derivative **bhwijo**, *be*, *become*, give Gmc *biju* (cf. O.E. *beon*, O.H.G. *bim*, *bist*, Eng. *be*), Skt. *bhavaḥ*, *bhavati*, *bhumiḥ*, Lat. *fieri*, *fui*, Gk. *phu-*, Lith. *bu'ti*, O.C.S. *byti*, O.Ir. *bi'u*, Rus. *быть*; **bhowo**, *live*, *dwell*, as Gmc. *bowan* (cf. O.N. *bua*, *buask*, O.H.G. *buan*, Eng. *bound*, *husband*, Ger. *bauen*); zero-grade **bhútlos**, *dwelling*, *house*, from Gmc. *buthlaz* (cf. O.E. *bold*, *byldan*, M.Du. *bodel*, Eng. *build*), **bhwo**, *bring forth, make grow*, as Gk. *phuein*, as in **bhútos**, **bhútom**, *plant*, and **bhútis**, *growth*, *nature*, as in **bhútikā**, *physics*, **bhutikós**, *physic*, **epíbhutis**, *epiphysis*, **diábhutis**, *diaphysis*, **supóbhutis**, *hypophysis*, etc.; suffixed **bhutús**, "*that is to be*", and Lat. *futurus*, MIE **bhutū́ros**, *future*; zero-grade **bhū́rom**, *dweller* (especially *farmer*), gives Gmc. *buram* (cf. O.E. *bur*, Eng. *bower*, Ger. *Bauer*), **kombhū́rom**, *dweller*, *peasant*, (cf. O.E. *gebur*, M.Du. *gheboer*, *ghebuer*, Eng. *neighbor*, Du. *boer*, *boor*), **bhū́riom**, *dwelling*, as Gmc. *burjam* (cf. O.E. *byre*), or **bhū́wis**, *settlement* (cf. O.N. *byr*, Eng. *by*[*law*]); **bhū́lom**, *tribe*, *class*, *race*, Gk. φύλον, and **bhū́lā**, *tribe*, *clan*, as in Eng. *phylum*, *phyle*, *phylo-*; zero-grade reduced suffixal form -***bhw***- in Lat. compounds

dubhwiós, *doubtful* (from zero-grade of **dwo**, *two*), Lat. *dubius*, **dúbhwitā**, *doubt*, Lat. *dubitāre*, **probhwós**, *upright*, Lat. *probus*, "*growing well or straightforward*", **superbhwós**, *superior*, *proud*, "*being above*", as Lat. *superbuus*; **bhóumos**, *tree* ("*growing thing*"), as Gmc. *baumaz* (cf. O.E. *beam*, M.Du. *boom*, Eng. *beam*).

II. Slavic "*diti*", "*child, son*", comes from Slavic *dětę*, *dětь* (cf. O.C.S. *дѣти*, S.C.S. *дѣть*, Russ. *дитя*, Pol. *dziecię*, Cz. *dítě*, Bul. *дете́*), MIE **dhḗitis**, "*suckling*", *child*, (see also Lat. *filius*), from PIE **dhēi**, also found in Lat. *fēlāre*, *fēmina*, Gk. *θήσατο* , *θηλή*, O.Ind. *dhā́tavē*, Lith. *dėlė̃*, O.Ir. *dínim*.

III.Germanic "*maiden*" comes from Indo-European **mághotis**, *maid, young womanhood, sexually inexperienced female*, *virgin* (dim. **mághotinom**, "*little maid*"), as Gmc. *magadinam* (cf. O.E. *mægeð*, *mægden*, O.S. *magath*, O.Fris. *maged*, O.H.G. *magad*, Ger. *Magd*, *Mädchen*), from **mághus**, *young person of either sex, unmarried person*, cf. O.E. *magu*, Avestan *magava*, O.Ir. *maug*.

131. Indo-European **dhúg(a)tēr**, older **dhug(h₂)ter*, *daughter*, Gmc. *dukter* (cf. Goth. *dauhtar*, O.N. *dóttir*, O.E. *dohtor*, O.H.G. *tohter*, Scots, Du. *dochter*, Swe. *dotter*), Osc. *fútir*, Gk. *θυγατήρ (thugatēr*), Skr. *duhitṛ*, Av. *duydar*, Pers. *doxtar*, Toch. *ckācar/tkacer*, Arm. *dustr*, O.Pruss. *duckti*, Lith. *duktė*, O.C.S. *dŭšti*, Russ. *дочь*, *dočer'*, Gaul. *duxtīr*, Kamviri *jü*; Hitt. *duttariyatiyaš*, Luw. *duttariyata*.

132. Other PIE common words referring to relatives, apart from **patḗr**, **mātḗr**, **bhrā́tēr** and **snúsos** are:

A. IE **jén(a)tēr**, older **jenh₂ter*, *brother-in-law's wife*, gives Lat. *ianitrīcēs*, Gk. *einatēr*, Skr. *yātar*, Phryg. *ianatera*, Arm. *ner*, Lith. *jentė*, Ltv. *ietere*, Russ. *jatrov'*, Pol. *jątrew*, Kamviri *iâri*.

B. IE **dáiwēr** (older ******deh₂iwer*), *husband's brother*, O.E. *tācor*, O.H.G. *zeihhur*, Lat. *lēvir*, Gk. *dāēr*, Skr. *devar*, Kurd. *diš/héwer*, Arm. *taygr,* Lith. *dieveris*, Ltv. *dieveris*, OCS *děverĭ*, Russ. *dever'*, Pol. *dziewierz*.

C. A comon **gálōus** (PIE **gh₂lōus*) gave Gk. *galōs*, Phryg. *gelaros*, O.C.S. *zlŭva*, Russ. *zolovka*, Pol. *zełwa*.

D. For PIE **áwos**, **áwjos**, *paternal grandfather*, *maternal uncle* (originally **h₂euh₂os*, an adult male relative other than one's father), compare Gmc. *awaz* (cf. Goth. *awó*, O.E. *ēam,* O.H.G. *ōheim*, Ger. *Oheim*), Lat. *avus*, *avunculus*, Gk. *aia*, Arm. *hav*, O.Pruss. *awis*, Lith. *avynas*, O.C.S. *uy*, Russ. *uj*, Pol. *wuj*, Gaul. *avontīr*, O.Ir. *aue*, Welsh *ewythr*; Hitt. *huhhas*. Also found in feminine **áwjā**, *grandmother* (cf. Lat. *avia*).

E. IE **népōts** (gen. **neptós**), *grandson*, *nephew*, gives Gmc. *nefat-* (cf. O.E. *nefa*, O.H.G. *nevo*, Eng. *nephew*, Ger. *Neffe*), Lat. *nepōs*, Gk. *anepsios*, Skr. *napāt*, Av. *napāt*, O.Pers. *napā*, Pers. *nave*, Lith. *nepuotis*, O.C.S. *nestera*, Russ. *nestera*, Pol. *nieściora*, Gaul. *nei*, OIr. *necht*, *níath*, Welsh *nai*, Kamviri *nâvo*, Alb. *nip*.

F. PIE **swékuros**, *father-in-law*, give Gmc. *swikhura-* (cf. Goth. *swaíhrō*, O.N. *svǽra*, Eng. *swēor*, O.H.G. *swehur*, *swagur*), Gk. *hekuros*, Skr. *śvaśura,* Av. *xvasura-*, Arm. *skesur*, Lith. *šešuras*, O.C.S. *svekŭrŭ*, Russ. *svekrov'*, Pol. *świekra*, Welsh *chwegr*, Alb. *vjehërr*, Kamviri *č.uč.* probably ultimately derived from fem. **swekrū́s**, *mother-in-law*, as O.H.G. *swigar*, Ger. *Schwieger*, Lat. *socrus*, Skr. *śvaśrū*, O.Sla. *svekry*, etc.

133. PIE **jéwos**, *norm*, *right*, *law* (possibly from PIE ***jeu***, *bind*), as in O.Ind. *yōḥ*, Av. *yaožda*, refers in MIE to the body of rules and standards to be applied by courts; **jówos**, *law*, as Lat. *iūs, iūris* (O.Lat. *ious*), and **jowosā**, *swear*, Lat. *jūrō* (O.Lat. *iouesat*, see rhotacism), p.part. **jowosātós**, *sweared*, giving Latin common borrowings **jowosístos**, *jurist*, **apjowosā**, *abjure*, **adjowosā**, *adjure*, **komjowosā**, *conjure*, **jówosātos**, *jury*, **enjowosā**, *injury*, **perjowosā**, *perjure*, **jowoseskomséltos**, *jurisconsult*, **jowosesproweidéntiā**, *jurisprudence* (from **proweidéntiā**, from IE **per** and **weid**); Italo-Celtic **jowest(i)ós**, *just*, as Lat. *iustus*, O.Ir. *huisse* (<**justjos*).

MIE **komselo**, *counsel, call together, deliberate, consider*, as Lat. *consulere*, found in Lat. *consulere senatum*, MIE ***komséltu senátum***, "*to gather the senate* (*to ask for advice*)*"*, from ***kom***- "with" + ***selo*** "*take, gather together*" from PIE base **sel**- "*to take, seize*" .

134. For "*law*" as *a written or understood rule* or *the body of rules from the legislative authority*, i.e. the concept of Lat. *lex*, MIE has different words:

I. Latin *lex*, *legis*, comes possibly from PIE lengthened *****lēgs***, hence lit. "*collection of rules*" (see PIE **leg**, *collect*), although it is used as Modern Indo-European **lēghs** (both IE ***g*** and ***gh*** could evolve as *g* in Latin), from PIE **legh**, *lie, lay*, because its final origin remains uncertain, and this root gives also Germanic o-grade **lóghom**, *law*, "*that which is set or laid down*", Gmc. *lagam* (cf. O.N.,O.E. *lagu*, *lag*-, O.H.G. *lāga*, Eng. *law*, Sca. *lov*, Ger. *Lage*), with common derivatives **lēghālís**, *legal*, **lēghitimā**, *legitimate*, **lēghiālís**, *loyal*, **lēgheslatṓr**, *legislator*, **preiwolḗghiom**, *privilege* ("*a law affecting one person*", from **preiwós**, *private*), and from Latin denominative **lḗghā**, *depute*, *commision*, *charge*, *legate* ("*engage by contract*"), as Lat. *legāre*, are **lḗghātom**, *legacy*, **komlḗghā**, *colleage*, **komlēghiālís**, *collegial*, **delḗghātos**, *delegate*, **relēghā**, *relegate*. Other known derivatives include **léghio**, *lay*, as Gmc. *lagjan* (cf. Goth. *lagjan*, O.S. *leggian*, O.N. *leggja*, O.E. *lecgan*, O.Fris. *ledza*, O.H.G. *lecken*, M.Du. *legghan*, Eng. *lay*, Ger. *legen*, Du. *leggen*), suffixed **léghros**, *lair*, *bed*, as Gmc. *legraz* (cf. O.E. *leger*, O.H.G. *legar*, M.Du. *leger*, Eng. *lair*), and **léghtos**, *bed*, as Lat. *lectus*; o-grade Greek **lóghos**, *childbirth*, *place for lying in wait*. Cf. Gk. *lekhesthai*, Toch. *lake*/*leke*, Lith. *at-lagai*, *lagaminas*, Ltv. *lagača*, O.C.S. *lego*, *ležati*, Russ. *ležat'*, Pol. leżeć, Gaul. *legasit*, O.Ir. *lige*, Welsh *gwely*, Hitt. *laggari*.

For the same sense of "*that which is set or laid down*", compare IE **statútom**, Lat. *statutum*, "*statute*", from Lat. *statuere*, "*establish*" or **statúmos**, Lith. *istatymas*, from *istatyti* "*set up*, *establish*" (from IE **stā**, *stand, set down*); also, Ger. *Gesetz* (from O.H.G. *gisatzida*, IE **kom**+**sedio**, *set*).

For PIE **stā**, *stand*, "*place or thing that is standing*", compare common derivatives **stálos**, *stool*, as Gmc. *stōlaz* (cf. Goth. *stols*, O.N. *stoll*, O.E. *stōl*, O.H.G. *stuol*, O.Fris. *stol*, Ger. *Stuhl*), **stántiā**, *stance*, *stage*, **stātēiuós**, *stative*, **kikromstántiā**, *circumstance*, **komstánts**, *constant*, **komtrāstā**, *contrast*, **di**(**s**)**stā**, **distánts**, *distant*, **ekstánts**, **enstánts**, **obhstákolos**, **obhstātrikós**, *obstetric*, **supstántiā**, *substance*; **stámēn**, *thread of the warp* (a technical term), *stamen*; **stámōn**, *thread*, as Gk. *stēmōn*; **starós**, *old*, "*long-standing*", as Slavic *staru*; zero-grade nasalized extended **stanto**, *stand*, as Gmc. *standan* (cf. O.N. *standa*, O.E.,O.S., Goth. *standan*, O.H.G. *stantan*, Swed. *stå*, Du. *staan*, Ger. *stehen*), as in **ndherstanto**, *stand under*, ***stántkarts*** (see ***kar***-, *hard*), *standard*; suffixed **stámnis**, *stem*, as Gmc. *stamniz* (cf. O.N. *stafn*, O.S. *stamm*, O.E. *stemn*, *stefn*, O.H.G. *stam*, Dan. *stamme*, Swed. *stam*, Ger. *Stamm*); **státis**, *place*, as Gmc. *stadiz* (cf. Goth. *staþs*, O.S. *stedi*, O.N. *staðr*, O.E. *stede*, O.H.G. *stat*, Swed. *stad*, Du. *stede*, Ger. *Stadt*), Lat. **státim**, *at once*, *stat*, **státiōn**, *a standing still, station*, **armistátiom**, *armistice*, **sāwelstátiom**, *solstice*; Greek **státis**, *standing*, *stanstill*, **statós**, *placed*, standing as Gmc. *stadaz* (cf. O.N. *stadhr*, Eng. *bestead*), Gk. *statos*, as in -**stat**, **statikós**, *static*; **dekstanā**, *make firm*, *establish*, *destine*, **obhstanā**, *set one's mind on*, *persist*; **státus**, *manner*, *position*, *condition*, *attitude*, with derivatives **statū́rā**, *height*, *stature*, **statuo**, *set up*, *erect*, *cause to stand*, and **superstáts** (Lat. *superstes*), *witness*, "*who stands beyond*"; **stádhlom**, *stable*, "*standing place*", as Lat. *stabulum*; **stadhlís**, *standing firm*, *stable*, **stadhlisko**, *establish*; Greek -**statās**, -*stat*, *one that causes to stand*, *a standing*; zero-grade reduplicated **sisto**, *set*, *place*, *stop*, *stand*, as Lat. *sistere*, in **komsisto**, *consist*, **desisto**, *desist*, **eksisto**, *exist*, **ensisto**, *insist*,

entersistátiom, *interstice*, **persisto**, *persist*, **resisto**, *resist*, **supsisto**, *subsist*, and from Gk. *histanai*, with **státis**, *a standing*, as in **apostátis**, **katastátis**, **epistátis**, **epistā́mā**, *knowledge* (Gk. ἐπιστήμη), **epistāmologíā**, **supostátis**, *hypostasis*, **ikonostátis**, **wiswostátis**, **metastátis**, **próstatā**, **komsto**, *establish*, **komstámn**, *system*; **sistos**, *web, tissue, mast* ("*that which is set up*"), Gk. ἱστός, **sistoghŕbhmn**, *histogram*, etc.; compound **pórstis**, *post*, "*that which stands before*" (***por-***, *before*, *forth*, see **per**), Lat. *postis*; extended ***stau***, "*stout-standing, strong*", as **stā́uā**, *place*, *stow*, Gmc. *stōwō*; o-grade Greek **stṓuiā**, *porch*, in **stōuikós**, *stoic*; suffixed extended **stáuros**, *cross, post, stake* (see also **stáuros**, *bull*), **enstaurā**, *restore*, *set upright again*, **restaurā**, *restore*, *rebuild*, **restaurā́nts**, *restaurant*; zero-grade extended **stū́los**, *pillar*, as in **epistū́los**, **supostū́los**, **oktōstū́los**, **peristū́los**, **prostū́los**; **steuirós**, *thick*, *stout*, *old*, as Skr. *sthaviraḥ*; suffixed secondary form **steu-**, suffixed **stéurā**, *steering*, as Gmc. *steurō*, and denominative verb **steurio**, *steer*, as Gmc. *steurjan* (cf. Goth. *stiurjan*, O.N. *styra*, O.Fris. *stiora*, O.E. *steran*, *stieran*, O.H.G. *stiuren*, Du. *sturen*, Ger. *steuern*), a verb related to **stéuros**, *large domestic animal*, *ox*, *steer* (see **stáuros**), and **stéurikos**, *calf*, *stirk*. Derivatives include Gmc. *standan*, Lat. *stare*, Osc. *staíet*, Umb. *stahmei*, Gk. *histami*, Skr. *tiṣṭhati*, Av. *hištaiti*, O.Pers. *aištata*, Pers. *istādan*, Phryg. *eistani*, Toch. *ṣtām*/*stām*, Arm. *stanam*, O.Pruss. *stacle*, Lith. *stoti*, Ltv. *stāt*, O.C.S. *stati*, Russ. *stat'*, Polish *stać*, O.Ir. *tá*, Welsh *gwastad*, Alb. *shtuara*; Hitt. *išta*, Luw. *išta-*, Lyc. *ta-*.

II. PIE **leg,** *collect*, with derivatives meaning *speak*, gives Lat. *legere*, "*gather, choose, pluck, read*", Gk. *legein*, "*gather, speak*", from which MIE **légtiōn**, *lection*, *lesson*, **legtós**, *read*, **legtósā**, *lecture*, **legéndā** (from a gerundive), *leyend*, **legibhilís**, *legible*, **légiōn**, **komlego**, *gather*, *collect*, **komlégtiōn**, *collection*, **dislego**, *esteem*, *love*, **dislegénts**, *diligent*, **eklego**, *elect*, **eklégtiōn**, *election*, **enterlego**, *choose*, **enterlegē**, *perceive*, **enterlegénts**, *intelligent*, **ne(g)lego**, *neglect*, **prāilego**, *prelect*, **sakrilegós**, *one who steals sacred things*, **sakrilégiom**, *sacrilege* (see **sak**), **selego**, *select*, **sortilégos**, *diviner* (see **ser**) **sortilégiom**, *sortilege*; **légsikom**, *lexicon*, **-logos**, *-logue*, **-logíā**, *-logy*, **katalego**, *to list*, **katálogos**, *catalogue*, **dialego**, *discourse*, *use a dialect, dialogue*, **dialégtos**, *dialect*, **légtis**, *speech*, *diction*, **dislegtíā**, *dyslexia*, **eklegtikós**, *eclectic*, etc.; **légnom**, *wood*, *firewood* ("*that which is gathered*"), as Lat. *lignum*; **lógos**, *speech, word, reason*, as Gk. λόγος, as in **lógikā**, *logic*, **logikós**, *logic*, **logístikā**, *logistic*, **análogos**, *analogous*, **apologíā**, *apology*, **epílogos**, *epilogue*, **komlogísmos**, *syllogism*, **prólogos**, *prologue*.

For PIE **sak**, *sanctify*, gives **sakrós**, *holy, sacred, dedicated*, as Lat. *sacer* (O.Lat. *saceres*), in **sakrā**, *make sacred, consecrate*, **sakristános**, *sacristan*, **komsakrā**, *consecrate*, **eksakrā**, *execrate*; compound **sakrodhṓts**, *priest*, "*performer of sacred rites*" (for **dhōt**, *doer*, see **dhē**), as Lat. *sacerdōs*, in **sakrodhōtālís**, *sacerdotal*; nasalized **sankio**, *make sacred, consacrate*, with p.part. **sanktós**, *sacred*, as Lat. *sancire*, *sanctus*, as in **sanktidhakā**, *sanctify*. Compare also Osc. *sakrim*, Umb. *sacra*, and (outside Italic) maybe all from IE ****saq***, *bind*, *restrict*, *enclose*, *protect*, as IE words for both "*oath*" and "*curse*" are regularly words of *binding* (Tucker).

Also, with the meaning of "*holy*", PIE root **kwen**, gives suffixed zero-grade **kwńslom**, *sacrifice*, as Gmc. *khunslam* (cf. Goth. *hunsl*, O.N. *hunsl*, O.E. *hūsl*, *hūsel*, Eng. *housel*), Av. *spanyah*, O.Pruss. *swints*, Lith. *šventas*, Ltv. *svinēt*, O.C.S. *svętŭ*, Russ. *svjatoj*, Polish *święty*.

PIE **ser**, *line up*, gives Lat. *serere*, "*arrange, attach, join* (*in speech*), *discuss*", as in **sériēs**, **adsero**, *assert*, **desertós**, *desert*, **dissertā**, *dissertate*, **eksero**, *put forth, stretch out*, **ensero**, *insert*; **sérmōn**, *speech*,

discourse, as Lat. *sermō*; **sŕtis**, *lot*, *fortune* (perhaps from the lining up of lots before drawing), as in **srtiásios**, *sorcerer*, **komsŕtis**, *consort* ("*who has the same fortune*"); **sérā**, *lock, bolt, bar*, (perhaps "*that which aligns*").

III.For PIE **dhē**, *set*, *put*, *place*, gives some common terms referring to "(*divine*) *law, right, fate*" (cf. Eng. *doom*), cf. Gmc. *dōn* (cf. Goth. *gadeths*, O.N. dalid*u*n, O.E. *dōn*, O.H.G. *tuon*, Eng. *do*, Ger. *tun*) Lat. *faciō*, Osc. *faciiad*, Umb. *feitu*, O.Gk. *tithēmi*, Skr. *dadhāti*, Av. *daδaiti*, O.Pers. *adadā*, Phryg. *dak-*, Thrac. *didzos*, Toch. *täs/täs*, Arm. *ed*, Lith. *dėti*, Ltv. *dēt*, Russ. *det'*; *delat'*, Polish *dziać*; *działać*, Gaul. *dede*, Welsh *dall*, Alb. *ndonj*, Hitt. *dai*, Lyc. *ta-*. Common MIE words include **dhētós**, *set down*, *created*, as O.Ira. *datah*; suffixed **dhḗtis**, "*thing laid down or done", law, deed*, Gmc. *dēdiz* (cf. O.E. *dǣd*, Eng. *deed*); **dhḗkā**, *receptacle*, Gk. θήκη, Eng. *theca*, as in **apodhḗkā**, "*store, warehouse*", then extended as *pharmacy* (and also to Spa. ***bodega*** and Fr. ***boutique***, both left as MIE loans), as in **apodhēkários**, *apothecary*, **apodhḗkiom**, *apothecium*, **bubliodhḗkā** (from Greek loan ***búbliom***, *book*, from the Greek name of the Phoenician city *Gubla*, ***Búblos*** *or* ***Cúblos***, Gk. *βύβλος*, as in n.pl. ***Búblia***, *bible*, lit. "*the books*"), *library*, **ambhidhḗkiom**, *amphithecium*, **endodhḗkiom**, *endothecium*, **peridhḗkiom**, *perithecium*; o-grade **dhō**, *do*, as Gmc. *dōn*; suffixed and prefixed **apdhṓmēn**, *belly*, *abdomen*, Lat. *abdōmen*, perhaps "*part placed away, concealed part*"; suffixed **dhṓmos**, *judgement*, "*thing set or put down*", and **dhōmio**, *judge*, as Gmc. *dōmaz, dōmjan* (cf. Goth. *dōms*, O.N. *dōmr*, O.E. *dōm*, *dēman*, Eng. *doom*, *deem*; also into Russ. *Duma*, from a Germanic source), also as abstract suffix **-dhṓmos** indicating *state*, *condition*, *power* (cf. O.N. *-domr*, O.E. *-dom*, Du. *-dømme*, Eng. *-dom*); zero-grade **komdho**, *put together*, *establish*, *preserve*, as Lat. *condere*, in **apskomdho**, *abscond*, **rekomdhitós**, *recondite*, and suffixed **komdhio**, *season*, *flavor*, as Lat. *condīre*, in **komdhiméntom**, *condiment*; suffixed zero-grade form **dhakio**, *do*, *make*, as Lat. *facere*, usually found as Latin combining form **-dhaks**, Lat. *-fex*, "*maker*", **-dhakiom**, Lat. *-ficium*, "*a making*", both Eng. *-fice*, and **-dhakā**, Lat. *-ficāre*, **-dhakio**, Lat. *-facere*, both normally Eng. *-fy*; some common words include **-dhakients**, *-facient*, **dháktos**, *fact*, **dháktiōn**, *faction*, **dhaktṓr**, *factor*, **dhaktoríā**, *factory*, **addhaktā**, *affect*, **addháktiōn**, *affection*, **amplidhakā**, *aplify*, **artidháktos**, *artifact*, **artidhákiom**, *artifice*, **dwēiatidhakós**, *beatific*, **komdháktiōn**, *confection*, **komdhaktionā**, *confect*, **dedhakio**, *fail*, **dedhakiénts**, *deficient*, **nisdodhakio**, *nidify* (see **nisdos**, *nest*), **aididhakā**, *edify* (from Lat. ***aidis***, *a building*), **aididhákiom**, *edifice*, **ekdháktos**, *effect*, **endhaktā**, *infect*, **jowostidhakā**, *justify*, **malidhaktṓr**, *malefactor*, **manudhaktósā**, *manufacture* (see **mánus**, *hand*), **modidhakā**, *modify*, **gnotidhakā**, *notify*, **opidháks**, *workman* (see **op**, *work*), **opidhákiom**, *service*, *duty*, *business*, *occupation*, *performance of work*, (from Lat. *opificium*, later *officium*), **op(i)dhakḯnā**, *office*, (cf. Lat. *opificina*, later *officina*), **perdhakio**, *finish*, **perdhaktós**, *perfect*, **ōsidhákiom**, *orifice* (see **ōs**, *mouth*), **ekdhakio**, *accomplish*, **ekdháktos**, *effect*, **ekdhakiénts**, *efficient*, **ekdhakā́ks**, *efficacious*, **endhaktā**, *infect*, **pontidháks**, *pontifex* (see IE **pent**), **prāidháktos**, *prefect*, **prodháktos**, *profit*, **prodhakiénts**, *profiting* (Eng. "*proficient*"), **putridhakio**, *putrify* (see **pu**, *rot*), **qālidhakā**, *qualify* (see **qo**), **pertidhakā**, *petrify*, **rāridhakā**, *rarefy* (from borrowing ***rārós***, *rare*, Lat. *rārus*), **regtidhakā**, *rectify* (see **regtós**, *right, straight*), **redhakio**, *feed*, *refect*, **redhaktóriom**, *refectory*, **reudhidhakio**, *redden*, **reudhidhakiénts**, *rubefacient*, (see **reudhós**, *red*), **sakridhakā**, *sacrify*, **satisdhakio**, *satisfy* (see **sā**), **supdhakio**, *suffice*, **supdhakiénts**, *sufficient*; from Lat. **dhákiēs**, *shape*, *face* ("*form imposed on something*"), are **dhakiālís**, *facial*, **superdhákiēs**, *surface*; further suffixed **dhaklís**, *feasible, easy*, as Lat. *facilis* (from O.Lat. *facul*), as in

dháklitā, *ability*, *power*, *science*, also noun **dhaklís**, with the sense of *faculty*, *facilities*, **disdháklitā**, *difficulty*; **dhās**, *divine law*, *right*, as Lat. *fas*; reduplicated Greek **dhidho**, put, Gk. *tithenai*, as in **dhátis**, *a placing*, Gk. θέσις, also *thesis*, and adjective **dhatós**, *placed*, as in **dhatikós**, *thetic*, **anadhámn**, *anathema*, **antidhátis**, *diadhasis*, **epidhátos**, **supodhakā**, *hypothecate*, **supodhátis**, *hypothesis*, **metadhátis**, **par(a)endhidho**, *insert*, **parendhátis**, *parenthesis*, **prosdhátis**, *prothesis*, *prosthesis*, **komdhátis**, *synthesis*; **dhámn**, "*thing placed*," *proposition*, *theme*, Gk. θέμα, as in **dhamntikós**, *thematic*; reduplicated Sanskrit **dhedhē**, *place*, Skr. *dadhāti*, p.part. **dhatós**, placed, Skr. *-hita-*.

In Proto-Indo-European, another common verb meaning "*make*" existed, **qer**, as Skr. *karoti*, "*he makes*", as in **Sómsqrtom**, *Sanskrit,* Skr. *saṃskṛtam*; also, common derivatives Greek **qéras**, *monster*, or dissimilated **qélōr**, *monster*, *peloria*; also, suffixed **qérmn**, *act*, *deed*, as Skr. *karma*.

III.1. Indo-European **op**, *work*, *produce in abundance*, include **ópōs**, *work*, Lat. *opus*, with denominative verb **opesā**, *operate*, as Lat. *operārī*, as in ***óperā***, *opera* (affected by Lat. rhotacism), **komopesā**, **manuopesā**, *maneuver*; **openentós**, *rich*, *wealthy*, *opulent*, as Lat. dissim. *opulentus*, **ópnis**, *all* (from "*abundant*"), Lat. *omnis*, as in **ópnibhos**, *omnibus*; **optmós**, best ("*wealthiest*"), as Lat. *optimus*; **komópiā**, *profusion*, *plenty*, also *copy*, as in **komopionts(ós)**, *copious*.

III.2. For PIE **pent**, *tread*, *go*, compare Gmc. *finthan*, "*come upon, discover*" (cf. Goth. *finþan*, O.N. *finna*, O.E. *find*, O.S. *findan*, M.Du. *vinden*, Ger. *finden*); suffixed **póntis**, *way*, *passage*, found in Lat. *pōns*, "*bridge*" (earliest mening of "*way*, *passage*" preserved in priestly title **pontidháks**, *pontifex*, "*he who prepares the way*"), also found in Russ. *nymь*, "*path, way*" (as in '*sputnik*', *fellow traveler*, which could be translated as MIE "***kompontinikós***"); zero-grade **pnto**, *tread*, *walk*, in **peripntetikós**, *peripatetic*, Gk. περιπατητικός; suffixed **pńtos**, from Iranian (cf. Av. *panta* (nominative), *paθa* (genitive) *way*, Old Persian *pathi-*), into W.Gmc. through Scythian, as Gmc. *patha-* (cf. O.E. *paþ*, *pæþ*, Fris. *path*, M.Du. *pat*, O.H.G. *pfad*, Eng. *path*, Du. *pad*, Ger. *Pfad*).

III.3. For PIE **pu**, *rot*, *decay* (from older **puh*, it becomes **pū**, ***puw-*** before vowels), compare **pūlós**, *rotten*, *filthy*, as Gmc. *fūlaz* (cf. Goth. *fūls*, O.N *fúll*, O.E. *fūl*, O.H.G. *fūl*, M.Du. *voul*, Ger. *faul*), **pūtrís**, *rotten*, as Lat. *puter*, **púwos/m**, *pus*, as Lat. *pūs*, Gk. *puon*, *puos*, also in **enpuwo**, *suppurate*, as in **enpuwémn**, *empyema*.

III.4. Indo-European root ***man-***, *hand*, gives Lat. **mánus**, with derivatives **manudiā**, *manage* (from V.Lat. *manidiāre*, into O.It. *maneggiare*, Fr. *manager*, Eng. *manage*, Spa. *manejar*, etc.), **manuālís**, *manual*, **manúdhriom**, *handle*, *manubrium* (from instr. suffix **-dhro-**), **manteno**, *maintain* (see **ten**), **manikóisā** (from Lat. *cura*, Archaic Latin *koisa*, "*cure*"), **manighestós**, *caught in the act, blatant, obvious*, (see **chedh**), **manuskreibhtós**, *handwritten* (see **skreibh**), **manuskréibhtom**, *manuscript*; **manúpolos**, *handful* (for **-polos**, *full*, see **pel**), **manupolā**, *manipulate*; **mankós**, *maimed in the hand*; **mankáps**, "*he who takes by the hand*" *purchaser*, (*-ceps,* agential suffix, "*taker*"; see **kap**), in **ekmankapā**, *emancipate*; **mandā**, "*to put into someone's hand*," *entrust*, *order*, from Latin compound *mandāre,* (*-dare,* "*to give*", see **dō**, although possibly from "*put*", see **dhē**), **mandā́tom**, *mandate*, **kommandā**, *command*, *entrust*, *commend*, **kommándos**, *commando*, **komtrāmandā**, *countermand*, **demandā**, *demand*, **rekommandā**, *recommend*.

III.4.a. PIE **ten**, *stretch*, gives derivatives suffixed **tendo**, *stretch, extend*, as Lat. *tendere*, in **adtendo**, *attend*, **komtendo**, *contend*, **detendo**, *detent*, **distendo**, *distend*, **ekstendo**, *extend*, **entendo**, *intend*, **prāitendo**, *pretend*, **suptendo**, *subtend*; **portendo**, *portend* ("*to stretch out before*", a technical term in augury, "*to*

indicate, presage, foretell"); suffixed **tenio**, Gk. *teinein*, with o-grade **ton-** and zero-grade **tńtis**, a *stretching, tension, intensity*, as in **katatóniā**, **entńtis**, *entasis*, **epitńtis**, *epitasis*, **supotenióntiā** (Gk. ὑποτείνουσα), *hypotenusa*, **protńtis**, *protasis*, **komtonikós**, *syntonic*, etc.; reduplicated zero-grade **tétnos** ['te-tn̥-os], *stiff, rigid*, as Gk. τέτανος, also *tetanus*; suffixed **téntrom**, *loom*, as Skr. *tantram* (cf. Pers. *tār*); stative **tenē**, *hold, keep, maintain* (from "*cause to endure or continue, hold on to*"), as lat. *tenēre*, in **tenā́ks**, *tenacious*, *tenor*, **apstenē**, *abstain*, **komtenē**, *contain*, **komtenuós**, *continuous*, **komtenuā**, *continue*, **detenē**, *detain*, **entertenē**, *entertain*, **tenánts**, *holder*, *tenant*, *lieutenant*, **manutenē**, *maintain*, **obhtenē**, *obtain*, **pertenē**, *pertain*, **pertenā́ks**, *pertinacious*, ***retenē***, *retain*, **suptenē**, *sustain*; derivatives meaning "*stretched*", hence "*thin*" include **tnús**, as Gmc. *thunniz*, *thunwiz* (cf. O.N. *þunnr*, O.E. *thynne*, W.Fris. *ten*, O.H.G. *dunni*, M.L.G. *dunne*, Du. *dun*, Ger. *dünn*, Eng. *thin*), **tenús**, *thin*, *rare*, *fine*, as Lat. *tenuis*, in **adtenuā**, *attenuate*, **ekstenuā**, *extenuate*, **tenrós**, *tender*, *delicate*, as Lat. *tener*, (**en**)**tenresko**, *touch, intenerate*; derivatives meaning "*something stretched or capable of being stretched, a string*" include Greek **ténōn**, *tendon*, o-grade suffixed **tónos**, *string*, hence *sound*, *pitch*, *tone*, and suffixed zero-grade **tńia**, *band*, *ribbon*.

III.4.b. PIE **chedh**, *ask*, *pray*, gives suffixed **chedhio**, *pray*, *entreat*, Gmc. *bidjan* (cf. O.E. *biddan*, Ger. *bitten*, O.E. *bid*), **chédhom**, entreaty, as Gmc. *bidam* (cf. Goth. bida, O.E. *bedu*, *gebed*, O.H.G. *beta*, M.Du. *bede*, Eng. *bead*, Ger. *bitte*); **chestós** (<****chedhto***-), into Lat. *-festus*, giving **n̥chestós**, *hostile* (from "*inexorable*"), **manuchestós**, *manifest*, *caught in the act*.

Some assign Lat. *-festus* to a common PIE **dhers**, *dare, be bold*, as Gmc. *derzan* (cf. Goth. *gadars*, O.E. *dearr*, *durran*, Eng. *dare*), Gk. *thrasys*, Skt. *dadharśa*, O.Pers. *darš-*, O.C.S. *druzate*.

III.4.c. PIE **skreibh**, *cut, separate, sift* (an extension of **sker**), used as *scratch, incise,* hence *write*, as Lat. *scrībere*, giving **skreibhtós**, *written*, **skréibhā**, *scribe*, **skréibhtos**, *script*, **skreibhtóriom**, *scriptorium*, **skréibhtā**/**skreibhtósā**, *scripture*, **adskreibho**, *ascribe*, **kikromskreibho**, *circumscribe*, **komskreibho**, *conscript*, **deskreibho**, *describe*, **enskreibho**, *inscribe*, **prāiskreibho**, *prescribe*, **proskreibho**, *proscribe*, ***reskreibho***, *rescript*, **supskreibho**, *subscribe*, **superskreibho**, *superscribe*, **tran**(**s**)**skreibho**, *transcribe*; from Greek is **skréibhos**, *scratching*, *sketch*, *pencil*, as Eng. *scarify*.

III.5. Common PIE **sā**, *satisfy*, as zero-grade **satós**, *sated*, *satiated*, as Gmc. *sathaz* (cf. Goth. *saþs*, O.N. *saðr*, O.H.G. *sat*, M.Du. *sat*, Eng. *sad*, Ger. *satt*, Du. *zad*), verb **satio**, *satisfy*, *sate*, as Gmc. *sathōn* (cf. O.E. *sadian*, Eng. *sate*); suffixed zero-grade **saturós**, *full* (*of food*), *sated*, as Lat. *satur*, in **sáturā**, *satire*, Lat. *satyra*, and **saturā**, *saturate*, Lat. *saturā*; **satís**, *enough*, *sufficient*, as Lat. *satis*, **satiā**, **satisdhakio**, *satisfy*, **satiatā**, *satiety*; **sadrós**, *thick*, as Gk. *hadros*.

135. Indo-European root (**s**)**teu**, *push*, *stick*, *knock*, *beat*, is behind suffixed **studo**, *be diligent* ("*be pressing forward*"), Lat. *studere*, giving **stúdiom**, *eagerness*, then "*study*, *application*", as in **studiā**, *study*, M.L. *studiāre*; other derivatives include extended (**s**)**teupo**, push, stick, knock, beat, as Gk. *typtein*, *typos*, Skt. *tup-*, *tundate*, Goth. *stautan* "*push*", O.N. *stuttr*, and common Germanic **steupós**, *high*, *lofty*, as Gmc. *staupaz* (cf. O.E. *steap*, O.Fris. *stap*, M.H.G. *stouf*, Eng. *steep*).

136. PIE **sūs**, *pig*, *swine*, and derivatives **swĭnos**/**-m**, give Gmc. *swinam* (cf. Goth. *swein*, O.S., O.Fris. M.L.G., O.H.G.,O.E. *swin*, M.Du. *swijn*, Du. *zwijn*, Ger. *Schwein*), **súkā**, *sugō* (cf. O.N. *sýr*, O.E. *sū*, O.S., O.H.G. *su*, Du.

zeug, Eng. *sow*, Ger. *Sau*), cf. Lat. *sūs*, *suinus*, Umb. *sif*, Gk. *hūs*, Skr. *sūkara*, Av. *hū*, Toch. -/*suwo*, Ltv. *sivēns*, O.C.S. *svinija* Russ. *svin*, Polish *świnia*, Celtic *sukko* (cf. O.Ir. *socc*, Welsh *hwch*, O.E. *hogg*), Alb. *thi*.

Related Indo-European **pórkos**, *young* or *little pig*, gives Gmc. *farkhaz* (cf. O.E. *fearh*, M.L.G. *ferken*, O.H.G. *farah*, M.Du. *varken*, Ger. *Ferkel*, Eng. *farrow*), Lat. *porcus*, Umb. *purka*, Gk. *porkos*, Kurd. *purs*, O.Pruss. *parstian*, Lith. *paršas*, Russ. *porosja*, Polish *prosię*, *prosiak*, Gaul. *orko* O.Ir. *orc*, Lusitanian *porcos*.

137. PIE **kákkā**, *shit*, *excrement*, and verb *shit*, cf. Ger. *Kacke*, Lat. *cacāre*, Gk. *kakkaō*, Pers. *keke*(*h*), Arm. *k'akor*, Lith. *kaka*, Russ. *kakat'*, O.Ir. *cacc*, Welsh *cach*.

Other words for "*shit*" are Gmc. *skitan*, from PIE **skeit-**, "*split, divide, separate*", and Lat. **ekskreméntom**, from **ekskerno**, "*separate*", therefore both revealing an older notion of a "*separation*" of the body.

For IE **krei**, *sieve*, *discriminate*, *distinguish*, compare **kéidhrom**/**kéitrom**, *sieve*, as Gmc. *khrithram* (cf. O.E. *hridder*, *hriddel*, Eng. *riddle*), Lat. *crībrum*; suffixed **kréimēn**, *judgment*, *crime*, as Lat. *crīmen*, as in **kreimenālís**, *criminal*, **rekreimenā**, *recriminate*, **diskréimēn**, *distinction*, **diskreimenā**, *discriminate*; suffixed zero-grade **krino**, *sift*, *separate*, *decide*, as metathesized Lat. *cernere*, in p.part **kritós**, (Lat. **kirtos*) *certain*, **komkrino**, *concern*, **komkrítos**, *concert*, **dekrítos**, *decree*, **diskrino**, *discern*, **diskomkritā**, *disconcert*, **ekskrino**, *separate*, **ekskritós**, *separated*, *purged*, **ekskritā**, *excrete*, **ekskriméntom**, *excrement*, **krititúdōn**, *certitude*, **n̥krititúdōn**, *incertitude*, **swekrino**, *secern*, **swekritā**, *secret*, **swekrítarios**, *secretary*; suffixed zero-grade **krinio**, *separate*, *decide*, *judge*, *explain*, as Gk. κρίνειν, in **krítis**, *crisis*, **kritikós**, *critic*, **kritḗriōn**, *criterion*, **diakritikós**, *diacritic*, **endokrinós**, *endocrine*, **eksokrinós**, *exocrine*, **supokritíā**, *hypocrisy*, **krítā**, *judge*, **saimntokrítā**, *hematocrit* (MIE ***saimn***-, ***saimnto***-, *blood*, are loan words from Gk. αἷμα, -ατος, probably MIE ***saimn***, cf. O.Ind. *is*, O.H.G. *seim*, Ger. *Honigseim*).

a. For Indo-European **méigh**, *urinate*, *sprinkle*, hence "*mist*, *fine rain*", also "*mix*" cf. Gmc. *mihstu-* (cf. Goth. *maihstus*, O.N. *míga*, O.E. *miscian*, *mistel*, O.H.G. *miskan*, Du.dial. *mieselen*, Swed. *mäsk*, Ger. *mischen*), *maisk-* (cf. O.E. *māsc*, *meox* Swed. *mäsk*, Ger. *Maisc*, Eng. *mash*), Lat. *mingere*, *meiere*, Gk. *omeikhein*, Skr. *mehati*, Av. *maēsati*, Kurd. *méz*, Gk. *omeihein*, Toch. -/*miśo*, Arm. *mizel*, Lith. *myžti*, Ltv. *mīzt*, Russ. *mezga*, Pol. *miazga*. Latin *micturire* comes from suffixed **míghtus**, in **mightusio**, *want to urinate*, *micturate*.

b. PIE **wem**, *vomit*, gives O.N. *váma*, Lat. *vomere*, Gk. *emeso*, Skr. *vamiti*, Av. *vam*, Pers. *vātāk*, O.Pruss. *wynis*, Lith. *vemti*, Ltv. *vemt*.

c. PIE **sp(j)ew**, *spit*, gave Gmc. *spjewan* (cf. Goth. *spiewan*, ON *spýja*, O.E. *spiwan*, O.H.G. *spīwan*, Eng. *spew*, Ger. *speien*), Lat. *spuere*, Gk. *ptuein*, Skr. *ṣṭīvati*, Av. *spāma*, Pers. *tuf*, Arm. *t'us*, Lith. *spjauti*, Ltv. *spļaut*, O.C.S. *pljujǫ*, Russ. *pljuju*, Pol. *pluć*, Osset. *thu*,

d. **kwas**, *cough*, gave Gmc. *hwostan* (cf. O.N. *hósta*, O.E. *hwōsta*, O.H.G. *huosto*, Ger. *Husten*, Skr. *kasāte*, Toch. /*kosi*, Lith. *kosėti*, Ltv. *kāsēt*, Russ. *kašljat'*, Pol. *kaszleć*, Ir. *casachdach*, Welsh *pas*, Alb. *kollje*, Kam. *kâsa*.

138. The name of the Rhine comes from Ger. *Rhine*, in turn from M.H.G. *Rin*, ultimately from an IE dialect, originally lit."*that which flows*", from PIE ***rej***, *flow*, *run*, as Gk. *rhein*, with derivatives including suffixed **rinuo**, *run*, as Gmc. *rinwan*, *rinnan*, (cf. Goth., O.S., O.E. O.H.G., *rinnan*, O.N. *rinna*, M.Du. *runnen*, Ger. *rinnen*), Gmc. *ril-* (cf. Dutch *ril*, Low German *rille,* Eng. *rill*); suffixed **réiwos**, *stream*, *river*, as Lat. *rīuus*.

139. IE **albhós**, *white*, gives derivatives Lat. *albus*, Umb. *alfu*, Gk. alphos, Russ. *lebed'*, Lyc. *alb-*. Other derivatives are **álbhos**, **álbhis**, "*white thing*", *elf* (from "*white ghostly apparition*"), as Gmc. *albaz*, *albiz* (cf.

O.N. *alfr* Eng. *ælf*, Gm. *Alps*, Eng. *elf*, also in Welsh *elfydd*, and in **Álbherōn**, *Oberon* from a Germanic source akin to O.H.G. *Alberich*, into O.Fr. *Auberon*), and fem. **álbhiniā**, *elfin*; Latin derivatives include **albhinós**, *albino*, **álbhom**, *album*, **álbhomōn**, **albhómonā**, *albumen*.

MIE **Albhániā**, *Albania*, comes from M.Gk. *Αλβανία*. Although the name of Albania in its language is different (Alb. *Shqipëria*, *"Land of the eagles"*), it appeared only after the Turkish invasions, and the name **Albhániā** is internationally used today. Probably the terms for Albanian speakers of Greece and Italy (as *Arvanite*, *Arber*, *Arbëreshë*, etc.) are also derived from this older noun.

A proper IE word for "*eagle*" is **órōn** (from older **h₃oron*, cf. Hitt. *ḫarā-*), as Gmc. *arnuz* (cf. Goth. *ara*, O.N. *ari*, O.E. *earn*, O.H.G. *arn*, Eng. *erne*, Ger. *Aar*), **órnis**, *bird*, as in Gk. *ornitho-*, and other derivatives from PIE root ***or-***, *large bird*, cf. Gk. *orneon*, Arm. *arciv*, Old Prussian *arelis*, Lith. *erelis*, Ltv. *ērglis*, Russ. *orel*, Pol. *orzeł*, O.Ir. *irar*, Welsh *eryr*, Alb. *orë*.

Álbhā, *Scotland*, is a Scots- and Irish-Gaelic name for *Scotland*, as well as **Álbhiōn**, *Albion*, which designates sometimes the entire island of Great Britain and sometimes the country of England. The "*white*" is generally held to refer to the cliffs of white chalk around the English town of Dover, in the south of Great Britain.

Common MIE names are **Skotts**, *Scot*, **Skott(isk)léndhom**, *Scotland*, and Germanic **Skottiskós**, *scottish*.

For "white, shining", compare also PIE **argós**, **argís**, as Goth. *unairkns*, O.E.. *eorcnan*(*stān*), Lat. *arguō*, Osc. *aragetud*, Gk. *arguros*, *erchan*, Skr. *arjuna*, Av. *arəzah*, Phryg. *arg*, Thrac. *arzas*, Toch. *ārki*/*arkwi*, Arm. *arcat'*, Gaul. *Argentoratum*, O.Ir. *argat*, Welsh *ariant*, Hitt. *ḫarkiš*. Common derivatives include Latin **argéntom**, *silver*, *argent*, **argentinā**, *argentine*; Greek **argil(l)os**, *white clay, argil*, **argúros**, *silver*, **arginouís**, *brilliant*, *bright-shining*; IE **argús**, *brilliant*, *clear*, in **argúio**, *make clear, demonstrate, argue*, Lat. *arguere*; suffixed **argrós**, *white*, Gk. *argos*.

140. Germanic loan words from Frankish might be translated (because of Grimm's Law, already seen) as MIE **prangós**, Gmc. **frankaz*, "*frank*", and **Prángos**, Gmc. **Frankaz*, "*freeman, a Frank*", (cf. O.E. *Franca*, O.H.G. *Franko*, M.L. *Franc*, Eng. *Frank*, Lith. *franču*, etc.), and **Prángiskos**, Gmc. **Frankiskaz*, "*Frankish*" (cf. O.E. *francisc*, Eng. *French*, Swe. *Fransk*, Du. *frans*, etc.), giving also IE **Prángiā**, Gmc. **Frankjo-*, *France* (as Fr. *France*, and not ~~***Prangā***~~, which would have given Fr. ~~*Franche*~~), and **Prangiakós**, or maybe secondary **Prangosiskós** (or ***Prangosistós***), *French*, cf. Ger. *Französisch*, Rom. *franţuzeşte*, Russ. *французский*, Pol. *francuski*, etc. – the common Romance adj. from Lat. *Francensis* (cf. Fr. *français*, It. *franzese*, Spa. *francés*, etc.), ****prangénts***(***is***)? seems too a secondary formation to be used in PIE.

Other country names in MIE:

a. *Spain*: Phoenician/Punic '*Î-šəpānîm* "*the isle of hares*" (where initial "*hi*" is a definite article). The Phoenician settlers found hares in abundance, and they named the land in their Canaanite dialect. The Latin-speaking Romans adapted the name as *Hispania*. The Latin name was altered among the Romance languages through O.Fr. *Espagne* and *espaignol* (through M.L. *Hispaniolus*), and entered English from Norman French, hence MIE **Hispániā**, *Hispania*, and **Hispanós**, *Hispaniard*, **Hispanikós**, *Hispanic*, and modern European words **Spániā**, *Spain*, **Spanós**, *Spanish*, cf. Lat. *hispānus*, Gk. *ispanós*.

b. *Greece*: From Gk. *Γραικοί*, Lat. *Graecus* (claimed by Aristotle to refer to the name of the original people of Epirus) is the general international name, hence MIE **Graikós**, *Greek*, **Gráikiā**, *Greece*. However, the proper old

name is **Sewlēnós**, *Hellene*, *Greek*, (possibly from "*luminary, bright*"), as Gk.῞Ελληνος, **Sewlēnikós**, *Hellenic*, and **Sewlás** or **Sewládā**, *Hellas*/*Ellas*/*Ellada*, *Greece*, a word possibly related to Gk. ἐλ- (*hel-*) "*sun, bright, shiny*", (cf. Gk. *helios*, "*sun*", from IE **sāwel**), in turn possibly related to the tribe of the *Selloi*, Gk. *Σελλοί*.

c. *Denmark*: The **Dhánes**, *Danes* (Lat. *Dani*), were the dominant people of the region since ancient times. The origin of their tribal name is unknown, although it could be a Latin borrowing from a Germanic name, and as Gmc. *dan-* is IE ***dhen***-, it is possibly related to PIE **dhen**, "*low, flat*", in reference to the lowland nature of most of the country (cf. etymology of *Poland* and *Netherland*). **Dhan**(**ēm**)**márg**(**ā**), *Denmark*, ("*the March of the low landers*"), with Gmc. gen. -***ēm***, is then from compound **Dhan** (in gen.pl) **+ marg**, *boundary*, *border*.

PIE **marg**, *boundary*, *border*, gives derivatives **marg**(**s**), Gmc. *mark-*, "*boundary, border territory*", also "*landmark, boundary marker*", and "*mark in general*" (and in particular a mark on a metal currency bar, hence a unit of currency), cf. Goth. *marka*, O.N. *mörk*, O.E. *mearc, merc*, O.Fr. *marc*, O.Fris. *merke*, Du. *merk*, Ger. *Mark*, Sca. *mark*, and **margio**, *note*, *notice*, Gmc. *markjan* (cf. O.N. *merki*, O.H.G. *merken*, O.E. *mearcian*), in ***remargio***, *remark*; also, derived from Germanic, compare fem. **márgā**, "*mark out, mark"*, Gmc. *markōn* (cf. Frank. *markōn*, O.It. *marcare*), and "*border country*, *march*, *marc*", Gmc. *markō* (cf. O.Fr. *marche*, M.Lat. *marca*), and. Other derivatives include **márgōn**, *border*, *edge*, *margin*, as Lat. margo, in (**ek**)**margonā**, *emarginate*; Celtic variant **mrógis**, *territory*, *land*, **mrógos**, *district*, (cf. O.Ir. *mruig*, *bruig*, Welsh *bro*, Corn. *bro*, Bret. *broin*), in compound from British Celtic **Kommrógos**, *Welsh*, "*fellow countryman*" (cf. Welsh *Cymro*), as in **Kommrógiā**, *Wales*, Welsh *Cymru*.

d. **Rōmaníā**, *Romania*, comes from **Rṓmā**, *Rome*, hence the same MIE adjective **Rōmānós** for (ancient and modern) *Roman* and *Romanian* people (cf. Rom. *români*), although modern borrowings MIE **Rōmāniós**/**Rōmānianós** and **Rōmānistós** (cf. common endings Rom. *-eană, -eşte*) could be used for *Romanian*. Older variants of the name were written with *-u*, as Eng. *Rumania* (probably a French-influenced spelling, from Fr. *Roumanie*), as Rom. *rumâni*.

141. From PIE **pej**, *be fat, swell*, are derivatives zero-grade **pḯtuitā**, *moisture exuded from trees, gum*, *phlegm*, as in **pītuitáriā**, *pituitary*; **pḯnus**, *pine tree* (*yielding a resin*), as Lat. *pīnus*, in **pḯniā**, *pine*, *piña*, **pḯniōn**, *piñon*; suffixed **pḯwōn**, *fat*, as Skr. *pī́van***,** Gk. *pīōn*; suffixed **pīweriós**, *fat*, *fertile*, as Skr. *pī́varī*, Gk. *pī́eira*, in **Pḯweriā**, *"fertile region"*, cf. O.Ir. *Īweriū* (Ir. *Eire*, M.Welsh *Iwerydd*, *Iwerddon*, also in O.E. *Īras*, Eng. *Ire*[*land*]), Gk. *Pīeriā* (a region of Macedonia, cf. Eng. *Pierian Spring*); extended o-grade **póitos**, *plump*, *fat*, in verb **póitio**, *fatten*, Gmc. *faitjan*, p.part. **poiditós**, *fattened*, giving **póiditos**, *fat*, as Gmc. *faitithaz* (cf. O.N. *feitr*, O.E. *fætt*, Du. *vet*, Ger. *fett*). Compare also Lat. *pinguis* (a mix of Lat. *finguis*, Gk. pakhus, and Lat. *opīmus*, Gk. *pimelh*). Gk. *pitys*, Skr. *pituh*, *pitudaruh*, *payate*, Lith. *pienas*.

"*Pine tree*" in PIE is **gelunā**, found in O.N. *giolnar*, Gk. *kheilos*, Arm. *jelun*/*čelun*, Lith. *pušis*, Ir. *giúis*.

142. IE reconstructed **gńingos**, "*leader of the people*", *king*, as Gmc. *kuningaz* (cf. O.N. *konungr*, O.H.G. *kuning*, O.E. *cyning*, Du. *koning*, Dan. *konge*, Ger. *könig*), is related to O.E. *cynn*, "*family, race*", Mod. Eng. *kin* (see **gen**); O.C.S. *kunegu* "*prince*" (cf. Rus. *knyaz*, Boh. *knez*), Lith. *kunigas* "*clergyman*", and Finnish *kuningas* "*king*", are deemed loans from Germanic. MIE neuter **gningodhṓmos** is a loan translation of Eng. *king-dom*, Du. *konge-dømme* (see **dhē**), as **gningorḗgiom** is for Gmc. *kuninga-rikjam* (cf. Du. *koninkrijk*, Ger. *Königreich*,

Da. *kongerige*, Swe. *kungarike*, Nor. *kongerike*). However, note that the proper O.E. word for "*kingdom*" was simply *rīce*, as PIE and MIE **régiom**.

143. The international name **Montinécros**, from ***necrós móntis***, *black mount(ain)* (after the appearance of Mount Lovćen or its dark coniferous forests), was given by Italian conquerors, possibly from Venice. The term was loan-translated in Slavic (substituting their older name, Sla. *Zeta*) as **Krsnā́ Corā́** (or ***Krsnocóriā***), from **krsnós**, *black* (cf. Sla. *čurnu*, O.Pruss. *kirsnan*, Lith. *kirsnas*, Skr. *kṛsna*, from PIE **kers**), and **corā́**, *mount(ain)*.

PIE nominal root **kers**, *heat*, *fire*, gives **kértā**, *hearth*, "*burning place*", as Gmc. *kherthō* (cf. O.E. *heorð*, O.Fris. *herth*, M.Du. *hert*, Ger. *Herd*); zero-grade **kŕdhōn**, *charcoal*, *ember*, *carbon*, as Lat *carbō* (in light of Gmc. *kherth-*, O.Ind. *kūḍayāti*), extended **kremā**, *burn*, *cremate*, as Lat. *cremāre*; sufixed extended Greek **kerámos**, *potter's clay, earthenware*, as in **keramikós**, *ceramic*; and in colour (apart from **krsnós**, *black*), compare extended verb **krāso**, *color*, as Russ. *krasit'*.

144. MIE **Swéones** (maybe orig. ***Swíonis***), *Suiones*, from **Swéōn**, *swede*, is a proper reconstruction for Gmc. *swioniz*, (cf. O.E. *Sweon, Sweonas*); in O.N. *svear*/*svíar*, the *n* disappeared in the plural noun, still preserved in the old adjective Swe. *svensk*, MIE **Sweoniskós**, *swedish*. The name became part of a compound, MIE **Sweotéutā**, "*The Suione People*" (see **teutā**), as O.N *Svíþjóð*, O.E. *Sweoðeod* (cf. Ice. *Svíþjóð*, Eng. *Sweden*, Ger. *Schweden*, Du. *Zweden)*. The only Germanic nation having a similar naming was the Goths, who from the name Gmc. *Gutans* (cf. *Suehans, "Swedes"*) created the form *gut-þiuda*. The name *Swethiuth* and its different forms gave rise to the different IE names for Sweden (cf. M.Lat. *Suetia*, Gk. *Σουηδία*, Hi. *Svī.dan*, Pers. *Sued*, Lith. *Švedija*, Russ. *Швеция*, Pol. *Szwecja*, even Maltese *Svezja*, Heb. *Shvedia*, Jap. *Suwēden*, Kor. *Seuweden*, etc). Another modern (Scandinavian) compound comes from MIE **Sweorégiom**, "*The Realm of the Swedes*", cf. O.N. *Svíariki*, O.E. *Swēorīċe* (cf. Swe. *Sverige*, Da.,Nor. *Sverige*, Fae. *Svøríki*, Ltv. *Zviedrija*, Saami *Sveerje*, *Svierik*). Another Germanic compound that has not survived into modern times is **Sweoléndhom**, "*The Land of the Swedes*", as O.E. *Swēoland*.

145. Germanic **Finnléndhom**, "*Land of the Finns*", comes from the Norsemen's name for the Sami or Lapps, **Finn** or **Finnós**, *Finn* (cf. O.N. *finnr*, O.E. *finnas*). The word may be related to Eng. *fen* or *find*.

English "*fen*" is probably from an original IE **pánio-**, "*marsh*, *dirt*, *mud*", as Gmc. *fanja-* (cf. Goth. *fani*, O.E. *fen*, *fenn*, O.Fris. *fenne*, Du. *veen*, Ger. *Fenn*), borrowed in It., Sp. *fango*, O.Fr. *fanc*, Fr. *fange*; compare also Skr. *pankaḥ*, O.Prus. *pannean*, Gaul. *anam*.

146. A PIE base ***per-***, *traffic in*, *sell* ("*hand over, distribute*", see **per**), is behind **enterpreso**, *negotiate*, as in **enterpréts**, *go-between, negotiator*, *interpret*, verb **enterpretā**, *interpret*; **prétiom**, *price*, Lat. *pretium*, in **pretiōsós**, *precious*, **adpretiā**, *appreciate*, **depretiā**, *depreciate*; **perno**, *sell*, as in **pornā́**, *prostitute*, as Gk. *πορνη*, in **pornogrbhós** (or abb. ***pornós***), *pornographic, porno*.

Other meanings of IE base **per-** (from **per**, see also verb **pero**), are *try, risk* (from "*lead over*", "*press forward*"), and *strike*. Compare from the first meaning extended **péros**, *danger*, as Gmc. *fēraz* (cf. O.S.,O.N. *fár*, O.E. *fær*, Ger. *Gefahr* Eng. *fear*); suffixed **perī́tlom**, *danger*, *peril*, as Lat. *perīclum*; suffixed and prefixed **eksperio**, *try*, *learn by trying*, as in **ekspertós**, *tried*, **ekspértos**, *experienced*, *expert*, **eksperiméntom**, *experiment*, **eksperiéntiā**, *experience*; **périā**, *trial*, *attempt*, as Gk. *πειρα*, in **periā́tā**, *pirate*, as Gk. πειρατής, **emperiākós**, *empiric*. From the second meaning is extended Latin *pre-m-*, *pre-s*, as in **premo**, *press*, **presós**,

pressed, giving **présiōn**, *pressure*, **depremo**, *depress*, **deprésiōn**, *depression*, **ekspremo**, *express*, **ekspresós**, *express*, **eksprésos**, *espresso*, **enpremo**, *impress*, **enpremtós/enpresós**, *impressed*, **enpremtā**, *imprint*, **obhpremo**, *oppress*, **obhpresós**, *oppressed*, ***repremo***, *repress*, ***represós***, *repressed*, ***reprementā***, *reprimand*, **suppremo**, *suppress*, **suppresós**, *suppressed*.

147. Latin **eksáliom**, *exilium*, "*banishment*", comes from **eksál**, Lat. *exul*, "*banished person*", from **eks**, "*away*", and PIE **al**, "*wander*", as in Gk. *alasthai*.

148. MIE **parénts**, *father or mother, ancestor*, as Lat *parens*, comes from verb **paro**, *bring forth, give birth to, produce*, Lat. *parere*, from PIE base **per-**, *bring forth*, as in **parā**, *make ready*, in **prāiparā**, *prepare*; for IE derivatives referring to young animals, cf. O.E. *fearr*, "*bull*", O.H.G. *farro*, Ger. *Farre*, Gk. *poris*, Skr. *prthukaḥ*, Lith. *pariu*, Cz. *spratek*.

149. Indo-European **ówis** (older **h₂owi-*), *sheep*, gives Gmc. *awiz* (cf. Goth. *awēþi*, ON *ær*, O.E. *ēow*, O.H.G. *ouwi*, M.Du. *ooge*, Eng. *ewe*, Ger. *Aue*), Lat. *ovis*, Umbrian *uvem*, Gk. *οις*, Skr. *avika*, Toch. *āuw*, Arm. *hoviv*, O. Pruss. *awins*, Lith. *avis*, Ltv. *avs*, Russ. *овца*, Polish *owca*, O.Ir. *ói*, Welsh *ewig*, Hitt. *ḫawi*, Luw. *ḫāwi-*, Lyc. *xabwa*. A common Latin derivative is **owinós**, *ovine*.

150. PIE root **pek**, *pluck*, gives **pékŭ**, *cattle*; compare Gmc. *fehu* (Goth. *faihu*, O.N. *fé*, O.E. *feoh*, O.H.G. *fihu*, Eng. *fee*, *fellow*, Ger. *Vieh*), Lat. *pecu*, *pecū*, Gk. *πεκω*, Skr. *paśu*, Av. *pasu*, Arm. *asr*, O. Pruss. *pecku*, Lith. *pekus*, Alb. *pilë*. Common derivatives include **pékudom**, *feudal estate*, *feud*, from Med.Lat. *feudum*, from Gmc. *fehu*; **pekŭ́niā**, *property*, *wealth*, as Lat. *pecunia*, gives **pekūniāsiós**, *pecuniary*, **n̥pekūniós**, *impecunious*; and suffixed **pekŭ́liom**, *riches in cattle, private property*, gives **pekūliālís**, *peculiar*, and **pekulā**, *peculate*.

151. PIE **egnís**, *fire*, referred to fire as a living force (compare **áqā-após**), different to the inanimate substance **pā́wr**, and gave known IE derivatives as Lat. *ignis*, Skr. *agni*, Lith. *ugnis*, Ltv. *uguns*, OCS *ognĭ*, Russ. *огонь*, Polish *ogień*, Alb. *enjte*; Hitt. *agniš*. However, in Modern Indo-European (due to the disappearance of such old distinctions) both words have usually come to mean the same, with many dialects choosing only one as the main word for a general "*fire*".

152. Proto-Indo-European **bhrūs**, *brow*, is found in Ger. *brū-* (O.E. *brū*, Nor. *brún*, Ger. *Braue*, Eng. *brow*), Gk. *οφρύς*, Skr. *bhrus*, Pers. *abru*, Toch. *pärwāṃ/pärwāne*, O.Pruss. *wubri*, Lith. *bruvis*, O.C.S. *bruvi*, Russ. *бровь*, Polish *brew*, Cel. *briva* (>**bhrḗwā**, *bridge*), O.Ir. *bru*; Ancient Macedonian *abroutes*.

153. For Indo-European **kerd**, *heart* (old inflection Nom. ***kerds***, Acc. ***kérdm***, Gen. ***krdós***, cf. Anatolian *kart-s*), compare suffixed **kérdōn**, as Gmc. *khertōn* (cf. Goth. *hairto*, O.S. *herta*, O.N. *hjarta*, O.E. *heorte*, O.H.G. *herza*, Du. *hart*, Eng. *heart*, Ger. *Herz*), Lat. *cor* (stem *cord-*, from **krd**), Gk. *kardia*, Skr. *hṛdaya*, Av. *zərədā*, Arm. *sird/sirt*, O. Pruss. *seyr*, Lith. *širdis*, Ltv. *sirds*, O.C.S. *srĭdĭce*, *sreda*, Russ. *serdce*, Pol. *serce*, O.Ir. *cride*, Welsh *craidd*, Bret. *kreiz*, Kamviri *zâra*. Common MIE words are from Latin zero-grade **krdiālís**, *cordial*, **adkrdā**, *accord*, **komkrdā**, *concord*, **diskrdā**, *discord*, **rekrdā**, *record*; further suffixed zero-grade Greek **kŕdiā**, *heart*, also *stomach*, *orifice*, gives **krdiakós**, *cardiac*, **endokŕdiom**, *endocardium*, **epikŕdiom**, *epicardium*, **megalokŕdiā**, **perikŕdiom**, *pericardium*; from compound ***kred-dha-***, "*to place trust*" (an old religious term, from zero-grade of **dhē**, *do, place*), is **kreddho**, *believe* (a separable verb) as Lat. *credere* (cf. Fr. *croire*, It. *credere*, Spa. *creer*, Pt. *acreditar*, *crêr*, Rom. *crede*), in **kredhénts**, *credence*, **kredhibhilís**, *credible*, **krédhitos**, *credit*, **kred dhō**, "*I believe*", *credo*, **kredholós**, *credulous*.

West Germanic "*believe*" comes from IE **komloubhio**, "*to hold dear*", *esteem*, *trust*, as Gmc. *galaubjan* (cf. O.E. *geleafa*, *ge-lēfan*, *gelyfan*, Du. *geloven*, Ger. *glauben*), from PIE verbal root **leubh**, *care*, *desire*, *love*, as L. *lubet* (later *libet*), Osc. *loufit*, Skt. *lubhyati*, Lith. *liaupsė*, O.C.S. *ljubŭ*, Pol. *lubić*, Alb. *lum*. Common derivatives include **leubhós**, *dear*, *beloved*, as Gmc. *leubaz* (cf. Goth. *liufs*, O.N. *ljutr*, O.E. *leof*, O.Fris. *liaf*, O.H.G. *liob*, Eng. *lief*, Ger. *lieb*), also o-grade **lóubhā**, *permission*, as Gmc. *laubō* (cf. O.E. leafe, Eng. leave); from zero-grade **lúbhā**, *love*, is Gmc. *lubō* (cf. Goth. *liufs*, O.N. *ljúfr*, O.E. lufu, O.Fris. liaf, O.H.G. *liob*, Eng. *love*, not found elsewhere as a noun, except O.H.G. *luba*, Ger. *Liebe*); also zero-grade stative **lubhē**, *be dear, be pleasing*, as Lat. *libēre* (O.Lat. *lubēre*); also, **lúbhīdōn**, *pleasure*, *desire*, as Lat. *libīdō*.

North Germanic verb "*tro*" comes from IE **deru**, *faith*, *trust*, as Eng. *trust*.

Slavic verb for *believe*, **werio**, comes from **werós**, *true*, cf. Russ. *вѣрить*, Pol., *wierzyć*, Sr.-Cr. *vjerovati*, Slo. *verovati*, etc.

154. IE **kwōn**, *dog*, gives derivatives Gmc. *khundas* (from ***kun(t)ós***, originally Genitive, cf. Goth. *hunds*, O.E. *hund*, O.N. *hundr*, O.H.G. *hunt*, Eng. *hound*, Ger. *Hund*), Lat. *canis*, Gk. *kuōn*, Skr. *śvan*, Av. *spā*, Pers. *sag*, Phryg. *kunes*, Thrac. *dinu-*, Dacian *kinu-*, Toch. *ku/ku*, Arm. *šun*, O.Pruss. *sunis*, Lith. *šuo*, Ltv. *suns*, Russ. *suka*, Pol. *suka*, Gaul. *cuna*, O.Ir. *cū*, Welsh *ci*, Alb. *shakë*; Hitt. *śuwanis*, Lyd. *kan-*. Derivatives **kwonikós**, *cynic*, from Gk. κυνικός; variant Lat. **kánis** gives **kanāsiós**, *pertaining to dogs*, ***kanários***, *canary*, **kaninós**, *canine*.

155. Compare the well-attested derivatives of PIE numerals from one to ten:

I.The usual IE word for one is **óinos**, (earlier **h₁oinos*) *one*, *only*, attested as Gmc. *ainaz* (cf. Goth. *ains*, O.N. *einn*, O.E. *ān*, O.H.G. *ein*, Dan. *een*, O.Fris. *an*, Du. *een*), Lat. *ūnus* (O.Lat. *oinus*), Osc. *uinus*, Umb. *uns*, Gk. οἶνη, O.Pruss. *aīns*, Lith. *vienas*, Ltv. *viens*, O.C.S., (*кѧд*)*инъ*, *ино-*, O.Russ. [*од*]*инъ*, [*од*]*ина*, Polish [*jed*]*en*, Gaul. *oinos*, O.Ir. *óin*, Welsh *un*, Kamviri *ev*, Alb. *një/nji*, Osset. иу (*iu*). Slavic prefix *ed-* comes from IE ***ek***, "*out*".

PIE root **oi-**, earlier **h₁ói*, (which gives ***oinos***) had other rare compounds, as **óiwos**, *one alone, unique*, as Gk. *oi(w)os*, Av. *aēva*, O.Pers. *aiva*, **óikos**, (maybe ***óiqos***) *one*, as Hitt. *aika-*, O.Ind. *éka-*, Hindi एक (*ek*), Urdu اِک (*ik*), Rro. *yek*, Pers. یک (*yek*), Kashmiri *akh*. It had also vowel grades ***ei-***, ***i-***, as in ***ijo-***, Gk. *iō*.

Derivatives include **alnóinos**, "*all one*", *alone*, from ***alnós óinos***, as W.Gmc. *all ainaz* (cf. Eng. *alone*, Ger. *alleine*, Du. *alleen*), **nóin**(**os**), "*not one*", *none*, from ***ne óinos***, as Gmc. *nain-az* (cf. O.S., M.L.G. *nen*, O.N. *neinn*, O.E. *nan*, M.Du., Du. *neen*, O.H.G., Ger. *nein*, Eng. *none*), Lat. *nōn* (cf. also Lat. *nec unus* in It. *nessuno*, Spa. *ninguno*, Pt. *ninguém*); from Latin are **óiniōn**, *union*, **oinio**, *unite*, **oinitós**, *united*, **óinitā**, *unity*, **oinitā**, *unite*, **adoinā**, *join*, **komadoinā**, *coadunate*, **oinanamós**, *unanimous*, **oinikórnis**, *unicorn*, **oiniwérsos**, *universe*; suffixed **oinikós**, *one*, *anyone*, and *sole*, *single*, as Gmc. *ainigaz* (cf. O.S. *enig*, O.N. *einigr*, O.E. *ænig* O.Fris. *enich*, Du. *enig*, Ger. *einig*, Eng. *any*), Lat. *ūnicus*, also in **óinkiā**, *one twelfth of a unit*, as Lat. *ūncia*.

For ordinal MIE **prwós** [pr̥:-wós], *first*, also dialectal ***preismós***, ***prowtós***, ***pristós*** [*pr̥-is-'tos*] (see more derivatives from **per**, *forward*, *through, in front of*, *before*, *early*, hence "*foremost*, *first*", cf. Hitt. *para*, Lyc. *pri*), compare Gmc. *furistaz* (cf. O.N. *fyrstr*, O.E. *fyrst*, O.H.G. *furist*, *fruo*, Eng. *first*, Ger. *Fürst*, *früh*), Lat. *primus*, Osc. *perum*, Umb. *pert*, Gk. *prōtos*, Skr. *prathama*, Av. *paoiriia*, *pairi*, Osset. *fyccag*, *farast*, Toch. *parwät/parwe*, O.Pruss. *pariy*, Lith. *pirmas*, Ltv. *pirmais*, O.C.S. *pĭrvŭ*, Russ. *pervyj*, Polish *pierwszy*, O.Ir. *er*, Welsh *ar*, Alb. *i parë*, Kam. *pürük*.

PIE root **sem-**, *one*, *together*, *united* (Nom. **sém**s/**sōm**s, Gen. **s(e)mós**/**somós**, and as prefix ***smḭ***), which refers to the unity considered as a whole, and appears usually in word compounds, as in **seme**, *at once, at the same time*, **sémel**, *one time*, as Lat. *simul*, **ensémel**, *at the same time*, *ensemble*; **sémele**, *formerly, once*, etc. Compare Gmc. sam- (cf. Goth. *sama*, O.N. *sami*, O.E. *sum*, O.H.G. *saman*, Eng. *some*, Ger. [*zu*]*sammen*), Lat. *semel*, Gk. *heis*, Skr. *sakṛt*, Av. *hakeret*, O.Pers. *hama*, Toch. *sas*/*ṣe*, Arm. *mi*, Lith. *sa*, Russ. *сам*, O.Ir. *samail*, Welsh *hafal*, Alb. *gjithë*, Kam. *sâ~*; Hitt. *san*, Lyc. *sñta*.

Derivatives include Greek full grade **semdekmkomlabikós**, *hendecasyllabic* (from MIE borrowing **kómlabā**, *syllable*, Gk. *sullambanein*, *to combine in pronunciation*, from **kom** and Gk. *lambanein*, *to take*), **semodhesísmos**, *henotheism* (see **dhēs**), **suposem**, *hyphen* (see **supo**); **smkmtóm**, see **kmtóm**, *hundred*; suffixed **sémel**, *at the same time*, Lat. *simul*, as in **semeltaniós**, *simultaneous*, **adsemelā**, *assemble*; **sem(g)olós**, *alone*, *single*, Lat. *singulus*; compound **sémper** (see **per**), *always, ever* ("*once and for all*"), Lat. *semper*; o-grade **som**, *together*, Skr. *sam*, and zero-grade extended **sḿmn**, *together with, at the same time*, as Gk. *hama*; o-grade suffixed **somós**, *same*, as Gmc. *samaz* (cf. O.N. *samr*, Eng. *same*), Gk. *homos*, in **somo-**, *homo-*, **somio-**, *homeo-*, **sómilos**, *crowd*, **somilíā**, *discourse*, *homily*, Gk. ὁμιλία; **somlós**, *like*, *even*, *level*, in **n̥somlós**, *anomalous*, **somlogrbhikós**, *homolographic*; lengthened **sōmís**, *fitting*, *agreeable*, (< "*making one*", "*reconciling*"), as Gmc. somiz (cf. O.N. *sœmr*, Eng. *seem*, *seemly*), also in **sōmo-**, *self*, Russ. *sam*(*o*); zero-grade ***smḭ-***, as Gk. ha-, a-, "*together*" (the '*a* copulativum', '*a* athroistikon') as e.g. in *a-delphos* "*brother*", from ***sm-celbhos*** literally "*from the same womb*" (cf. Delphi), cognate to English *same* (cf. Symbel), or Skr. *saṃ-*, present e.g. in the term for the language itself, viz. ***s(o)ms-qrtā***, Skr. *saṃ-s-kṛtā* "*put together*"; **smplós**, *simple*, Lat. *simplus*, Gk. *haploos*, *haplous*, also **smplḗks**, "*one fold*", *simple*, as Lat. *simplex*, in **smplḗkitā**, *simplicity*; suffixed **sḿmos**, *one, a certain one*, also **-smmos**, *like*, as Gmc. *sumaz* (cf. O.E. *sum*, *-sum*, Eng. *some*, *-some*); **smmlós**, *of the same kind, like*, *similar*, as Lat. *similis*, **adsmmlā**, *assimilate*; usually reconstructed *****sḿteros***, *one of two, other*, as Gk. *heteros* (older *hateros*), although **sḿteros** (cognate with Lat. *sine*) should be used.

Compare also **sḗmi**, *half*, generally as first member of a compound, as Gmc. *sēmi-* (cf. O.E. *sām-*, in compounds *samblind*, *samlæred*, "*half-taught, badly instructed*", *samstorfen*), Gk. *hēmi*, and Lat. *semi-* and **sémis**, *half*.

II. The forms for "*two*" alternate **dwo**/**do**, with **duw-**/**du-**, cf. Gmc. *two-* (cf. Goth. *twai*, O.N. *tveir*, O.E. *twā*, O.H.G. *zwene*, Eng. *two*, Ger. *zwei*), Lat. *duo*, Osc. *dus*, Umb. *tuf*, Gk. *δύο*, Skr. *dva*, Av. *duua*, Pers. *duva*, Pers. *do*, Toch. *wu*/*wi*, Arm. *erku*, O.Pruss. *dwāi*, Lith. *du*/*dvi*, Ltv. *divi*, O.C.S. *dŭva*, Russ. *два*, Pol. *dwa*, Gaul. *vo*, O.Ir. *dá*, Welsh *dau*, Kamviri *dü*, Alb. *dy*; Hitt. *dā-*, Lyc. *tuwa*. See also **ámbhos**, *both*.

Common PIE "second" was **alterós** (from PIE **al**, *beyond*) and **anterós**, "*the other of the two*, *the second, other*", cf. Gmc. *antharaz* (cf. O.S. *athar*, O.N. *annarr*, Ger. *ander*, Goth. *anþar*), Lat. *alter*, Lith. *antras*, Skt. *antarah*, both senses still found in some modern languages, cf. Da. *anden*, Swe. *andra*, Nor. *andre*, Ice. *annar*.

To avoid ambiguity, some languages have renewed the vocabulary, as in suffixed participial Lat. **seqondós**, *following, coming next, second* (from PIE **seq**, *follow*), borowed in English *second*, while others have made compounds imitating the general ordinal formation in their dialects (cf. Ger. *zweite*, Du. *tweede*, Gk. *δεύτερος*, Skr. *dvitīya*, Fr. *deuxième*, Ir. *dóú*, Bret. *daouvet*, etc.), hence MIE **dwoterós**, **dwitós**, **dwiós**, etc.

Slavic languages have undergone a curious change, retaining the same words for "*other*" and "*second*" (and therefore the ambiguity), but using a word for "*friend*" (hence "*other*"), from IE **deru**, *be firm, solid* (hence also "*be trustworthy*"), compare O.Sla. *дроугъ*, giving Russ. *друг*, O.Pol. *drug*, Sr.-Cr., Slo. *drûg*, Cz., Slk. *druh*, O.Pruss. *draugiwaldūnen*, Lith. *draũgas*, *sudrugti*, Lath. *dràugs*, and even Germanic (cf. verbs Goth. *driugan*, O.N. *draugr*, O.E. *dréogan*, Eng. dial. *dree*, "*endure*", and as noun Goth. *gadraúhts*, O.H.G. *trucht*, *truhtin*).

III.For PIE root **tri- trei-** (cf. Hitt. *tri-*, Lyc. *trei*), giving IE **tréjes**, *three*, compare Gmc. *thrijiz* (cf. Goth. *þreis*, O.N. *þrír*, O.E. *þrēo*, O.H.G. *drī*, Eng. *three*, Ger. *drei*), Lat. *trēs*, Umb. *trif*, Osc. *trís*, O.Gk. *τρεῖς*, Gk.*Cret*. *τρέες*, Gk.*Lesb*. τρῆς, Skr. *tráyas*, *tri*, Av. *thri*, Phryg. *thri-*, Illyr. *tri-*, Toch. *tre/trai*, Arm. *erek'*, O.Pers. *çi*, Pers. *se*, O.Pruss. *tri*, Lith. *trỹs*, Ltv. *trīs*, Sla. trьje (cf. O.C.S. *trĭje*, O.Russ. *mpue*, O.Cz. *tři*e, Polish *trzy*), Gaul. *treis*, O.Ir. *treí*, Welsh *tri*, Alb. *tre*. Modern derivatives include zero-grade **trístis** (from ***tri*+*st***, see **stā**), "*third person standing by*", *witness*, as Lat. *testis*, in **trístā**, *witness*, **trístāments**, *testament*, **tristíkolos**, *testicle*, **adtristā**, *attest*, **komtristā**, *contest*, **detristā**, *detest*, **obhtristā**, *obtest*, **protristā**, *protest*, **tristidhakā**, *testify*; suffixed o-grade form **trójā**, *group of three*, gives Russian **tróikā**.

For ordinal **trit(i)ós**, **trtijós**, compare Gmc *thridjaz* (cf. Goth. *þridja*, O.N. *þriðe*, O.E. *þridda*, O.Fris. *thredda*, O.S. *thriddio*, O.H.G. *dritto*, M.L.G. *drudde*, Du. *derde*, Ger. *dritte*), Lat. *tertius*, Gk. *trito*s, Skt. *trtiyas*, Avestan *thritya*, Lith. *trecias*, O.C.S. *tretiji*, O.Ir. *triss*, with common derivatives including **trítiom**, *tritium*.

IV. Alternating forms of four are **qetwor**, **qtwor**, **qetur**, **qetr**, **qetwr**. Unlike *one, two, three*, the inflected forms of "*four*", i.e. m. **qetwóres**, f. **qetwesóres**, n. **qetwṓr**, are not common to all IE dialects; compare Gmc. *fe(d)wor* (cf. Goth. *fidwor*, O.N. *fjórir*, O.S. *fiwar*, O.Fris. *fiuwer*, Frank. *fitter-*, O.E. *fēower*, O.H.G. *feor*, Eng. *four*, Ger. *vier* Dan. *fire*, Sw. *fyra*), Lat. *quattuor*, Osc. *petora*, Umb. *petor*, Gk.*Hom*. *τέσσαρες*, *πίσυρες*, Gk.*Ion*. *τέσσερες*, Gk.*Dor*. *τέτορες*, O.Ind. *catvā́ras*, *catúras*, Av. *čathwar*, *čaturam*, Pers. *čahār*, Kurd. *čwar*, Thrac. *ketri-*, Toch. *śtwar/śtwer*, Arm. *č'ork'*, O.Pruss. *keturjāi*, Lith. *keturì*, O.Ltv. *cetri*, O.C.S. *četyri*, Russ. *четыре*, Pol. *cztery*, Gaul. *petor*, O.Ir. *cethir*, Welsh *pedwar*, Bret. *pevar*, Alb. *katër*, Kam. *što*; Lyc. *teteri*.

For ordinal adjective **qeturós**, **qetwrtós** (also **qeturtós**), compare Gmc. *fedworthaz* (cf. O.E. *fēortha, fēowertha*, O.H.G. *fiordo*, M.Du. *veerde*, Ger. *vierte*, Eng. *fourth*), Lat. *quārtus*, Lith. *ketvirtas*, Russ. *четвёртый*, Cz. *čtvrtý*, Ir. *ceathrú*, Welsh *pedwaredd*.

V. For Indo-European **pénqe**, *five*, compare Gmc. *finfe* (cf. Goth. *fimf*, O.S. *fif*, O.N. *fimm*, O.E. *fīf*, O.H.G. *funf*), Lat. *quinque*, Osc. *pompe*, Umb. *pumpe*, Gk. *πέντε*, Skr. *pañca*, Av. *paṇča*, O.Pers. *panča*, Phryg. *pinke*, Toch. *päñ/piś*, Arm. *hing*, O.Pruss. *pēnkjāi*, Lith. *penki*, Ltv. *pieci*, O.C.S. *pętĭ*, Russ. *пять*, Polish *pięć*, Gaul. *pempe*, O.Ir. *cóic*, Welsh *pump*, Alb. *pesë*, Kam. *puč*; Luw. *pa^{n}ta*.

For ordinal **penqtós**, compare Gmc. *finfthaz* (cf. Eng. *fifth*, Du. *vijfde*, Ger. *fünfte*, Sca. *femte*, etc.), Lat. *quintus*, Gk. *πέμπτος*, Lith. *penktas*, Russ. *пятый*, Cz. *pátý*, Ir. *cúigiú*, Welsh *pumed*, Bret. *pempvet*, etc.

VI. For PIE "*six*", **sweks** and **seks** (also ***weks*** in Arm. *vec'*, originally then probably PIE *****sweks***), compare Gmc. *sekhs* (cf. Goth. *saihs*, O.S. *seks*, O.N., O.Fris. *sex*, O.E. *siex*, O.H.G. *sēhs*, M.Du. *sesse*), Lat. *sex*, Osc. *sehs*, Umb. *sehs*, Gk. *ἑξ*, Skr. *ṣaṣ*, Av. *khšwuaš*, Pers. *šeš*, Osset. *æxsæz*, Illyr. *ses-*, Toch. *ṣäk/ṣkas*, O.Pruss. *usjai*, Lith. *šeši*, Ltv. *seši*, O.C.S. *šestĭ*, Russ. *шесть*, Polish *sześć*, Gaul. *suex*, O.Ir. *sé*, Welsh *chwech*, Alb. *gjashtë*, Kam. *ṣu*.

For **s(w)ekstós**, compare Gmc. *sekhsthaz* (cf. O.E. siexta, Fris.,Ger. sechste, Du. zesde, Da. sjette) Latin sextus, Gk. ἕκτος, Lith. *šeštas*, Russ. *шестоŭ*, Cz. *šestý*, Sr.-Cr.,Slo. *šesti*, Ir. *séú*, Welsh *chweched*, Bret. *c'hwec'hvet*, etc.

VII. For PIE **séptm**, **septḿ**, *seven*, compare Gmc. *sebun* (cf. O.S. *sibun*, O.N. *sjau*, O.E. *seofon*, O.Fris. *sowen*, *siugun*, O.H.G. *sibun*, Du. *zeven*), Lat. *septem*, Oscan *seften*, Gk. ἑπτά, Skr. *saptá*, Av. *hapta*, Pers. *haft*, Osset. *avd*, Toch. *ṣpät (ṣäpta-)/ṣukt*, Arm. *evt'n*, O. Pruss. *septīnjai*, Lith. *septynì*, Ltv. *septiņi*, O.C.S. *sedmĭ*, O.Russ. *семь*, Polish *siedem*, Gaul. *sextan*, O.Ir. *secht*. Welsh *saith*. Alb. *shtatë* (from ***septmtí***-), Kamviri *sut*; Hitt. *šipta-*.

For ordinal **septm**(**m**)**ós**, compare Gmc. *sebunthaz* (cf. Eng. *seventh*, Ger. *siebente*, Du. *zevende*, Da. *syvende*, Swe. *sjunde*), Lat. *septimus*, Gk. ἑβδομος, Lith. *sekmas*, Russ. *седьмой*, Ir. *seachtú*, Welsh *seithfed*, Bret. *seizhvet*.

VIII. For PIE **óktō**(**u**), *eight*, older **h₃ekteh₃*, compare Gmc. *akhto*(*u*) (cf. Goth. *ahtau*, O.N. *átta*, O.E. *eahta*, O.H.G. *ahto*), Lat. *octō*, Osc. *uhto*, Gk. *οκτώ*, Skr. *aṣṭa*, Av. *ašta*, O.Pers. *ašta*, Toch. *okät/okt*, Arm. *ut'*, O.Pruss. *astōnjai*, Lith. *aštuoni*, Ltv. *astoņi*, OCS *osmĭ*, Russ. *восемь*, Polish *osiem*, Gaul. *oxtū*, O.Ir. *ocht*, Welsh *wyth*, Alb. *tëte*, Kam. *uṣṭ*; Lyc. *aitãta-*.

For common ordinal **oktowós**, or newer imitative formations ***oktotós***, ***oktomós***, compare Gmc. *akhtothaz* (cf. Eng. *eighth*, Ger. *achte*, Du.,Fris. *achtste*, Swe. *åttonde*), Lat. *octavus* (but cf. Fr. *huitième*), Gk. *ógdoos*, Russ. (*в*)*осьмой*, Cz. *osmý*, Ir. *ochtú*, Welsh *wythfed*, Bret. *eizhvet*.

IX. PIE **néwn** (older **h₂néwn*), *nine*, gave Gmc. *niwun* (cf. Goth.,O.H.G. *niun*, O.Fris. *niugun*, O.N. *níu*, O.E. *nigon*), Lat. *novem*, Osc. *nuven*, Umb. *nuvim*, Gk. ἐννέα, Skr. *nava*, Av. *nauua*, O.Pers. *nava*, Pers. *noh*, Toch. *ñu*, Arm. *inn*, O.Pruss. *newīnjai*, Lith. *devynì*, Ltv. *deviņi*, O.C.S. *devętĭ*, Russ. *девять*, Polish *dziewięć*, Gaul. *navan*, O.Ir. *nói*, Welsh *naw*, Alb. *nëntë/nândë*, Kam. *nu*; Lyc. *ñuñtãta-*. Slavic common form *devętь*, from PIE **néwntis**, is also found in O.N. *niund*, Gk. (f.) ἐννεάς, O.Ind. *navatíṣ*, Av. *navaiti-*. For ordinals **nown**(**n**)**ós**, **neuntós**, compare Gmc. *niunthaz* (cf. Eng. *ninth*, Ger. neunte, Du. *negende*, Da. *niende*, Swe. *nionde*), Lat. *nonus*, *nouenus*, (but Fr. *neuvième*), Gk. *ἔνατος*, Russ. *девятый*, Cz. *devátý*, Ir. *naoú*, Welsh *nawfed*, Bret. *navvet*.

X. For PIE **dékm**(**t**) ['de-kmˌ], also **dekḿ**, *ten*, compare Gmc. *tekhun* (cf Goth. *taihun*, O.S. *tehan*, O.N. *tíu*, O.Fris. *tian*, O.E. *tīen*, O.Du. *ten*, O.H.G. *zēhen*), Lat. *decem*, Osc. *deken*, Umb. *desem*, Gk. *δέκα*, Skr. *daśa*, Av. *dasa*, Pers. *datha*, Dacian *dece-*, Toch. *śäk/śak*, Arm. *tasn*, O.Pruss. *desīmtan*, Lith. *dešimt*, Ltv. *desmit*, O.C.S. *desętĭ*, Russ. *десять*, Polish *dziesięć*, Gaul. *decam*, O.Ir. *deich*, Welsh *deg*, Alb. *dhjetë/dhetë*, Kam. *duc*.

For ordinal **dekm**(**m**)**ós**, **dekmtós**, compare Gmc. *tekhunthaz* (cf. O.E. *teogoþa*, Ger. *zehnte*, Du.,Da. *tiende*, Swe. *tionde*, Eng. *tithe, tenth*), Lat. *decimus*, Gk. *dékatos*, Lith. *dešimtas*, Russ. *десятый*, Cz. *desátý*, Ir. *deichiú*, Welsh *degfed*, Bret. *dekvet*.

156. This is the general situation in PIE (cf. e.g. for "*twelve*", Ved.Skr. *dvā́daśa*, Lat. *duodecim*, Gk. *δώδεκα*, Ir. *dó dheag*, etc.), although some dialectal differences are found:

a. In Slavic and dialectal Baltic, a peculiar form ***-nódekm*** (***-pódekm***), lit. "*on ten*", is used, e.g. ***qetwrnódekm*** (***qetwrpódekm***) "*four on ten*", as Russ. *четырнадцать*, i.e. *четыре+на+дцать*, (Ltv. *četrpadsmit*, i.e. *četri+pad+desmit*), cf. Pol. *czternaście*, Cz. *čtrnáct*, Sr.-Cr. *četrnaest*, etc.

b. Germanic and dialectal Baltic use compounds with MIE ***-liq(a)***, *left over* (see **leiq**), in Germanic only ***óinliq(a)***, "*one left (beyond ten)*", as Gmc. *ain-lif* (cf. Goth. *ain-lif*, O.E. *endleofan*, O.H.G. *elf*, Eng. *eleven*), Lith. *vienio-lika*, ***dwóliq(a)***, "*two left (beyond ten)*", as Gmc. *twa-lif* (cf. Goth. *twalif*, O.S. *twelif*, O.N. *tolf*, O.E. O.E. *twelf*, O.Fris. *twelef*, M.Du. *twalef*, O.H.G. *zwelif*), Lith. *dvy-lika*; also, compare Lithuanian *try-lika,* "*thirteen*", *keturio-lika*, "*fourteen*", etc.

For PIE **leiq**, *leave*, compare Gmc. *laikhwnjan* (cf. Goth. *leiƕan*, O.N. *ljá*, O.E. lǣnan O.H.G. *līhan*, Eng. *lend*, Ger. *leihen*), Lat. *linquō*, Gk. *leipō*, Skr. *riṇakti*, Av. *raexnah*, Pers. *rēxtan*, Arm. *lk'anem*, O.Pruss. *polijcki*, Lith. *likti*, Ltv. *likt*, Russ. *olek*, O.Ir. *léicid*. Common derivatives include **ekléiqtis**, *eclipse*, *ellipsis*, Gk. ἔλλειψις; o-grade **lóiqnis**, *loan*, as Gmc. *laikhwniz* (cf.O.N. *lān*, Eng. *loan*), **loiqnio**, *lend*, as Gmc. *laikhwnjan*, ; nasalized **linqo**, *leave*, as Lat. linquere, in **delinqénts**, *delinquent*, **relinqo**, *relinquish*, **relí(n)qā**, *relic*, etc.

c. It is believed that in some Germanic dialects an inflected form of -**dekm**- was possibly used (cf. O.E. *-tēne*, *-tīne, -týne*, Eng. *-teen*), maybe IE *-***dekmis**.

157. The suffix -**k(o)mtă̆**, *ten times*, comes probably ultimately from zero-grade PIE **dkmtH*, from **dékm(t)**, *ten*, and is found as Lat. *-gintā*, Gk. *-konta*; it is also found in Germanic full-grade **dekmtós**, *tenth*, Gmc. *teguntha-* (cf. O.E. *teogotha*, *tēotha*, Eng. *tenth*, *tithe*).

Germanic suffix *-tig*, "*group of ten*", representing "*ten*" in cardinal numbers (as Eng. *sixty*, *seventy*, etc.), possibly an independent Gmc. root (cf. O.E., Du. *-tig*, O.Fris. *-tich*, O.N. *-tigr*, O.H.G. *-zig*, *-zug*), existed as a distinct word in Goth. *tigjus*, O.N. *tigir*, "*tens*, *decades*". Germanic retains traces of an old base-12 number system, as the words *eleven*, "*leave one*", and *twelve*, "*leave two*", show, v.s. Old English also had *hund endleofantig* for 110 and *hund twelftig* for 120. One hundred was *hund teantig*. O.N. used *hundrað* for 120 and *þusend* for 1,200. *Tvauhundrað* was 240 and *þriuhundrað* 360.

Balto-Slavic dialects use the forms that MIE reserves for the tens (due to their different formation), i.e. "*(unit)+ten*", e.g. *three-ten*, as Russ. *трuдцать* (i.e. *трu* + *дцать*), Ltv. *trīsdesmit* (i.e. *trīs*+*desmit*); cf. also Pol. *trzydzieści*, Sr.-Cr. *trideset*, etc.

158. For IE (**d**)**wīkḿtī**, *twenty*, originally then ***dwi-dkomt**-, compare Lat. *vīgintī*, Gk. *εἴκοσι*, Skr. *viṁśati*, Av. *visaiti*, Pers.) يست ‡*bēst*), Toch. *wiki/ikäṃ*, Arm. *k'san*, Gaul. *vocontio*, O.Ir. *fiche*, Welsh *ugain*, Alb. *njëzet/njizet*, Kamviri *vici*. For newer formations in Balto-Slavic, as MIE ***dwo*+*dekm**, cf. Lith. *divdesmit*, Russ. *дeвaдцamь*, Pol. *dwadzieścia*, Cz. *dvacet*, Sr.-Cr., Bul. *dvadeset*, Slo.,Slk. *dvajset*, Rom. *douăzeci*.

Indo-European tens are generally found in the oldest – or more archaic – attested dialects as compounds of zero-grade numbers with -***dkomt***-, as **trikómt(ă̆)** (Lat. *trīgintā*, Gk. *triákonta*, Ir. *tríocha*, Skr. *triṁśat*), **qetwrkómt(ă̆)** (cf. Lat. *quadrāgintā*, Gk. *tessarákonta*, Skr. *catvāriṁśat*), **penqekómt(ă̆)** (cf. Lat. *quinquāgintā*, Gk. *pentêkonta*, Ir. *caoga*, Skr. *pañcāśat*), **s(w)ekskómt(ă̆)** (cf. Lat. *sexāgintā*, Gk. *exêkonta*, Ir. *seasca*, Skr. *ṣaṣṭiḥ*), **septmkómt(ă̆)** (cf. Lat. *septuāgintā*, Gk. *heptákonta*, Ir. *seachtó*, Skr. *saptatiḥ*), **newnkómt(ă̆)** (cf. Lat. *nonāgintā*, Gk. *ennenêkonta*, Ir. *nócha*, Skr. *navatiḥ*).

For PIE **kmtóm**, *hundred*, (probably from ***dkmtóm**, a zero-grade suffixed form of **dékm**, *ten*), compare Gmc. *khunda* (cf. Goth. *hund*, O.H.G. *hunt*), Lat. *centum*, Gk. *εκατόν*, Skr. *śata*, Av. *satem*, Pers. *sad*, Toch. *känt/kante*, O.Lith. *šim̃tas*, Ltv. *simts*, O.C.S. *sŭto*, Russ. *cmo*, Pol. *sto*, Gaul. *cantam*, O.Ir. *cét*, Welsh *cant*. Also, West Germanic dialectal MIE ***kḿt*(*m*)-*radhom** (for **rádhom**, *number*, see **ar**), *khund(a)-ratham*, as O.N. *hundrað*, O.E. *hundred*, Ger. *hundert*, Eng. *hundred*.

A general Proto-Indo-European inflected noun for "*thousand*" was (**sm**)**ghéslos**, **-om**, **-ā**, (*one*) *thousand*, as Skr. *sahasram*, Av. *hazarəm*, Pers. *hāzar*, Toch. *wälts/yaltse*, Russ. *чucлo*, Cz. *číslo*. Common MIE derivatives

include **ghéslioi**, *thousand*, as O.Gk. χίλιοι, in **gheslo**-, *kilo*-, and Latin derivatives from *mīlle*, O.Lat. *mī*(*hī*)*lī*, in turn from an older PIE suffixed ***sm-ghesl-ī***.

The usual (uninflected) Germanic and Balto-Slavic common form **túsntī**, "*massive number*" hence "*thousand*", gave Gmc. *thusundi* (cf. Goth. *þusundi*, O.N. *þúsund*, O.E. *þūsunt*, O.Fris. *thusend*, O.H.G. *þūsunt*, Du. *duizend*), Toch. *tumane*/*tmām*, Lith. *tūkstantis*, Ltv. *tūkstots*, OCS *tysǫšti*, Russ. *тысяча*, Polish *tysiąc*. It is possibly related to PIE **tew**, *swell*, and some consider it an older *****tūs-kmtī***->*****túsmtī***/***túsomtī***, "*swollen hundred*".

159. For IE **pel**, *fold*, compare o-grade nouns **paltōn**, *fold*, as Gmc. *falthan* (cf. Goth. *falþan*, O.N. *falda*, O.E. *faldan*, *fealdan*, M.L.G. *volden*, Ger. *falten*), and combining forms -**paltos**, as Gmc. -*falthaz* (cf. Goth. *falþs*, O.N. -*faldr*, O.E. -*feald*, -*fald*, Ger. -*falt*), and -**plŏs**, as Lat. -*plus*, Gk. -πλος, -πλόος, also as Gk. πολύς, still used in modern Greek. Extended IE base **pleks**, *plait*, gives o-grade **plóksom**, *flax*, as Gmc. *flakhsam* (cf. O.E. *fleax*, O.Fris. *flax*, Ger. *Flachs*), full-grade -**pleks**, -*fold*, in compounds such as **dupleks**, **tripleks**, **mltipleks**, etc., and as verb **plekā**, *fold*, *plicate*, Lat. *plicāre*, in **adplekā**, *apply*, **komplekā**, *complicate*, **kómpleks**, *complice*, **eksplekā**, *deploy*, **deeksplekā**, *deploy*, *display*, **enplekā**, *involve*, *implicate*, *employ*, **enplekitós**, *implicit*, **replekā**, *replicate*, *reply*; suffixed **plekto**, *weave*, *plait*, *entwine*, as Lat. *plectere*, p.part. **plekstós** (from *****plekttos***), as in **plékstos**, *plexus*, **amplekstos**, *amplexus*, **komplekstio**, *entwine*, **komplekstós**, *complex*, **perplekstós**, *confused*, *perplexed*; Greek **plektós**, *twisted*.

160. For PIE **mónoghos** (root ***menegh***-), *much*, *many*, compare Gmc. *managaz* (cf. Goth. *managS*, O.S. *manag*, O.E. *monig*, *manig*, O.Fris. *manich*, Swed. *mången*, Du. *menig*, Ger. *manch*), O.C.S. *munogu*, Russ. *много*, Cz. *mnoho*, O.Ir. *menicc*, Welsh *mynych*. The compound **monoghopóltos**, *manifold*, is common to Germanic dialects, cf. Goth. *manag-falþs*, O.E. *monigfald* (Anglian), *manigfeald* (W.Saxon), O.Fris. *manichfald*, M.Du. *menichvout*, Swed. *mångfalt*, etc.

161. For PIE first person **egŏ**, **egóm**, (and later also attested as Gmc. and Sla. ***eg***-), compare Gmc. *ek* (cf. Goth. *ik*, O.Fris. *ik*, O.E. *Ic*, O.N. *ek*, O.H.G. *ih*, Norw. *eg*, Dan. *jeg*, Eng. *I*, Ger. ich), Lat. ego, Umb. *eho*, Gk. *ἐγώ,* Av. *azəm*, O.Lith. eš, O.Pruss.,Ltv. *es*, O.C.S. *азъ*, O.Russ. *язъ*, O.Pol. *jaz*, Kam. õc; Hitt. uk, Carian uk. Dialectal Skr. *aham*, Ven. *ехо*, could show a variant form ***eghó***(***m***), while Slavic *azъ* and Anatolian *ug* forms show maybe another old o-grade variant *****ŏgo***, although this is disputed. Derivatives from inflected **me**(**ghi**) include Gmc. *me*(*ke*) (cf. O.N., Goth. *mik*, O.E. *me*, *mec*, O.H.G. *mih*), Lat. *me*, Umb. *mehe*, Ven. *mego*, Gk. *eme*, Skt. *mam*, Av. *mam*, Russ. *mne*, O.Ir. *mé*, Welsh *mi*, Alb. *mua*, etc.

162. For PIE **wéjes**, *we*, compare Gmc. *wejz* (cf. Goth. *wit, weis*, O.S. *wi*, O.N. *vit*, *vér*, O.E. *wē*, O.Fris. *wi*, O.H.G. *wir*, Dan. *vi*, Du. *wij*), Skr. vayam, Av. vaēm, O.Pers. vayam, Toch. was/wes, Lith., O.Pruss. *mes* (<***wes*), Ltv. *my* (<***wes*), Arm. *mek* (<***wes*), Hitt. *wēs*. For inflected IE **ns**-, **nos**, compare Gmc. *uns*- (cf. Goth. *unsar*, *ugkis*, ON *oss*, *okkr*, O.E., *us*, *uncer*, O.S., O.Fris. *us*, O.H.G. *unsih*, *unser*, Swed. *oss*), Lat. *nōs*, Gk. *hmeis* (<**nsmé**, cf. Eol. *amme*), *no*, Skr. *nas*, Av. *nō*, O.Pers. *amaxām*, Toch. *nás*, O.Pruss. *noūson*, Lith. *nuodu*, Russ. *nas*, Polish *nas*, O.Ir., Welsh *ni*, Alb. *ne*; Hitt. *anzās*.

163. For Indo-European **tū**, *you* (sg.), compare Gmc. *thū* (cf. Goth. *þu*, O.N. *þú*, O.E. *þu*, O.H.G. *thu*, Eng. *thou*, Ger. *du*), Lat. *tū*, Osc. *tiium*, Umb. *tiú*, Gk. *su*, Skr. *tvam*, Av. *tū*, O.Pers. *tuva*, Toch. *tu*/*tuwe*, Arm. *du*, O.Pruss. *toū*, Lith. *tu*, Ltv. *tu*, O.C.S.,Russ. *ty*, Polish *ty*, O.Ir. *tú*, Welsh *ti*, Alb. *ti*, Kam. *tü*; Hitt. *tuk*.

164. PIE **júwes**, *you* (pl.), gives Gmc. *iuwiz* (cf. Goth. *jus*, O.N. *yor*, O.S. *iu*, O.E. [*g*]*ē-ow*, O.Fris. *iu-we*, M.Du. *u*, O.H.G. *ir*, *iu-wih*), Osc.-Umb. *uēs*, *-uus*, Gk. *humeis*, Skr. *yūyam*, Av. *yūžəm*, Toch. *yas/yes*, Arm. *dzez*, O.Pruss. *ioūs*, Lith. *jūs*, Ltv. *jūs*, Celt. *swis* (<**swēs*), Alb. *ju* (<**u*), Hitt. *sumēs*. For **wos**, ***jus***-, compare Lat. *vōs*, Umb. *uestra*, Skr. *vas*, Av. *vō*, O.Pruss. *wans*, Russ. *vy*, *vas*, Polish *wy*, *was*.

165. Indo-European reflexive **s(w)e** gave Goth. *sik*, O.N. *sik*, O.H.G. *sih*, Ger. *sich*, Lat. *sē*, *sibi*, Oscan *sífeí*, Umbrian *seso*, Gk. *heos*, Skr. *sva*, Av. *hva*, Phryg. *ve*, Arm. *ink's*, O.Pruss. *sien*, *sin*, Lith. *savo*, Ltv *sevi*, O.C.S. *se*, Russ. *sebe*, *-sja*, Alb. *vetë*; Carian *sfes*, Lyd. *śfa-*. Derivatives include suffixed **sélbhos**, self, Gmc. *selbaz* (cf. Goth. *silba*, O.N. *sjalfr*, O.E. *seolf*, *sylf*, O.Fris. *self*, Du. *zelf*, O.H.G. *selb*), **s(w)ebh(ó)s**, "*one's own*", *blood relation, relative*, as Gmc. *sibjas* (cf. Goth. *sibja*, O.S. *sibba*, O.E. *sibb*, O.Fris., M.Du. *sibbe*, O.H.G. *sippa*, Eng. *sib*, Ger. *Sippe*); suffixed **swóinos**, "*one's own (man)*", *attendant*, *servant*, also *sheperd*, as Gmc. *swainaz* (cf. O.N. *sveinn*, O.E. *swan*, O.S. *swen*, O.H.G. *swein*, Eng. *swain*); suffixed ***s(u)w***-, as in **suwikīdā**, *sucide*, and **swṓmis**, "*one's own master*", *owner*, *prince*, as Skr. *svāmī*; extended **sed, sē**, *without, apart* (from "*on one's own*"); suffixed o-grade **sōlos**, *by oneself alone*, Lat. *sōlus*, as in **sōlitāsiós**, *solitary*, **desōlā**, *desolate*; suffixed **swēdhsko**, *accustom*, *get accustomed*, as Lat. *suēscere*, as in **komswēdhsko**, *accustom*, p.part. **komswēstós** (<****komswēdh(sk)to***-), in **komswēstū́dōn**, *consuetude*, *custom*, **deswēstū́dōn**, *desuetude*, **manswēstū́dōn**, *mansuetude*; suffixed extended **swetrós**, *comrade*, *companion*, as O.Gk. *hetaros*; suffixed form **sweinós**, *self*, as O.Ir. *féin*, as in *Sinn Fein*; suffixed **swétos**, *from oneself*.

Some linguists connect the pronoun to an older PIE root **swe**- meaning *family*, in turn related with **su**, *be born*, which would have frozen in ancient times through composition in words like ***sw-esōr***, lit. "*woman of the own family*" (from **sw**-, "*family*, *own*" and **ésor**-, *woman*), as opposed to the generic **ésōr** or **cénā**, *woman*.

166. For PIE **deuk**, *lead*, also "*pull*, *draw*", compare Gmc. *teuhan* (cf. O.E. *tēon*, O.H.G. *ziohan*, Eng. *tug*, Ger. *ziehen*, *Zug*), M.Welsh *dygaf*, Alb. *nduk*; zero-grade suffixed **dúkā**, *draw*, *drag*, Gmc. *tugōn* (cf. O.E. *togian*, Eng. *tow*), and prefixed **ekdukā**, *lead out*, *bring up*, *educate*, in Lat. *ēducāre*; suffixed o-grade **doukē**, *bind*, *tie*; **dóukmos**, *descendant*, *family*, *race*, *brood*, hence "*team*", as Gmc. *tauhmaz*, O.E. *tēam*, and denominative verb **doukmio**, *beget*, *teem*, as Gmc. *taukhmjan*, O.E. *tēman, tīeman*; basic form gives Latin derivatives **déuks**, *duke*, **apdeuko**, *abduct*, **addeuko**, *adduce*, **aqādéuktos**, *aqueduct*, **kikromdéuktiōn**, *circumduction*, **komdeuko**, *conduce*, *conduct*, **dedeuko**, *deduce*, *deduct*, **ekdeuko**, *educe*, **endeuko**, *induce*, **entrodeuko**, *introduce*, **prodeuko**, *produce*, ***redeuko***, *reduce*, **sedeuko**, *seduce*, **supdeuko**, subdue, **transdeuko**, *traduce*.

167. For PIE **so**, *this*, as O.E. *se* (later replaced by *th*-, in *the*), Gk. *ho*, *he*, Skt. *sa*, Avestan *ha*, O.Ir. *so*, had also a Germanic feminine **sjā**, "*she*", Gmc. *sjō*, as O.E. *sēo*, *sīe*. A common loan word is variant form **sei**- in compound with **ki**, *here*, giving **séiki**, *thus*, *so*, *in that manner*, as Lat. *sīc* (cf. for Romance "*yes*", Fr. *si*, It. *sì*, Spa.,Cat. *sí*, Pt. *sim*). From inflected form **to** are Gmc. *thē* (cf. O.E. *the*, M.Du. *de*, Ger. *der*, *die*), L. *ta*[*lis*], Gk. *to*, Skr. *ta*-, BSl. *to*, also alternative Greek borrowing **tmto**-, *tauto*-; from neuter **tod** is Gmc. *that*; from accusative **tām** are adverbial Latin **tā́mdem**, *at last, so much*, *tandem*, and **tā́mtos**, *so much*, and from its reduced form ***tā***- is suffixed **tā́lis**, *such*.

168. From PIE **i** are derivatives **jénos** (see **éno**), *that*, *yon*, as Gmc. *jenaz* (cf. Goth. *jains*, O.N. *enn*, O.Fris. *jen*, O.H.G. *ener*, M.Du. *ghens*, O.E. *geon*, Ger. *jener*), and as extended **jend**-, **jéndonos**, *yond*, *yonder*, *beyond*, as Gmc. *jend*(*anaz*), O.E. *geond*(*an*); extended form **jā́i** gives O.E. *gēa*, Ger., Dan., Norw., Sw. *ja*, Eng. *yeah*; relative

stem **jo** plus particle gives **jóbho**, "*doubt*", *if*, as Gmc. *jaba* (cf. O.E. *gif*, O.N. *ef*, *if*, O.Fris. *gef*, O.H.G. *ibu*, *iba*, Ger. *ob*, Du. *of*); basic form **i**, Lat. *is*, neuter **id**, *it*, and **ídem**, *same*, as in **idemtikós**, *identical*, **idémtitā**, identity, **idemtidhakā**, *identify*; suffixed **íterom**, *again*, **iterā**, *iterate*, **reiterā**, *reiterate*, **ítem**, *thus*, *also*.

For MIE reconstructed **līg**, *body*, *form*, *like*, *same*, compare Germanic derivatives **komlī́gos**, "*like*", *having the same form*, lit. "*with a corresponding body*", as Gmc. *galikaz* (cf. Goth. *galeiks*, O.S. *gilik*, O.N. *glikr*, O.E. *gelic*, Du. *gelijk*, Ger. *gleich*), analogous, etymologically, to MIE **kombhormís**, Lat. *conform*; verb **līgio**, *please*, as Gmc. *likjan* (cf. Goth. *leikan*, O.N. *lika*, O.E. *lician*, O.Fris. *likia*, O.H.G. *lihhen*).

For MIE reconstructed **bhórmā**, *form*, compare Lat. *forma*, "*form, mold, shape, case*", and Greek μορφη, "*form, shape, beauty, outward appearance*", equivalent to IE **mórbhā**, hence both possibly from a common PIE root ***merbh-*/*bherm***, "*form*".

169. For **ko**, **ki**, *here*, compare as Gmc. *khi-* (cf. Goth. *hita*, ON *hér*, O.E. *hit*, *he*, *her*, O.H.G. *hiar*, Eng. *it*, *he*, *here*), Lat. *cis*, Lith. *šis*; Hitt. *kāš*, Luw. *zaš*. Also, a common particle **ke** is found, as in O.Lat. *hon-ce* (Lat. *hunc*), Gk. *keinos* (from ***ke-eno***), also Hitt. *ki-nun*, "*now*".

170. PIE **éno**, *there*, gave Gmc. *jenos* (in compound with **i**), Skr. *ena-*, *anena*, O.C.S. *onu*, Lith. *ans*.

171. Common loan word Latin *murus*, "*wall*", comes from O.Lat. *moiros*, *moerus*, i.e. MIE **móiros**, with common derivatives **moirālís**, *of a wall*, and n.pl. **moirā́lia**, as Fr. *muraille*, Spa. *muralla*, Eng. *mural*. This word is used normally in modern Indo-European languages to refer to an "*outer wall of a town, fortress, etc.*", as Ger. *Mauer*, Du. *muur*, Sca. *mur*, Fr. *mur*, It.,Spa.,Pt. *muro*, Ca. *mur*, Lith. *muras*, Pol. *mur*, Ir. *mur*, Bret. *mur*, Alb. *mur*, etc., while most IE languages use another word for the "*partition wall within a building*", as MIE **wállom**, *wall, rampart, row or line of stakes*, a collective from **wállos**, *stake*, as Lat. *uallum, uallus* (cf. O.E. *weall*, O.S., O.Fris., M.L.G., M.Du. *wal*, Swe. *vall*, Da. *val*, Ger. *Wall*), MIE **pariéts**, as Lat. *paries*, *parietis* (cf. It. *parete*, Spa. *pared*, Pt. *parede*, Rom. *perete*), MIE **stā́inā** (cf. O.C.S. *stena*, Russ. *стена*, Sr.-Cr.,Slo. *stena*, Cz. *stěna*, Pol. *ściana*, also compare loans Ltv. *siena*, Lith. *siena*, Finn. *seinä*, Est. *sein*). IE móiros comes from PIE **mej**, *strengthen*, *pole*, as in Gmc. *mairja-* (cf. O.Eng. *mǣre*, *gemǣre* "*limit*, *boundary*", O.Ice. *landa-mæri*), O.Ind. *mití-*, Pers. *mēχ* "*peg*, *plug*, *nail*" (<**maiχa*), O.Ir. [*-tuid*]*men*, and extended Lith. *mita*, Sla. **moisto** or **meisto** (from PIE ****me*/*o-itto***), as in O.Bulg. *mě̋sto*, Ser.-Cr. *mjȅsto*, Cz. *místo*, etc.

For Indo-European root **stāi-**, *stone*, compare Slavic **stā́inā**, *wall*, and o-grade **stóinos**, *stone*, as Gmc. *stainaz* (cf. Goth. *stains*, O.N. *steinn*, O.E. *stan*, O.H.G. *stein*, Da. *steen*); suffixed **stā́jr**, *solid fat, suet*, as Gk. στέαρ, in **stājrikós**, *stearic*, etc; cf. also Gk. *stia*, *stion*, "pebble", Skr. *styayate* "*curdles, becomes hard*", Av. *stay-* "*heap*".

172. For PIE **peig**, also **peik**, *cut*, *mark* (*by incision*), compare derivatives **péik(o)lā**, *cutting tool*, *file*, *saw*, as Gmc. *fīkh(a)la* (cf. O.E. *feol*, *fil*, O.H.G. *fila*, M.Du. *vile*, Eng. *file*, Ger. *Feile*), Lith. *pela*, O.C.S. *pila*; nasalized zero-grade **pingo**, *embroider*, *tattoo*, *paint*, *picture* (presumably from "*decorate with cut marks*" to "*decorate*" to "*decorate with color*"), as Lat. *pingere*, in p.part. **pigtós**, *painted*, **pigtósā**, *painting*, *picture*, **pigmńtom**, *pigment*, **depingo**, *depict*; suffixed zero-grade form **pikrós**, *sharp*, *bitter*, as Gk. *pikros*; o-grade **poikilós**, *spotted*, *pied*, *various*, as Gk. *poikilos*. Compare, with the sense of "*mark*, *decorate*", Skr. *pingaḥ*, *pesalaḥ*, *pimsati*, O.C.S. *pisati*, *pegu*, "*variegated*", O.H.G. *fehjan* "*adorn*", Lith. *piesiu* "*write*".

173. For PIE **ed**, *eat*, originally *bite*, compare Gmc. (*pro*)*etan* (cf. Goth. *itan*, ON *eta*, O.E. *etan*, *fretan*, O.H.G. *ezzen*, *frezzan*, M.Du. *eten*), Lat. *edere*, as in **edibhilís**, *edible*, **komedo**, *comedo*, Lat. *comedere*, p.part.

komestós, (<*__komedto-__) as in **komestibhilís**; compound **prám(e)diom**, "*first meal*", *lunch* (from **prām**, *first*), as Lat. *prandium*; suffixed **edunā**, *pain* (from "*gnawing care*"), as Gk. *odunē*. Compare Lat. *edō*, Osc. *edum*, Gk. *edō*, Skr. *ad*, Av. *ad*, Thrac. *esko-*, Toch. *yesti*, Arm. *utel*, O.Pruss. *ist*, Lith. *ėsti*, Ltv. *ēst*, Russ. *jest'*, Polish jeść, O.Ir. *esse*; Hitt. *at*, Luw. *ad-*, *az-*, Palaic *ata-*.

Proto-Indo-European **donts** (old gen. ***dentós***), *tooth*, originally present participle *h_1*dent*, "*biting*", gives Gmc. *tanth-tunth* (cf. Goth. *tunþus*, O.E. *tōð* , pl. *teð*, cf. O.N. *tönn*, O.S. *tand*, O.Fris. *toth*, O.H.G. *zand*, Dan., Swed., Du. *tand*, Ger. *Zahn*), Lat. *dentis*, Gk. *odous*/*donti*, Skr. *dantam*, Pers. *dandān*, Lith. *dantis*, Russ. *desna*, O.Ir. *dét*, Welsh *dant*, Kam. *dut*. Modern derivatives include Germanic **dńtskos**, *canine tooth*, *tusk* (cf. O.E. *tux*, *tusc*, O.Fris. *tusk*), Latin **dentālís**, *dental*, **dentístā**, *dentist*, **endentā**, *indent*, **tridénts**, *trident*, and Greek **-donts**, **donto-**, as Gk. *odōn*, *odous*, in **dontología**, *odontology*, etc.

174. Proto-Indo-European **gal**, *call*, *shout*, gave expressive **gallo**, as Gmc. *kall-* (cf. O.N. *kalla*, O.E. *ceallian*, O.H.G. *halan*, Eng. *call*), also found in Latin noun **gállos**, *cock* (< "*the calling bird*"), as Skr. *usakala*, "*dawn-calling*", M.Ir. *cailech*, (but also associated with *Gallus,* Gallic, as if to mean "*the bird of Gaul*"), in **gallinakiós**, *gallinaceous*; **gálsos**, *voice*, as O.C.S. *glasŭ*, as in *glasnost*; also, reduplicated **gálgalos**, *word*, as O.C.S. *glagolu*. Also found in Gk. *kaleo*, *kelados*, Lith. *kalba*, "*language*".

175. For Proto-Indo-European verbal root **pō(i)**, *drink*, compare common derivatives Lat. *pōtāre*, *pōtus*, *bibō*, Umb. *puni*, Gk. πῖνω, πόσις, Gk.Lesb. πώνω (Fut. πἰομαι, Aor. ἔπιον, Impf. πῖθι, Perf. πέπωκα), O.Ind. *píbati*, *pītás*, *pītíṣ*, also *pā́ti*, *pāyáyati*, *páyatē*, Thrac. *pinon*, Arm. *əmpelik'*, O.Pruss. *poutwei*, *poieiti*, Lith. *puotà*, Sla. *pī-* (cf. O.C.S. *pitijĭ*, *piju*, O.Russ. *numu*, Pol. *pić*, *piju*, Cz. *píti*, *piji*, Sr.-Cr. *nu͡mu*, *nu͡jȅм*, Slo. *píti*, *píjem*, etc.), O.Ir. *ibim*, Welsh *yfed*, Alb. *pi* (aor. *pīva*); Hitt. *pas*. For MIE common words, compare **pōtós**, *drunk*, as Lat. *pōtus*, in **pōtā**, *drink*, Lat. *pōtāre*; suffixed zero-grade **pótis**, *drink*, *drinking*, in **kompótiom**, "*with drinking*", *feast*, *banquet*, *symposium*, as Gk. συμπόσιον, and further suffixed Latin **pṓtiōn**, *a drink, potion*, as Lat. *pōtiō*, or; zero-grade **pī́ros**, *feast*, as O.C.S. *pirŭ* (cf. also general zero-grade **pī**, Sla. *pij-*, "*drink*"); suffixed nasal **pīno**, *drink*, as Gk. *pīnein*; suffixed **pṓtlom**, *drinking vessel*, *cup*, *bowl*, as Skr. *pātram*; suffixed reduplicated zero-grade pipo-, whence **pibo**, *drink*, as O.Ind. *píbati*, Sla. *pivo*, also in Lat. *bibere*, where it is assimilated to **bibo*.

A common term for "*beer*", thus, could be Modern Indo-European neuter **píbom**, as both common European words are derived from PIE reduplicated verb **pibo**, compare Lat. *bibere* (cf. O.E. *beor*, O.N. *bjórr*, Du.,Fris.,Ger. *bier*, Ice. *bjór*, Fr. *bière*, It.,Cat. *birra*, Rom. *bere*, Gk. *μπίρα*, Pers. *abejo*, Bul. *бира*, Ir. beoir, Welsh *bîr*, Bret. *bier*, Alb. birrë, also Hebrew *bîrah*, Turkish *bira*, Arabic *bīra*, Jap. *bīru*, Chinese *píjiŭ*/*bihluh*, Maori *pia*, Thai *biya*, Malay *bir*, Indonesian *bir*, Swahili, Vietnamese *bia*), and Slavic *pivo* (cf. Russ.,Ukr. *пиво*, Pol. *piwo*, Cz.,Sr.-Cr. *pivo*, Bel. *піва*, Mac. *пиво*, also Mongolian *пиво*, Azeri *pivo*, etc.). For other terms, compare MIE **áluts**, *ale*, as Gmc. *aluth* (cf. O.E. *ealu*, O.S. *alo*, O.N.,Sca. *øl*, Ice. *öl*, Ltv.,Lith. *alus*, O.C.S. *olu*, Slo. *ol*, Rom. *olovină*, also Est. *õlu*, Finn. *olut*), perhaps from a source akin to Lat. *alumen*, "*alum*", or to PIE root **alu**, a root with connotations of "*sorcery, magic, possession, intoxication*". Another term comes from Cel.-Lat. *cerevisia -> cervesia* (cf. Spa. *cerveza*, Pt. *cerveja*, Occ.,Cat. *cervesa*, Gal. *cervexa*, Filipino, Tagalog *servesa*, Ilongo *serbisa*, Cebuano *sirbesa*, Tetum *serveja*, etc.), in turn from agricultural Goddess Lat. *Ceres*, from PIE **ker**, *grow*, and possibly Lat. *vis*, "*strength*", from IE **wī́ros**, *man*.

For PIE **ker**, *grow*, compare **kérēs**, as Lat. *Cerēs*, *goddess of agriculture, especially the growth of grain*, in **kereā́lis**, *cereal*; extended form **krē-**, in **krēio**, *bring forth, create, produce* (< "*to cause to grow*), *create*, as Lat. *crēāre*, also in **prōkrēiā**, *procreate*, **krēiā́tiōn**, *creation*; suffixed **krēsko**, *grow*, *increase*, as Lat. *crēscere*, in **krēskénts**, *crescent*, **komkrēsko**, *grow together*, *harden*, p.part. **komkrētós**, in **komkrētā**, *concrete*, **adkrēsko**, *accrue*, **dekrēsko**, *decrease*, **enkrēsko**, *increase*, **rekrēsko**, *increase*, also *recruit*, **ekskrēsko**, *grow out*, in **ekskrēskéntiā**, *excrescence*, p.part. **ekskrētós**, *grown out*, in **ekskrētā**, *separate, purge*; suffixed o-grade **kórwos**, "*growing*", *adolescent*, *boy*, *son*, and **korwā́**, *girl*, as Gk. *kouros*, *koros*, and *korē*; compound **smkērós**, "*of one growth*", *sincere* (from zero-grade **sm-**, *same*, *one*), as Lat. *sincērus*.

176. For PIE root **lew**, *wash*, cf. Lat. *lauāre*, Gk. *louein*, Gaul. *lautro*, Arm. *loganam*/*lokanam*, O.Ir. *lóathar*, Welsh *luddw*, Hitt. *lahhuzzi*. Compare derivatives **lóukā**, as Gmc. *laugō* (cf. O.N. *laug*, O.E. *lēðran*, O.H.G. *louga*, Eng.*lather*, Ger. *Lauge*); from Latin variant **lawo**, zero-grade ***-ŀwo*** in compounds, are **dislúwiom**, *deluge*, **adlúwiōn**, *alluvion*, **komlúwiom**, *colluvium*, **eklúwiom**, *eluvium*, etc.; from athematic **lawā** are **lawātóriom**, *lavatory*, ***lawābho***, **lawātrī́nā**, *bath*, *privy*, as Lat. *lātrīna*, etc.

177. The verb 'to be' in Old English was a compound made up of different sources. *Bēon* and *wesan* were only used in certain tenses (mixed with original PIE **es**). *Bēon* was used in the present tense to express permanent truths (the 'gnomic present'), while *wesan* was used for the present participle and the preterite.

Wesan comes from Germanic **wīsan* (cf. Goth. *wesan*, O.N. *vesa*, O.E. *wesan*, O.H.G. *wesan*, Dutch *wezen*, Ger. *war*, Swe. *vara*) from Indo-European **wes**, *dwell*, *live*, as in Celtic *westi-* (cf. Old Irish *feiss*). Common English forms include *was* (cf. O.E. *wæs*) and *were* (cf. O.E. Sg. *wǣre,* Pl. *wǣron*).

178. For PIE **men**, *think*, compare zero-grade suffixed **(kom)mn̥tis**, *mind*, as Gmc. *(ga)munthiz* (cf. Goth. muns, O.N. *minni*, O.E. *gemynd*, Ger. *minne*), Lat. *mēns* (*ment-*), in **mntālís**, *mental*, **demntís**, *dement*, **mn̥tiōn**, *remembrance*, *mention*; also, **mntós**, "*willing*", as Gk. *-matos*, as in **automntikós**, *automatic*; suffixed **mnio**, *be mad*, as Gk. *mainesthai*, and **mn̥ios**, *spirit*, as Av. *mainiius*; also fem. **mn̥iā**, *madness*, *mania*, as Gk. *maniā*, in **mniakós**, *maniac*; full-grade **méntiā**, *love*, as Gmc. *minthjō* (cf. O.H.G. *minna*, M.Du. *minne*); reduplicated **mimno**, *remember*, as Lat. *meminisse*, in **mimnéntōd**, *memento* (imperative), **kommimnesko**, *contrive by thought*, as Lat. *comminīscī*, **kommentā́siom**, *comment*, **remimnesko**, *recall*, *recollect*, **remimneskénts**, *reminiscent*; **mántis**, *seer*, as Gk. *mantis*; **méntros**, *counsel*, *prayer*, *hymn*, as Skr. *mantraḥ*; suffixed **ménōs**, *spirit*, as Gk. *menos*; o-grade causative **monē**, *remind*, *warn*, *advise*, as Lat. *monēre*, in **mónitiōn**, *monition*, **monitṓr**, *monitor*, **mónstrom**, *portent*, *monster*, **admonē**, *admonish*, **demonstrā**, *demonstrate*, **prāimonítiōn**, **supmonē**, *summon*; maybe also from this root is suffixed **Móntuā**, *Muse*, which gives usual Greek loans **montuáikos**, *mosaic*, as Gk. Μωσαϊκός, **montuéiom**, *museum*, as Gk. μουσεῖον, **montuikā́**, *music*, as Gk. μουσική; extended **mnā**, reduplicated **mimnāsko**, *remember*, as Gk. *mimnēskein*, giving **mnāstós**, *remembered*, **n̥mnāstós**, "*not remembered*", from which **n̥mnāstíā**, *oblivion*, *amnesty*, as Gk. ἀμνηστία, and **n̥mnā́siā**, *amnesia*, **mn(á)mn**, *memory*, as Gk. *mnēma*, **mnā́mōn**, *mindful*, **mnāmonikós**, *mnemonic*, **mnā́mā**, *memory*, as Gk. *mnēmē*; also, from PIE expression **mens dhē**, "*set mind*", is compound noun **mnsdhē**, *wise*, as Av. *maz-dā-*.

A similar IE root is **mendh**, *learn*, which in zero-grade **mndhā** gives Gk. *manthanein* (Aorist stem *math-*), as in **mndhāmntikós**, *mathematical*, **ghrēstomn̥dheiā**, *chrestomathy*, etc.

BIBLIOGRAPHY

This work is mainly a compilation of scholar knowledge, the output of two centuries of thorough research in comparative linguistics.

For this specific work we have used (among others, less important references) the following books:

- Adrados, Francisco R., Bernabé, Alberto, Mendoza, Julia. *Manual de lingüística indoeuropea I*, Ediciones Clásicas, 1995.
- Adrados, Francisco R., Bernabé, Alberto, Mendoza, Julia. *Manual de lingüística indoeuropea II*, Ediciones Clásicas, 1996.
- Adrados, Francisco R., Bernabé, Alberto, Mendoza, Julia. *Manual de lingüística indoeuropea III*, Ediciones Clásicas, 1998.
- Beekes, Robert S. P. *Comparative Indo-European Linguistics: An Introduction*, Amsterdam: John Benjamins, 1995.
- Benveniste, Émile. *Le vocabulaire des institutions indo-européennes*. Paris: Les Editions de Minuit, 1969.
- Bryce, Trevor. *The Kingdom of the Hittites*. Oxford: Oxford University Press, 1998.
- Buck, Carl Darling. *Comparative Grammar of Greek and Latin*, Chicago: University of Chicago Press, 1933.
- Cooper, Robert L. *Language planning and social change*. Cambridge: Cambridge University Press, 1989.
- Crépin, André. *Problèmes de grammaire historique*. Presses Universitaires de France, 1978.
- Ganesh Gadre, Vasant. *Estructuras gramaticales de hindi y español*. Madrid: CSIC, 1996.
- Güterbock, Hans G., Hoffner, Harry A. *The Hittite Dictionary, fascicle 1, volume 3*. Chicago: The Oriental Institute of the University of Chicago, 1980.
- Güterbock, Hans G., Hoffner, Harry A. *The Hittite Dictionary, fascicle 2, volume 3*. Chicago: The Oriental Institute of the University of Chicago, 1983.
- Güterbock, Hans G., Hoffner, Harry A. *The Hittite Dictionary, fascicle 3, volume 3*. Chicago: The Oriental Institute of the University of Chicago, 1986.
- Krahe, Hans. *Lingüística indoeuropea*. Madrid: CSIC, 1953.
- Lazzeroni, Romano. *La cultura indoeuropea*. Bari: Gius, Laterza & Figli, 1998.
- Lehman, W. P. *Theoretical Bases of Indo-european Linguistics*. London: Routledge.
- Lehman, W.P. *Proto-Indo-European Phonology*. Austin: University of Texas Press and Linguistic Society of America, 1952
- Lehman, W.P. *A Reader in Nineteenth-Century Historical Indo-European Linguistics*. Bloomington: Indiana UP, 1967
- Lehman, W. P. *Proto-Indo-European Syntax*. Austin: University of Texas Press, 1974
- Lehmann, W., Zgusta, L. Schleicher's tale after a century. In *Festschrift for Oswald Szemerényi on the Occasion of his 65th Birthday*. Amsterdam: B. Brogyanyi, 1979. p. 455–66
- Lindemann, F.O. *Introduction to the Laryngeal Theory*, Oslo: Norwegian University Press, 1987.

- Martínez, Javier, de Vaan, Michiel. *Introducción al avéstico*. Madrid: Ediciones Clásicas, 2001.
- Mayrhofer, Manfred. *Indogermanische Grammatik, i/2: Lautlehre*, Heidelberg: Winter, 1986.
- Masson, Emilia. *Les douze dieux de l'immortalité*. Paris: Les Belles Lettres, 1989.
- Meid, W. *Archäeologie und Sprachwissenschaft*. Innsbruck: Institut für Sprachwissenschaft der Universität.
- Monier-Williams, Sir Monier, *A Sanskrit-English Dictionary, Etymologically and Philologically arranged,* Oxford University Press, 1899.
- Ramat, Anna Giacalone, Ramat, Paolo. *Le lingue indoeuropee*. Bologna: Il Mulino, 1993.
- Renfrew, Colin. *Archaeology and language: The Puzzle of Indo-European Origins*. London: Jonathan Cape, 1987.
- Roberts, Edward A., Pastor, Bárbara. *Diccionario etimológico indoeuropeo de la lengua española*. Madrid: Alianza, 1996.
- Renfrew, Colin. Arqueología y Lenguaje: La cuestión de los orígenes indoeuropeos.Barcelona: Crítica, 1990
- Sánchez Salor, E. *Semántica y sintaxis. La oración compuesta latina*. Cáceres: Universidad de Extremadura, 1993.
- Shields, K. *A history of Indo-European Verb Morphology*. Amsterdam: Benjamins, 1992.
- Sihler, Andrew L. *New Comparative Grammar of Greek and Latin*, Oxford: Oxford University Press, 1995.
- Szemerényi, Oswald. *Einführung in die Vergleichende Sprachenwissenschaft*. Darmstadt: Wissenschaftliche Buchgesellschaft, 1989.
- Szemerényi, Oswald. *Introduction to Indo-European Linguistics*. Oxford: Oxford University Press, 1996.
- Tovar, Antonio. *Antiguo Eslavo Eclesiástico*. Madrid: Universidad Complutense, 1987.
- Tucker, T.G., *Etymological Dictionary of Latin,* Ares Publishers, 1976
- Villar, F. *Los indoeuropeos y los orígenes de Europa*. Madrid: Gredos, 1991.
- Watkins, Calvert, ed., *The American Heritage Dictionary of Indo-European Roots,* 2nd ed., Houghton Mifflin Co., 2000.
- Whitney, William Dwight. *Comparative Grammar of Greek and Latin*. Delhi: Motilal Banarsidass (reprint), 1924.

We have also used these quick sources on the Net:

- The Wikipedia, the *Free Online Encyclopaedia*, and the Wiktionary, both excellent sources for free resources and knowledge. Thanks to all contributors and to their founders.
- The Online American Heritage Dictionary.
- The Online Etymology Dictionary of the English language.
- The Indo-European Etymological Dictionary, University of Leiden.