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# Before Babel: Ancient Tales from Genesis Retold in Reconstructed Proto-Indo-European

Bertrand C. Barrois

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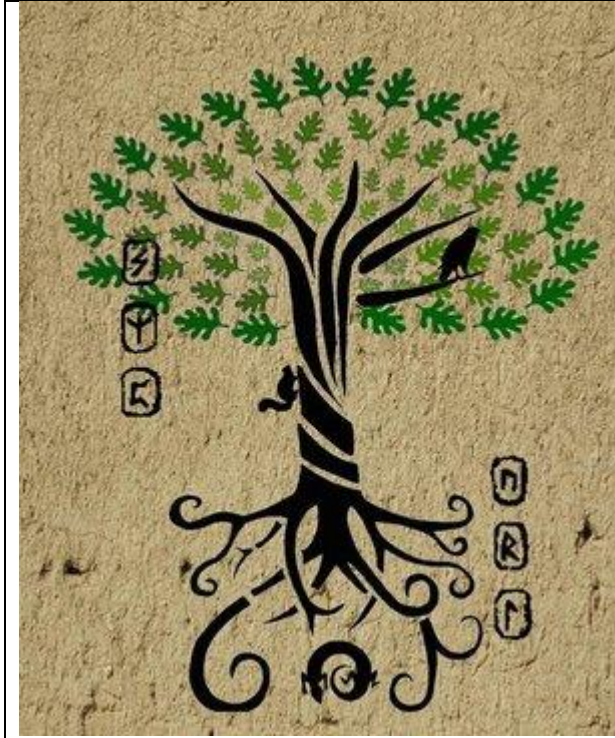


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**Before Babel: Ancient Tales from Genesis  
Retold in Reconstructed Proto-Indo-European**

**Bertrand C Barrois**

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## BEFORE BABEL

*The oldest of legends retold in the  
mother of European languages*

## PREFACE

I composed *Before Babel* to fill a hole that persists after two centuries of dry academic work on Proto-Indo-European. It seems a shame that nobody has composed a sample of reconstructed text with any literary merit. Schleicher's fable is clever, but his outdated theories of the proto-language were comically Indo-centric, and his little fable does not do justice to the poetic power of the language.

I looked no further than Genesis and Psalms to find suitable texts. I hope you find my light-hearted "translations" of the tales more substantial than Schleicher's fablet, and more authentic than Dn̄ghū's shameless calques on Latin models. They prove the point that the proto-language, though poor in abstraction, lent itself to narration and poetry.

I also take the opportunity to promote the unprovable theory that the tale of the Flood alludes to a conflict between ethnic groups that worshiped different gods, and that the name *Noah* (נֹחַ) derives from Indo-European \**Nah<sup>2</sup>u*. Might *Cain* (קַיִן), *Abel* (הַבֶּל), and *Eve* (חַוָּה) also have Indo-European origins?

The tales themselves use symbols that are not characteristically Semitic. Sacred trees and evil serpents are staples of Indo-European myth. Could the tales be Hebrew retellings of Indo-European fables?

In fond tribute to the web site *Early Indo-European Online*, created by the Linguistics Research Center of the University of Texas, I have structured my materials in similar fashion. Besides the annotated tales, the reader will find a précis of my grammatical conventions and a downloadable mini-lexicon, confined to well-attested roots.

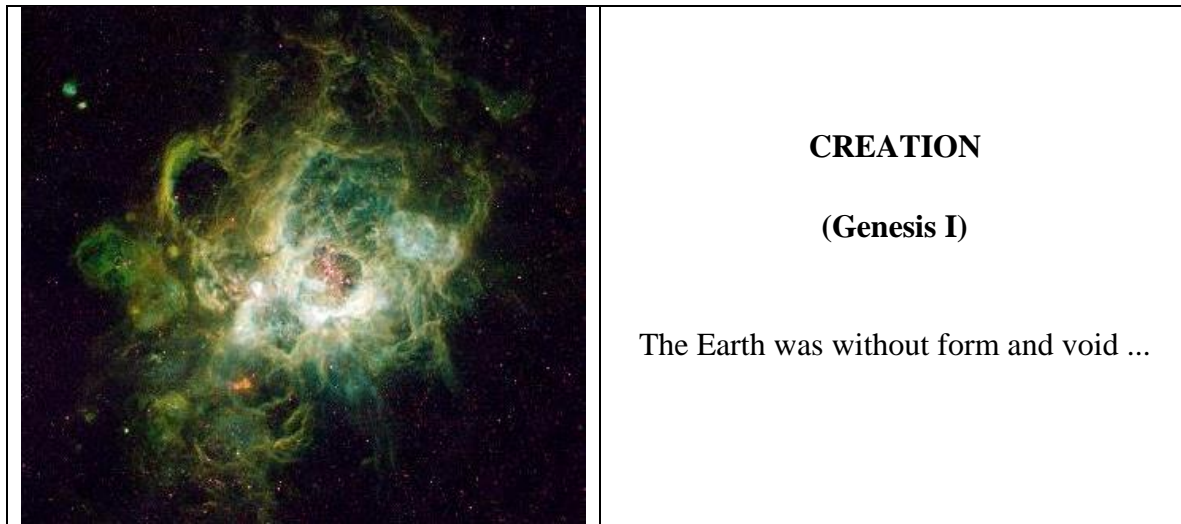
Before the reader has a chance to sniff out my distaste for the too-fashionable and over-developed theory of laryngeals, I will freely confess it. Too many different phenomena have been explained by resort to laryngeals, and these theoretical explanations defy rigorous statistical validation via inter-branch correlations. I minimize the use of obscure notation, and will further vent my opinions in the notes on orthographic conventions.

Readers will find the syntax somewhat unorthodox. I was obliged to reinvent complex constructions by imitating models from recorded languages, and to violate canonical SOV word order at every turn. I invite the readers to do better, in the knowledge that some of you will succeed.

*Bertrand C Barrois*

*Falls Church, Virginia, USA*

*E-mail: BBarrois@verizon.net*



In the beginning, God created the Heavens and the Earth.

**pro-tem-ō q<sup>w</sup>oret Deivós nebhesa dheĝhom(m)-q<sup>w</sup>e**

- pro-tem-ō = first -- inst-sg of superlative used as adverb. (Superlative suffixes include *\*temo, mo, isto, istimo*.)
- q<sup>w</sup>or-et = he made -- weak-grade aorist from root *\*q<sup>w</sup>er* > Sanskrit *akarāt*
- deivós = god, divine -- nom-sg, derivative of root *\*dyeu* (sky)

- nebh-es-a = heavens, clouds -- acc-pl of abstract neuter *\*nebh-ës*
- The suffix of abstract neuters alternates between *\*os* in strong (NAV) cases and *\*es* in weak cases, yielding *genus/genera* = *γενοϛ/γενε(σ)α* = *janas/janasi*, etc.
- dheġhom(m) = Earth -- acc-sg (F) > *ġdhom(m)* > Greek *χθονα*, Sanskrit *kṣām*, Latin *humus*, Slavic *zemę*. The root is reduced to *ġh.m* in weak cases, hence Vedic *jm-*.

The Earth was unformed and void,

**dheġhōm ne-dhiġtá vana-au bhevet**

- dheġhōm / dheġhom-s = the Earth -- nom-sg, feminine as if personified. The nom-sg ending on M/N/R/L/A-stems is routinely suppressed, but compensatory lengthening takes place.
- dhiġ-ta / diġ-dha = formed-- nom-sg (F), past passive participle of root *\*dhi(n)ġh* > Latin *ficta*. (This verb literally means to shape dough, or to build with mortar, but figurative derivatives include German *dichten*, to compose poetry.)
- vana / euna = empty
- au = but, whereas-- enclitic conjunction used to express opposition or contrast between simple or strictly parallel elements
- bhev-et = it was -- imperfect of *\*bheu*, connoting temporary state

and upon the depths was darkness,

**bhudhnoisu-q<sup>w</sup>e temos bhevet**

- bhudh-noisu = bottom, fundus, *πυθμην* -- loc-pl > Sanskrit *budhnesu*
- tem-os = darkness -- nom-sg of abstract neuter *\*tem-ës*
- reg<sup>w</sup>-os = darkness, *ερεβοϛ* -- yet another abstract neuter

and the spirit was passing over the waters.

**ut' an.mós udéni upéri peret**

- ute = and then, and so -- conjunction used to join complex clauses
- an(?)mos / an(?)los = *anima*, *ανεμοϛ*, *anilam*, *anāl* (Old Irish)
- Synonym: *ātman*, *ατμοϛ*, *āḥm* < *\*at*
- Synonym: *πνευμα* < *\*pneus*
- udén-i = water -- loc-sg of R/N-stem root *\*vëd-r/n*
- upéri = over, super -- comparative particle opposed to *\*upo*
- per-et / pi-per-t = it was passing -- imperfect of root *\*per*

And now God said, "Let there be light," and (so) there was light.

**nūn-q<sup>w</sup>e voq<sup>w</sup>et Deivós -- bhevoit leuks ute bhuvet leuks**

- nūn = now
- q<sup>w</sup>e = and -- enclitic conjunction used in simple lists
- voq<sup>w</sup>-et = he said -- weak-grade aorist of root *\*veq*
- bhev-oi-t = let there be -- optative of root *\*bheu*
- leuks = light -- nom-sg, feminine as if personified

And he saw that the light was good,

**videt-q<sup>w</sup>e q<sup>w</sup>od kalya**

- vid-et = he saw -- weak-grade aorist of root \**veid*
- q<sup>w</sup>od = that -- subordinating conjunction
- kalya = good, beautiful -- nom-sg (F) > Greek *καλλη*

and he separated the light from the darkness.

**skidet-q<sup>w</sup>e leuk.m apo temesës**

- skid-et = he separated -- weak-grade aorist of root \**ski(n)d*
- skeid-s(t) = he separated -- strong-grade S-aorist of same root
- Synonym: \**çrei(n)* = separate, sieve > *κρῖνω*, *cerno*, *crībrum*, *hridder*. Easily confused with antonyms: *κερᾶννυμι*, *śrayati* = mix
- apo temes-ës = from the darkness -- Sanskrit fails to distinguish abl-sg from gen-sg for athematic nouns, but the particle serves to clarify the usage.

The light he called day, but the darkness he called night.

**Hnomnyet-q<sup>w</sup>e leuk.m dinom temos-au nokt.m**

- Hnomn-y-et = named -- factitive-denominative verb
- dino-m = day -- modeled on Sanskrit *dinas*, Russian *день*. May connote *division*. (Synonyms derive from \**dyu*, *aus*, *dheĝh*, with reference to sky or burning heat.)
- nokt-m = night -- acc-sg, O-grade of root in NAV cases, E-grade in “weak” cases. (Hittite *nekut* suggests \**neqt*, but this should yield *νεπτ* vice *νκτ* in Greek. )

And there was evening, and there was morning, a first day.

**vesq<sup>w</sup>eros ausos-q<sup>w</sup>e bhuvetēm-- dinos p.r.mos**

- vesq<sup>w</sup>eros / vesperos = evening
- aus-os = dawn, eos, aurora -- nom-sg of abstract neuter \**aus-ës*
- bhuv-etēm = they were -- 3rd-dual of weak-grade aorist (Exact form of secondary ending is uncertain: *tem*, *tom*, *tām*.)
- p.r.mos = first

Now God said, "Let there be a firmament amid the waters,

**nūn-q<sup>w</sup>e voq<sup>w</sup>et -- bhevoit açmōn udēni medhyöi**

- aç-mōn = firmament -- Means *sky* in Indo-Iranian, but *stone*, *anvil* elsewhere.
- medhyoi / medhyei = amid -- loc-sg of adjective > Sanskrit *madhye*

to stand between the waters above and the waters below."

**staHtévei inter vedōr uperi vedōr-q<sup>w</sup>e upo**

- staH-tév-ei = in order to stand -- dative of supine > Latin *statu*
- inter = between -- particle employed when a mere locative won't suffice
- vedōr = waters -- acc-sg (N). According to one currently fashionable theory, \**vedōr* connotes waters collectively, \**vod.r* the substance.

And it was so. And God called the *firmament* heavens.

**bhuvet -- ute açmon(m) Hnomnyet nebhesa**

- The concept of a stable foundation could be conveyed by *\*stabhos*, which yields Germanic *stab* and Sanskrit *stambhati*, and is related to *\*staH* = stand.

And there was evening, and there was morning, a second day.

**vesq<sup>w</sup>eros ausos-q<sup>w</sup>e bhuvetēm -- dinos anteros**

- an-ter-os / al-ter-os = another, second -- serves as ordinal of *\*dvo*

And God said, "Let the waters come together, and let the dry land appear."

**nūn-q<sup>w</sup>e voq<sup>w</sup>et -- son-g<sup>w</sup>emoit vedōr ute bhanyoit tersa**

- son / som = together -- particle used here as prefix
- g<sup>w</sup>em-oi-t = let it come -- optative > Sanskrit *gamet*, Gothic *kumaiþ*
- g<sup>w</sup>en-y-oi-t = let it come -- optative > Latin *veniat*, Greek *βαivoι*
- bhan-y-oi-t = let it appear -- optative of thematic root *\*bhan-yē*
- bhaH-yē-t = let it appear -- optative of athematic root *\*bhaH*
- These two roots have been confused. In Greek, *φαiv* = appear, *φη* = announce; but in Sanskrit vice-versa. Latin *fā* = announce, as in Greek; whereas Germanic *bann* < *banja* = announce, as in Sanskrit.
- tersa = dry land, terra -- nom-sg, feminine as if personified

And he called the dry land earth, but the waters around seas.

**Hnomnyet-q<sup>w</sup>e t.r.sam dheġhōm(m) vedōr-au ambhi moria**

- ambhi = around -- particle
- moria / maria = seas, maria -- nom-pl (N)  
(Ambiguous back vowel: Latin *mar*, Gaelic *muir* < *\*mor*)

And he saw that they were good.

**videt-q<sup>w</sup>e q<sup>w</sup>od kalya**

- kalya = good, beautiful -- nom-pl (N) to agree with *\*moria*

Then God said, "Let the dry land bear green plants, and grains, and fruits."

**ute voq<sup>w</sup>et -- bheroit t.r.sa bholya ġ.rH.na karpa-q<sup>w</sup>e**

- bher-oi-t = let it bear -- optative > Latin *ferat*
- bhol-ya / dhal-ya = folia, φυλλα, θαλλα -- acc-pl (N)
- ġ.rH.na = grāna, corn, зерно
- karpa = fruits, harvest

And it was so, and he saw that they were good.

**bhuvet ute vevoide q<sup>w</sup>od kalya**

And there was evening, and there was morning, a third day.

**vesq<sup>w</sup>eros ausos-q<sup>w</sup>e bhuvetēm -- dinos treitos**

- trei-tos = third -- ordinal of *\*treis*

Then God said, "Let there be two great lights in the heavens

**ute voq<sup>w</sup>et -- bhevoitēm meg.lō leukē nebhessu**

- meg.lō = great -- nom-dual of \**meg.lo-*
- leukē = lights -- nom-dual of \**leuk-*
- nebh-es-su = in the heavens -- loc-pl of abstract neuter \**nebh-ēs*

to set apart the day from the night,

**sonter-dheHtévei dinom nektét**

- dheH-tév-ei = in order to put -- verbal noun from root \**dheH*
- son-ter = apart -- comparative particle opposed to \**son / som*
- apo nektēs = from the night -- substitute for abl-sg  
(Current theory predicts E-grade of root in the "weak" cases.)

to measure the days and months and years,

**meHtévei dinons meHnesa samróns-q<sup>w</sup>e**

- meH-tév-ei = in order to measure, from root \**meH*
- meHn-es-a = months, moons -- acc-pl of abstract neuter, from a related root
- sam-rons = summers -- acc-pl

and he put stars into the heavens to light the earth

**Hster.ns-q<sup>w</sup>e dheHt en nebhesa luktévei dheĝhom(m)**

- Hster.ns / Hsternons / Hsterlons = stars, stella, aster -- acc-pl
- dheH-t = he put, he did -- athematic aorist
- luk-tév-ei = in order to light -- with weak-grade of root

And there was evening, and there was morning, a fourth day.

**vesq<sup>w</sup>eros ausos-q<sup>w</sup>e bhuvetēm -- dinos q<sup>w</sup>eturtos**

- q<sup>w</sup>etur-tos = fourth -- ordinal of \**q<sup>w</sup>etvōr*

Then God said, "Let the waters generate living things,

**nūn-q<sup>w</sup>e voq<sup>w</sup>et -- ĝneHskoit vedōr g<sup>w</sup>eivons**

- g<sup>w</sup>eivons = alive -- acc-pl of adjective
- ĝneH-sk-oi-t = let it generate -- optative of an inchoative-iterative verb form, modeled on Latin root *gnasc*. The basic root is simply \**ĝen*.

and let birds fly in the heavens."

**petoiënt-q<sup>w</sup>e Hvéyes nebhessu**

- pet-oi-ënt = let them fly -- 3rd-pl optative > Latin *petant*
- Hvéyes = birds -- nom-pl of \**Hveys* > Vedic *ves*, Latin *avis*



And he made great serpents and fish and filled the water,

**q<sup>w</sup>oret-q<sup>w</sup>e meg.lons og<sup>w</sup>hins peiskons-q<sup>w</sup>e em-p.IH.s(t)-q<sup>w</sup>e vod.r**

- og<sup>w</sup>hins / ong<sup>w</sup>hins = serpents, ophidians -- acc-pl
- peiskons = fishes -- attested only in Latin & Germanic
- ġdhuves = fishes, ἰχθυεῖς -- attested in Greek and Baltic
- em-p.IH.-s(t) = filled -- S-aorist, modeled on Greek ἐν-ε-πλήσσει

and he made birds and flies and wasps and filled the air,

**q<sup>w</sup>oret-q<sup>w</sup>e Hvéins mūsksans-q<sup>w</sup>e vespans-q<sup>w</sup>e em-p.IH.s(t)-q<sup>w</sup>e an.mom**

- mūsksans = flies, midges -- acc-pl (F)
- vespans / vopsans = wasps (F)

and he made and beasts and reptiles and filled the earth.

**q<sup>w</sup>oret-q<sup>w</sup>e ġhvēr.ns serpont.ns-q<sup>w</sup>e em-p.IH.s(t)-q<sup>w</sup>e dheġhom(m)**

- ġhvēr.ns / g<sup>w</sup>hēr.ns = wild beasts, ferus, θηρ, звѣрь -- acc-pl
- serpont.ns = reptiles -- acc-pl of present active participle

And there was evening, and there was morning, a fifth day.

**vesq<sup>w</sup>eros ausos-q<sup>w</sup>e bhuvetēm -- dinos penq<sup>w</sup>etos**

- penq<sup>w</sup>e-tos = fifth -- ordinal of \*penq<sup>w</sup>e

Then God said, "Let the earth generate living things:

**nūn-q<sup>w</sup>e voq<sup>w</sup>et -- ġneHskoit dheġhōm g<sup>w</sup>eivons**

wild beasts and cattle and crawling things.

**ġhvēr.ns peçuns-q<sup>w</sup>e (s)negons-q<sup>w</sup>e**

- peçuns = cattle -- acc-pl (M/F)
- (s)negons = snakes, nagas -- acc-pl

And he saw that they were good.

**videt-q<sup>w</sup>e q<sup>w</sup>od kalyoes/oi**

- kalyoes / kalyoi = good, beautiful, -- nom-pl (M)

Then God said, "Let us make a man in our likeness,

**ut' voq<sup>w</sup>et -- q<sup>w</sup>eroimē(n) vīróm som.lom n.sbhos**

- q<sup>w</sup>er-oi-mē(n) = let us make -- 1st-pl optative
- vīrom / virom = man -- specifically male
- som-lom = similar -- acc-sg, adjective derived from \*som (together)
- n.s-bhos = to us > Latin *nōbis*

so that he might rule the birds, the cattle, the wild beasts, and the crawling things."

**ute reġoit Hvéins peçuns-q<sup>w</sup>e ġhvēr.ns serpont.ns-q<sup>w</sup>e**

- reġ-oi-t = let him rule

And then he made humans like unto himself, men and women,

**ute (d)ĝh.m.n.ns svoei som.lons q<sup>w</sup>oret -- vīróns g<sup>w</sup>.nans-q<sup>w</sup>e**

- (d)ĝh.m.n.ns = homines -- acc-pl, derived from \*dheĝhom (Skeleton root gets vocalized as *homines*, *gumans*, *žmones*, *doīni*)
- g<sup>w</sup>.nans = women -- acc-pl of A-stem feminine

And he said to them, "Go and multiply,

**voq<sup>w</sup>et-q<sup>w</sup>e -- ite augsete-q<sup>w</sup>e**

- ite = go -- 2-pl imperative
- augs-ete / aug-éy-ete = wax, augment -- The latter is properly causative.

and rule the fish of the sea, and the birds of the air, and the beasts of the earth.

**reĝete-q<sup>w</sup>e peisk.ns moréisyo avéins-q<sup>w</sup>e an.mosyo ĝhvēr.ns-q<sup>w</sup>e (d)ĝhmosyo**

- The pseudo-adjectival genitives ending in \*syo are non-restrictive in this context, hence follow the nouns that they modify. Restrictive modifiers normally precede.

Behold, I have given you green plants and seeds and fruit as food."

**veidete -- yusbhos dhalya seHmena-q<sup>w</sup>e karpa-q<sup>w</sup>e svō paHtum dedoHa**

- yusbhos / vosbhos = to you -- dat-pl of personal pronoun
- seH-men-a = seeds -- acc-pl (N) of verbal noun from root \*seH (to sow)
- svō / svei = so, as -- cf. Old Latin *seī*, Oscan *svae*, Gothic *swō*, Greek `ως
- paH-tum / paH-dhrom / paH-dhlom = food, fodder -- acc-sg of supine of root \*paH > Sanskrit *pitum*, Latin *panem*, *pābulum*
- Synonym: g<sup>w</sup>roHm.n = βρωμα, grāmen, "voramen"
- de-doH-Ha = I have given -- 1-sg perfect from root \*doH. The perfect expresses completed action that bears upon the present, unlike the aorist of narration.

And there was evening, and there was morning, a sixth day.

**vesq<sup>w</sup>eros ausos-q<sup>w</sup>e bhuvetēm -- dīnos sekstos**

- seks-tos = sixth -- ordinal of \*seks

And thus the heavens and the earth were finished.

**ute kom-q<sup>w</sup>.r.toes/oi bhuvont nebhesa dheĝhōm-q<sup>w</sup>e**

- The prefix \*kom emphasizes the perfective aspect of the verb. Perfective prefixes are rare in Greek and Sanskrit, but common in all other branches.
- q<sup>w</sup>.r.-toes / q<sup>w</sup>.r.-toi = made -- nom-pl of perfect passive participle from root \*q<sup>w</sup>er

But on the seventh day, there was an end of the works and God rested,

**alyo sept.mom dinom verĝo(n)om antom est ute çoieto Deivós**

- sept.m-os = seventh -- ordinal of \*sept.m
- verĝo(n)om = of the works -- O-stem gen-pl ending varies: *ōm* / *ōnōm* / *ōsom*
- çoi-eto = lay down -- weak-grade middle aorist from root \*çei
- logh-eto = lay down -- Middle voice serves to distinguish *lie/lay* from *lay/layed*.

And he said, "Let the seventh day be holy."

**eti voq<sup>w</sup>et-q<sup>w</sup>e -- sept.mos dinos yaġyos syēt**

- eti = and also -- used interchangeably with *\*ute*
- yaġyos = holy, worthy of worship > Greek `αγιος
- s-yē-t = let it be -- athematic optative from root *\*es*, connoting permanent state



## GARDEN OF EDEN

(Genesis II)

No trees had grown, and no clouds  
had watered the ground ...

God had made the heavens and the earth,

**Deivós q<sup>w</sup>eq<sup>w</sup>ore nebhesa dheġhom(m)-q<sup>w</sup>e**

- q<sup>w</sup>e-q<sup>w</sup>or-e = he had made -- 3-sg perfect used in anterior sense

but no trees had grown,

**n' avaugér alyo dréves**

- dréves = trees (F) -- nom-pl of root *\*d.r.v*
- doru = wood (N) -- from same root
- av-aug-ér = they had grown -- 3-pl perfect from root *\*aug*

and no rain clouds had watered the ground,

**n' udvodér-q<sup>w</sup>e ombhroes/oi dheġhom(m)**

- ud-vod-ér = they had watered -- 3-pl perfect from root *\*ved*
- ombhroes / ombhroi = clouds -- related to root *\*nebh*

there was no tiller of the fields,

**n' est-q<sup>w</sup>e aratōr aġro(n)om**

- es-t = there was -- imperfect of root *\*es*. Present tense would be *\*es-ti*.
- ara-tōr = tiller, arator -- nom-sg, from root *\*HerH* (plough, oar)
- aġro(n)om = of the fields

but now a mist came and watered the ground.

**ute nūn miġhla g<sup>w</sup>omet udet-q<sup>w</sup>e dheġhom(m)**

- g<sup>w</sup>om-et = it came -- weak-grade aorist > Sanskrit *agamat*, Greek *εβη*
- miġhla = mist -- nom-sg from root *\*mi(n)gh*, connoting both urination and rain
- ud-et = watered -- weak-grade aorist from root *\*ved / u(n)d*

God formed a man from clay and blew into his nostrils,

**dhiġhet Deivós vīróm gloioet bhloHt vīróei en mukter.ns**

- dhiġh-et = formed -- weak-grade aorist from root *\*dhi(n)ġh*
- dheik-s(t) -- alternative strong-grade S-aorist > Latin *finxit*
- gloioet = from clay -- abl-sg
- bhloH-t = he blew, inflated -- athematic aorist from root *\*bhoH*
- vīróei = to the man -- dat-sg
- muk-ter.ns = nostrils -- acc-pl of agent-noun *\*muktēr* from root *\*mu(n)g*  
(The verb ordinarily connotes release of breath, but here the intake.)

and blessed him, and the man came alive.

**bhlaġhs(t)-q<sup>w</sup>e vīróm ute g<sup>w</sup>eiv.s(t) vīrós**

- bhlaġh-s(t) = S-aorist of root *\*bhlaġh* or *blagh*
- g<sup>w</sup>eiv-s(t) = came alive -- strong-grade S-aorist modeled upon *ajīvišīt*

And God planted a garden in[to] the east, and there he put the man

**ghordhom dheHt Deivós en austrom toter-q<sup>w</sup>e vīróm stelyet**

- ghordom = garden, hortus
- aus-trom = east -- acc-sg, related to *\*aus-ēs* (dawn) from root *\*aus* (burn). Opposed to *\*vesq<sup>w</sup>ero / vespero / vesterō* (evening, west).
- to-ter = thither (dynamic)
- tosmi = there (static)
- stel-y-et = installed -- Imperfect -- Factitive verb *\*stel-yē* has no distinct aorist. Yields Greek *εστέλλε*, with altered meaning.

And from the ground he made to grow

trees pleasant to the eye and fruits sweet to the tongue,

**augéyet (d)ġhomoet druns svāduns oq<sup>w</sup>oei karpa-q<sup>w</sup>e svaduá denġhévei**

- aug-éy-et = made to grow -- Causative verb *\*aug-éyē* has no distinct aorist.
- (d)ġhomoet = from the ground, humus
- druns = trees -- acc-pl
- svāduns = sweet, pleasant -- acc-pl of U-stem adjective
- denġhév-ei / linġó-ei = to the tongue, licker -- dat-sg

and put a giver-of-life tree into the middle of the garden,

**eti dreum-q<sup>w</sup>e ayu-doHtōr.m medhyōi en ghordhom dheHt**

- ayu / aiv = life, health
- doH-tōr = giver -- acc-sg of agent-noun

and a tree giver-of-vision

**dreum-q<sup>w</sup>e visti-doHtōr.m**

- vis-ti / vid-ti = vision -- combining form of I-stem verbal noun
- ḡnoH-ti = knowledge -- combining form of I-stem verbal noun
- There is no known semantic distinction between I-stem and U-stem variants. The I-stem yields Greek nouns in  $\sigma\iota\varsigma < \tau\iota\varsigma$ , and Latin nouns with extended stem *tion*. The U-stem yields Latin and Sanskrit supines, as well as some Germanic words in  $t < þu$ .

And God put the man in the garden as tiller,

**ute dheHt Deivós vīróm en ghordhom aratrō**

- arH-trō = as arator -- instrumental of role or specification

and he commanded the man, saying,

**deiçs(t) vīróei, veq<sup>w</sup>ons --**

- deiç-s(t) = he commanded -- S-aorist > *dixit, adhaikšīt, εδειξε*
- diç-et -- alternative weak-grade aorist (unattested) from same root
- veq-ons = saying -- present active participle of root \**veq*

"You may eat the fruit of all the trees,

**ap' alnoibhos druōm estum karpa maghesi**

- apo = from -- Inserted to clarify usage, because abl-pl has merged with dat-pl.
- al-n-oibhos = from all -- abl-pl of \**al-no* (all), closely related to \**al-yo* (other) > Old Latin *olle*, Germanic *all*, Gaelic *uile*
- es-tu-m / ed-tu-m = eating -- nom-sg, supine of root \**ed*
- magh-esi = thou mayest, thou canst -- 2-sg present indicative

but do not eat (however) from the vision-tree.

**n' ede-au ap' visto-druēs**

If you will eat of her, you will die."

**q<sup>w</sup>o-svō edēsi apo taēs, to-svō m.r.tos esēsi**

- q<sup>w</sup>o-svō ... to-svō = if ... then -- fanciful reinvention of conditional conjunctions. The conjunctions coined by recorded languages are not authentic models. Greek uses  $\epsilon\iota \dots \alpha\nu$ , Sanskrit *yad ... yad*, German *wenn ... so*, Gothic *ibai ... þan*, Russian *если ... то*, and Latin *si ...*
- ed-ēsi = thou shalt eat -- Feasible condition expressed via subjunctive.
- es-ēsi = thou shalt be -- Yields Latin future *eris*.
- apo taēs = from her -- substitute for abl-sg of A-stem demonstrative. (Trees are feminine, especially when personified, as is this unique tree.)
- m.r.-tos = dead -- past passive participle of root \**mor-yē*

Then God said, "It is not good for man to be alone."

**ute voq<sup>w</sup>et Deivós -- ne-vesū q<sup>w</sup>od vīrós vidhvos syēt**

- vesū / su = happy, good, eu -- inst-sg used as adverb
- vidhvos = widower, batchelor (M)

So out of the ground, God made the beasts and the birds,

**ute ġhvēr.ns Hvéins-q<sup>w</sup>e q<sup>w</sup>oret Deivós (d)ġhomoet**

- (d)ġhomoet = from the humus -- abl-sg of O-stem variant
- Unusual OVS word order driven by focus.

and he brought them to the man,

**bhoret-q<sup>w</sup>e vīróei**

and the man gave them names

**ute vīrós toibhos Hnomena doHt**

- toibhos = to them -- dat-pl
- Hnomena = names -- acc-pl of neuter noun. (The initial laryngeal left traces in many branches: Greek *ονοματα*, Russian *имена*, Old Irish *ainmanna*.)
- doH-t = he gave -- athematic aorist. Default SOV word order.

to the cattle of the field and the birds of the air and the beasts of the plain,

**pecúbhos aġrosyo Hvibhós-q<sup>w</sup>e an.mosyo ġhverbhós-q<sup>w</sup>e p.l.téusyo**

- p.l.t-éu-syo = of the plain -- pseudo-adjective from root \*p.l.t-u (not to be confused with participle \*p.lH.-to = filled)

but there was no fitting beloved for the man,

**n' est alyo sata kāra vīróei**

- alyo = but -- conjunction used to oppose complex clauses
- sata = satisfactory
- kāra = beloved, whore

So God caused the man to sleep, and pulled out a bone,

**ute supéyet vīróm Deivós osti deuks(t)-q<sup>w</sup>e**

- sup-éy-et = he caused to sleep -- Imperfect (Causative form has no distinct aorist.)
- osti / kostim = bone (N) or rib (F) -- acc-sg
- deuk-s(t) = he pulled -- S-aorist modeled upon Latin *duxit*

and closed the wound in the chest with hide

**(s)tegs(t)-q<sup>w</sup>e v.l.nom bhreusöi (s)kutō-bhi**

- (s)teg-s(t) = covered, hid -- strong-grade S-aorist > Latin *textit*, Greek *εστεξε*
- v.l.nom = wound, vulnus -- acc-sg. Latin remodels this as an abstract neuter. (The skeleton root gets vocalized as *vuln*, *ovλ*, *vran*.)
- bhreusoi / bhreusei = in the breast -- loc-sg

- (s)kutō-bhi = with hide -- instrumental construct

and formed a woman from the bone and brought her to the man

**q<sup>w</sup>oret-q<sup>w</sup>e ap' ostéis g<sup>w</sup>énam bhoret-q<sup>w</sup>e vīróei**

- ap' ostéis = from bone -- substitute for abl-sg

And the man said, "She is the bone from my bone and the flesh from my flesh."

**ute voq<sup>w</sup>et vīrós -- sã tod ósti me(n)oet ostéyet tod krovi-q<sup>w</sup>e meoet krovéyet**

- sos, sã, tod / yos, yã, yod = he, she, it -- nom-sg pronouns
- me(n)oet = from my -- abl-sg of possessive adjective > Old Latin *meōd* (The proper genitive form of the pronoun defies reconstruction.)
- krovis / kroivos = flesh, blood, κρεας -- nom-sg
- Semantic distinctions: \**kroiv* / *krovyo* refers to raw flesh, \**memso* to edible meat, \**snēyu* / *senu* / *sneuro* to sinew, \**ghorno* to gut-string, \**s-kuto* to leather hide.

Therefore shall a man leave his father and mother,

**tosmoet linéq<sup>w</sup>eti vīrós patér.m mātér.m-q<sup>w</sup>e**

- tosmoet = therefore -- abl-sg of extended root \**tosmo* > Sanskrit *tasmāt*
- linéq<sup>w</sup>-eti = he shall leave -- 3rd-sg subjunctive from root \**li(n)q* > Sanskrit *rinákti*, with accented nasal infix, but Latin future *linquet*
- patér.m mātér.m-q<sup>w</sup>e = father and mother -- acc-sg. Accent shifts in weak cases.

but cleave to his wife, so that they be yoked.

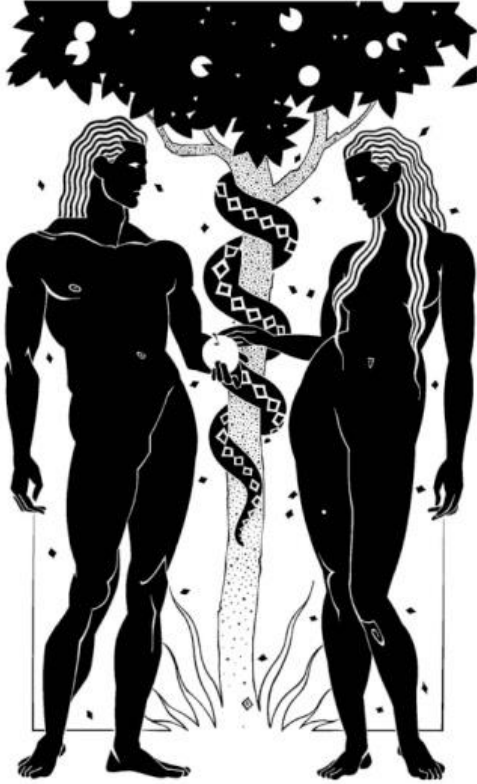
**g<sup>w</sup>.náei au adi gloiēti ute yugóm bhevōnti**

- Pun: \**gloiós* connotes *glue* as well as the *clay* of which men are made.
- gloi-ēti = he shall cleave -- subjunctive of root \**glēi*
- yugóm = yoke, junction -- nom-sg (N)
- bhev-ōnti = they shall become -- subjunctive of root \**bheu*

They shall love and they shall stick.

**lubhyōntoi leipōntoi-q<sup>w</sup>e**

- Missing verse, rediscovered by telepathic communication with ancient authors.
- lubh-y-ōntoi = they shall love -- from root \**leubh-yē*
- leip-ōntoi = they shall stick -- from root \**leip*



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## EXPULSION

(Genesis III)

They were naked, but they knew it not.

But the serpent was more knowing ...

They were naked, but they knew it not.

**nog<sup>w</sup>.tō estēm alyo ne ġnoHtēm**

- nog<sup>w</sup>.tō = naked -- nom-dual -- This adjective resembles a participle.
- ġnoH-tēm = they knew -- 3rd-dual athematic aorist

But the serpent was more knowing than other beasts.

**au alyo(n)ōm ġhverōm ġnoHteros**

- vīs-og<sup>w</sup>his = poison-opidian -- combining form of \*vīsom (N)
- ġnoH-ter-os = more knowing -- comparative

He said to the woman, "Has God forbidden eating from the trees in the garden?"

**voq<sup>w</sup>et-q<sup>w</sup>e ġ<sup>w</sup>.nāei -- proti-dedoīçe Deivós estum apo druōm ġhordhoi**

- proti = against
- de-doiç-e = he has commanded -- perfect
- es-tum / ed-tum = eating -- acc-sg of verbal noun from root \*ed
- apo = from -- particle used with genitive as substitute for ablative

And the woman said to the serpent, "We may eat the fruit of the trees,

**voq<sup>w</sup>et ġ<sup>w</sup>éna og<sup>w</sup>héyei -- karpa druōm estum maghovēs(i)**

- magh-ovēs(i) = we may -- 1st-dual present indicative



but he has forbidden one tree in the middle,  
**alyo proti-dedoīce oinam dreum medhyōi**

- oinam = one -- acc-sg (F)

nor should we even touch it, lest indeed we become mortal."

**ne tangōvēs(i) eti svō-ne m.r.tō ghe bhevōvēs(i)**

- tang-ōvēs(i) = we shall touch -- 1st-dual subjunctive
- bhev-ōvēs(i) = we shall be -- 1st-dual subjunctive
- Sanskrit uses a hodgepodge of primary and secondary endings in the subjunctive, but Greek uses primary endings consistently. We shall follow the Greek model.
- svō-ne = lest, so not
- ghe -- because the serpent is asserting something surprising

But the serpent said to the woman,

**voq<sup>w</sup>et alyo og<sup>w</sup>his g<sup>w</sup>.nāei --**

"You will not perish. God knows that having eaten from that tree,

**ne g<sup>w</sup>dhinéHetēs ghe -- Deivós ġnoHti q<sup>w</sup>od (ed)edvosē apo taēs druēs**

- This verb should be in the middle voice, to avoid confusion with *destroy*, but the authentic 2nd-dual middle endings are unknown, so we would have to substitute the plural. The use of active voice dodges that problem.
- g<sup>w</sup>dhiH-sy-etēs = you will perish, decline -- 2nd-dual S-future of root \*g<sup>w</sup>dhiH > Greek *φθισετον* (active) or *φθισεσθον* (middle)
- g<sup>w</sup>dhinéH-etēs = you shall perish, decline -- 2nd-dual subjunctive with nasal infix > Greek *φθινητον*, Sanskrit *kṣiñāthas*
- (ed)edvosē = having eaten -- nom-dual of perfect active participle. Reduplication seems optional, because it is semantically superfluous. The nom-sg suffixes are *vōs / vons*, with "weak" form *us*, and feminine *usia*.

you will see with your eyes, and you will become gods, and you will know good and evil.

**veitsyetēs oq<sup>w</sup>ōis, bheusyetēs-q<sup>w</sup>e deivō, ġnoHsyetēs-q<sup>w</sup>e vesum deusom-q<sup>w</sup>e**

- veid-sy-etēs = you will see -- S-future
- bheu-sy-etēs = you will be -- S-future
- ġnoH-sy-etēs = you will know -- S-future
- vesum = good -- acc-sg (N)
- deusom= bad, evil, dys -- ordinarily a prefix, but here remodeled as an adjective

The woman having seen that the tree bears good fruit and is pleasing to the eyes,

**g<sup>w</sup>éna (ve)vidusia q<sup>w</sup>od bhereti dreus su-karpa eti oq<sup>w</sup>oibhos svādus est**

- bher-eti = bears -- present of root \*bher
- tol-y-eti = bears -- present of root \*tol-yē / t.lH.

and desiring for knowledge, she grasped an apple and devoured it,

**ġnoHtim ġhoryonta-q<sup>w</sup>e labhet g<sup>w</sup>roHt-q<sup>w</sup>e ablom**

- ġhory-ont-a = desiring -- nom-sg (F) of present active participle of root \*ġhër-yë > Doric Greek *χαίροντι*, Sanskrit *haryanti*, Latin *horiuntur*
- labh-et = she grasped -- weak-grade aorist of root \*la(m)bh > Greek *ελαβε*
- g<sup>w</sup>roH-t = devoured -- athematic aorist > Greek *εβρω*
- ablom / amlom / malom = apple -- Unaspirated \*b is rare.

and she gave an apple to the man, and he bit.

**doHt-q<sup>w</sup>e sa ablom vīróei bheids(t)-q<sup>w</sup>e sos**

- bheid-s(t) = he bit -- strong-grade S-aorist of root \*bhi(n)d > Sanskrit *abhāitsīt*
- bhidh-et = he bit -- alternative weak-grade aorist > Latin *fidit*



and they saw, and they knew their nakedness,  
**ute videtēm ġnoHtēm-q<sup>w</sup>e svom nog<sup>w</sup>.tum**

and they sewed clothes from leaves.  
**sivetēm-q<sup>w</sup>e vestra apo dhalyobhos**

- siv-etēm = they sewed
- ves-tra = clothes -- acc-pl (N)
- apo dhalyobhos = from leaves -- abl-pl

Having heard the sound of feet in the garden,

**(ke)kusvosē pedōm svonom ġhordhōi**

- pedōm = of feet -- gen-pl, with E-grade root in the “weak” cases
- (ke)kus-vos-ē = having heard -- perfect active participle of root \*Hkous

the man and the woman hid themselves in the shade between the trees.

**kudhonto vīrós g<sup>w</sup>éna-q<sup>w</sup>e en skotóm drusú medhyōi**

- kudh-onto = they hid themselves -- 3rd-pl middle aorist of root \*keudh
- en = into (dynamic) -- The static sense could be conveyed by the locative case, but the dynamic preposition *into* demands the accusative.
- skotom = shade -- acc-sg (M)

But God called out to the man, "Where art thou?"

**ute ġhvet Deivós vīróei -- q<sup>w</sup>osmi essi ?**

- ġhv-et = called out -- weak-grade aorist of root \*ġhve-yë
- q<sup>w</sup>osmi = where? -- cf. \*q<sup>w</sup>oter = whither?

And the man said, "I have heard a sound -- it was you walking through the garden,

**voq<sup>w</sup>et-q<sup>w</sup>e vīrós -- svonom kekousa -- tu ġhordhoi t.rH. ġhonġheHs**

- svonom = sound -- acc-sg
- ke-kous-a = I have heard -- 1st-sg perfect of root \*Hkous > ακουκα
- tu = thou -- used for special emphasis in context
- ġhonġheH-s = you were walking -- 2nd-sg reduplicated imperfect > Sanskrit *ajahās*, Germanic *gangis* (reduplicated present)
- ġheHs = you walked -- athematic aorist > Sanskrit *ahās*
- t.rH. = through -- particle -- vocalized as *trā* in Latin

and I have been afraid, because I am naked, and so I have hidden."

**bhebhoia q<sup>w</sup>osmoet nog<sup>w</sup>.tos esmi ute kekudha**

- bhe-bhoi-Ha = I have been afraid -- 1-sg perfect of root \*bhei
- q<sup>w</sup>osmoet = because, why? -- abl-sg of extended root \*q<sup>w</sup>osmo
- esmi = I am -- 1st-sg present
- ke-kudh-Ha = I have hidden -- 1st-sg perfect > Greek *κεκυθα*

And God said, "Who hath told thee that thou art naked?"

**voq<sup>w</sup>et Deivós -- q<sup>w</sup>is dedoiçe q<sup>w</sup>od nog<sup>w</sup>.tos essi**

- q<sup>w</sup>is = who? (M/F)
- q<sup>w</sup>od = what? (N)
- q<sup>w</sup>oteros = which? (M)

Hast thou eaten from the forbidden tree?"

**edesta apo proti-diçtaës druës**

- ed-es-ta / ed-ed-ta = you have eaten = 2nd-sg perfect of root \*ed
- diç-taës = commanded -- gen-sg (F)

And God said to the woman, "What hast thou done?"

**voq<sup>w</sup>et-q<sup>w</sup>e Deivós ġ<sup>w</sup>.náei -- q<sup>w</sup>od dhedheHta?**

- dhe-dheH-ta = you have done -- 2nd-sg perfect  
(Compare \*dhi-dheH-si reduplicated present.)

So the woman said, "The serpent hath mislead me, and I have indeed eaten."

**voq<sup>w</sup>et-q<sup>w</sup>e ġ<sup>w</sup>éna -- apo-dedouke me og<sup>w</sup>his ute ededa ġhe**

- de-douk-e = he has pulled -- 3rd-sg perfect of root \*deuk > Germanic *tōh / tōg*
- ed-ed-a = I have eaten -- 1st-sg perfect

So God said to the serpent,  
**voq<sup>w</sup>et-q<sup>w</sup>e Deivós og<sup>w</sup>héyei**

"As thou hast done this, so thou shalt be lower than the cattle and the beasts.

**svō-q<sup>w</sup>e dhidheHta ute pecévōm ġhvērōm-q<sup>w</sup>e niteros esēsi**

- ni-ter-os = nether -- comparative formed from particle *\*ni*

Upon thy belly thou shalt crawl, and humus shalt thou eat, forever.

**(s)negēsi breusōi edēsi-q<sup>w</sup>e (d)ġhomóm en aivons aivōm**

- (s)neg-ēsi = thou shalt crawl
- bhreusoi / bhreusei = on breast or belly -- loc-sg
- aivons = ever, ætates, eons -- acc-pl from root *\*ayu / aiv* = life, health
- en aivons aivōm = εν τοις αιωνας των αιωνων

I shall put enmity between thee and the woman, between thy sons and her sons.

**dusm.n enter g<sup>w</sup>énam tve-q<sup>w</sup>e dhidheHōmi enter tvons suHtóns svons-q<sup>w</sup>e suHtóns**

- dus-m.n = enmity, badness -- acc-sg (N) verbal noun of *\*dus / dvis*
- tve = thee
- dhi-dheH-ōmi = I shall put -- 1st-sg present indicative or subjunctive
- enter = between (dynamic) -- cf. *\*medhi* (static)
- tvons ... svons = thy ... his/her -- acc-pl of possessive adjectives
- suH-tons / suH-nons = sons -- acc-pl, participles of *\*suH* = to be fertile

He shall step on your head, but thou shalt hurt his heel."

**tvod kapot ėpi steibēti sperneuti-q<sup>w</sup>e svam persnam-au g<sup>w</sup>henēsi**

- kapot = head -- acc-sg (N) -- O-grade in NAV cases, E-grade in "weak" cases
- epi / opi / ana = upon, onto (dynamic) -- with object in accusative
- steibh-ēti = he shall step -- subjunctive > Greek *στειβηι*
- sper-neu-ti = he spurns -- indicative
- sper-név-eti = he shall spurn -- subjunctive
- au = but -- enclitic conjunction used to oppose simple elements
- persnam = heel -- acc-sg
- g<sup>w</sup>hen-ēsi = thou shalt injure > Sanskrit *hanasi*, Latin *de-fendas*

And God said to the woman,

**voq<sup>w</sup>et-q<sup>w</sup>e Deivós g<sup>w</sup>.náei**

"I will multiply the pain of the womb, and in pain shalt thou bring forth children.

**g<sup>w</sup>herbhosyo g<sup>w</sup>olóm augéyōmi eti sununs g<sup>w</sup>oló-bhi tokyēsi**

- g<sup>w</sup>herbhosyo = of the womb -- gen-sg
- g<sup>w</sup>olóm = pain -- acc-sg, derived from verbal root *\*g<sup>w</sup>el-yě*
- g<sup>w</sup>oló-bhi = with pain -- instrumental construct
- tok-y-ēsi = thou shalt bring forth -- 2nd-sg subjunctive of *\*tek-yě* > Greek *τικτηις*

yet thou shalt love the man, and he shall rule over you."

**alyo lubhyēsi vīróm ute sos tve reġēti**

And God said to the man,

**voq<sup>w</sup>et-q<sup>w</sup>e vīróei**

"Because thou hast listened to the woman, and hast eaten from the tree,

**q<sup>w</sup>osmoet çeçluta g<sup>w</sup>énam ededta-q<sup>w</sup>e apo druës**

- çe-çlu-ta = thou hast listened -- 2nd-sg perfect

therefore the humus shall be cursed.

**tosmoet (d)ġhomóm dus-diçtom esēti**

In sharp toil (instr.) thou shalt till forever;

**aç(r)ū v.r.go-bhi arayēsi en aivons aivōm**

- aç-u / aç-ru = sharp, acute

thorns shall grow from the soil, and thou shalt eat the harvest of the fields.

**tornoes/oi (d)ġhomoet augsōnti ute edēsi aġrosyo karpa**

- tornoes/oi = thorns -- nom-pl
- \*aġros connotes a field into animals may be driven, not necessarily arable.

In sweat, thou shalt have a share,

**svēid(r)o-bhi bhunġēsoi**

- sveido / svoid-ro = sweat, sudor
- bhunġ-ēsoi / bhrug<sup>w</sup>-ēsoi = thou shalt have a share -- 2nd-sg middle subjunctive.
- Two roots have been confused: (1) Sanskrit *bhunákte*, Latin *fungitur*, and (2) Latin *fruitur*, *fructus*, Germanic *brūkeþ*.

until thou returnest to the soil

**dō-q<sup>w</sup>om vertēsoi (d)ġhomóei**

- dō-q<sup>w</sup>om = until -- Inversion of \*q<sup>w</sup>on-dō = when?
- vert-ēsoi = thou shalt turn

Thou art a human from humus, and to humus thou goest."

**(d)ġh.mōn (d)ġhomoet essi ute (d)ġhomóm ghe eisi**

- This elegant pun sounds much better in P.I.E. than in Hebrew.

Then the man called the woman Eve, because she is the ancestress of all.

**ute Hnomnyet vīros g<sup>w</sup>enam Hava, q<sup>w</sup>osmoet eia toutōm mātēr**

- The name Hava (חַוָּה) resembles the Hebrew root for life (חַי) but could just as easily derive from the P.I.E. root \*Hav > Latin *avus*, Gothic *awo*.

And God gave them garments of hide.

**ute doHt Deivós tobhōm (s)kutosyo vestra**

- tobhōm = to them -- dat-dual
- (s)kutosyo = hide, leather -- gen-sg

And then he said, "The man has become like *one of us*, knowing good and evil,

**voq<sup>w</sup>et-q<sup>w</sup>e -- bhebhúve oinoei n.sōm som.los, vesum deusom-q<sup>w</sup>e ġnoHnts**

- Unredacted polytheism -- God is speaking to his sons -- more in Chapter VI
- bhe-bhuv-e = he has become -- perfect > Sanskrit *babhūva*, Greek *πεφυκε*
- oinoei = to one -- dat-sg
- n.s-ōm / nos-tr-ōm = of us, of our -- cf. Greek *`ημων* < *\*ηsmōm*

so lest he grab fruit from the tree and become immortal,

**svō-ne ghrebhnyēt karpa apo druēs ute bhevoit-q<sup>w</sup>e ne-m.r.tós**

- ghrebh-nu-yē-t = that he might grab -- optative expresses potentiality
- Synonyms: *\*ghrebh = la(m)bh = ghe(n)d = em*
- Another pun: Each of these words connotes both *grasp* and *understand*.

but rather live forever,

**g<sup>w</sup>eivoit-au en aivons**



let us drive him from the garden into the fields."

**aġoimē(n) tom ghordhoet en aġróns**

And God placed a guardian in the east,

**stolet-q<sup>w</sup>e speçtōr.m austrōi**

- aĝ-oi-më(n) = let us drive -- 1st-pl optative > Latin *agāmus*
- \*aĝ originally referred to driving goats, hence \*aĝyos > αιζ
- speç-tōr = guardian -- agent of \*speç-yë
- aus-tr-oi / aus-tr-ei = east -- loc-sg, derived from verb root \*aus = burn

carrying a torch, and barring the path to the tree.

**bhloĝom bherons -- anti-staHns-q<sup>w</sup>e druėi pont.m**

- anti = in front, ante
- bhloĝom = torch, φλοξ -- also related to English *black* (charred)
- pont.m = path -- This word traveled far. The Germanic branch received it in a form that clearly bypassed Grimm's Law. The Sanskrit form is *panthan*.



**MURDER**

**(Genesis IV)**

The tale of Cain and Abel scrambles the historical progression from hunter-gatherers, to nomadic herdsmen, to sedentary farmers. After killing his brother, Cain reverts to hunting, and his alleged prior occupation as tiller is forgotten in Chapter VI, where Noah is described as the first tiller.

Conflicts between farmers and herdsmen occur even today, so I have given Cain a motive: He wanted to put idle Abel to work in the fields.

Adam and Eve lay together and conceived a son.

**Atta Hava-q<sup>w</sup>e son-çoi-onto ute suHnéum ĝneHtēm**

- Atta = Adam, Daddy
- Hava = Eve, Ancestress -- possible related to Hebrew הוה
- son-çoi-onto = they lay together -- 3rd-pl middle of weak-grade aorist. (This is a euphemism. The plain term for sexual intercourse is \*yëbh / yobh-yö.)
- suH-néum / suH-tóm / suH-nóm = son -- acc-sg, from root \*suH = to give birth

- ġneH-tēm / ġon-etēm = conceived, begot -- thematic or athematic aorist

And Eve said -- I have acquired a son from God.

**voq<sup>w</sup>et-q<sup>w</sup>e Hava -- q<sup>w</sup>eq<sup>w</sup>riHa suHnéum deivóet**

- The original Hebrew text uses the verb QNH (קנה) connoting *purchase*, but the Septuagint and Vulgate translate it as *εκτησαμην* < *κταομαι* and *possedi*. The name QYN (קין) seems to be connected, but the medial Y seems out of place.
- q<sup>w</sup>e-q<sup>w</sup>riH-Ha = I have bought -- 1st-sg perfect of root \**qri(n)H* > English *hired*

And Eve named the son Cain after the bitter price in the garden

**ute Hnomnyet Hava suHneum Q<sup>w</sup>oinom ap' ačréus q<sup>w</sup>oinoet ghordhoi**

- q<sup>w</sup>oinom = price, ποινη, цѣна -- acc-sg (M)

And in the second summer, she bore his brother.

**ute anteröi samröi-q<sup>w</sup>e bhrātr.m toket**

- bhrā'tr.m = brother -- acc-sg
- tok-et = she bore -- weak-grade aorist of root \**tek* > Greek *ετεκε* (The literal meaning of this verb is *to flow from a source*.)

And Eve named the brother Abel after the sweet fruit in the garden.

**ute Hnomnyet Hava bhrātr.m Ablom apo svadéus karpoeet ghordhöi**

- The name Abel (אבל) has no known Hebrew root.
- ablom / amlom / mālom = apple -- acc-sg
- Apples are native to the region around the Black Sea.

Abel became a keeper of sheep, but Cain a tiller.

**Ablos ovéyōm paHstōr bhuvet Q<sup>w</sup>oinos au aratōr**

- ovéyōm = of sheep -- gen-pl
- paHs-tōr = shepherd -- nom-sg, from \**paHs*, variant of \**paH* = feed

Years having passed,

**yēroes/oi (te)tokvóses**

- yēroes / yōroes = years -- nom-pl
- (te)tok-vós-es = having passed, flowed -- nom-pl of perfect active participle. (This is a nominative absolute construction. Honi soit qui mal y pense.)

Cain brought to the Lord the harvest of the field,

**bhoret Q<sup>w</sup>oinos Potéyei aratósyo karpons**

- arH-tósyo = of the [arable] field -- gen-sg

but Abel brought a firstling of his flock.

**Ablos au pečénōm g<sup>w</sup>erbhom**

- g<sup>w</sup>.r.bhom / g<sup>w</sup>.l.bhom = womb, newborn, calf -- acc-sg > Sanskrit *garbham*, Slavic *žrebe*, Greek *βρεφον* / *δελφον*, Germanic *kalb*



And God smiled upon Abel and his gifts, but turned from Cain.

**smeis(t) Deivós ěpi Ablom donóns-q<sup>w</sup>e vortet-au apo Q<sup>w</sup>oinoet**

- smei-s(t) .. ěpi = smiled upon

To Cain he said -- Why are you angry?

**Q<sup>w</sup>oinóei voq<sup>w</sup>et -- q<sup>w</sup>osmoet anĝhus essi?**

- q<sup>w</sup>osmoet = why, whence? -- abl-sg of extended root \*q<sup>w</sup>osmo
- anĝhus = angry, anxious, narrow
- g<sup>w</sup>.r.H-us = heavy, (fig.) sad

If you act well, then you will win.

**q<sup>w</sup>o-svō su-aĝsesoi, to-svō venēsoi**

- Fanciful reinvention of conditional conjunctions. Feasible conditionals may be expressed with the future indicative or the subjunctive, but contra-factual conditionals are better expressed by the optative in both clauses.
- su = well, eu -- prefix
- aĝ-sy-esoi = you will act, conduct thyself -- 2nd-sg middle S-future > Sanskrit \*aj-sya-ati > *akṣyāti* <, Greek \*ag-s-ei(t) > *αῖει*
- ven-ēsoi = you will win -- 2nd-sg middle subjunctive > Latin *venēris*
- s(t).rH.g(h)-sy-esor = you will be cared for -- 2nd-sg passive S-future > Germanic *sorg*, Sanskrit *sūrks*, Greek *στεργ*, Russian *срoж*

If you act badly, then you will have bad intent, and evil will rule you, so rule yourself.

**q<sup>w</sup>o-svō dus-aĝsyesoī, to-svō dus-venskēsi, eti mēlos tve reĝsyeti, ute reĝgoiso sve**

- dus = bad, dys -- prefix
- vol-y-ēsi = you will want -- 2nd-sg subjunctive
- vensk-ēsi = you will wish -- 2nd-sg subjunctive -- contrast with *venēsoi*
- H-g<sup>w</sup>h.l.H-yē-si = you will desire > Greek *εθελησεις*, Slavic *желаешь*
- melos / molos = evil, misfortune, malus
- reĝ-sy-eti = it will rule -- 3rd-sg S-future
- reĝ-oi-so = rule thyself -- 2nd-sg optative used as middle-voice imperative
- sve = self -- technically redundant with middle voice, but added for emphasis

Then Cain said to his brother -- Come -- Let the two of us go to the field.

**ute Q<sup>w</sup>oinos bhrātrei voq<sup>w</sup>et -- g<sup>w</sup>eme -- iyēvē(n) aratóm**

- g<sup>w</sup>em-e / g<sup>w</sup>en-y-e = come -- 2nd-sg imperative
- i-yē-vē(n) = let us go -- athematic optative (with mood sign *yē* vice *oi*)
- The verb \*ei can take a destination as direct object.

The two having entered the field, the senior slew the junior.

**(y)eyvosē aratóm, g<sup>w</sup>honet senyōs yunyos.m**

- (y)ei-vos-ē = having gone to -- nom-dual, nominative absolute
- g<sup>w</sup>hon-et = he slew -- weak-grade aorist > Latin *de-fendit*

- sen-yōs = senior -- nom-sg comparative
- yun-yos-m = junior -- acc-sg comparative
- Comparative suffixes include \*yos, tero.

And God said to Cain -- Where is thy brother?

**voq<sup>w</sup>et Deivós -- q<sup>w</sup>osmi bhrāter?**

But Cain said -- I don't remember. Is it I who am my brother's keeper?

**voq<sup>w</sup>et-au Q<sup>w</sup>oinos -- ne memena -- esmi eĝo orbhosyo paHstōr?**

- orbhosyo = of the orphan -- gen-sg. (Cain is being sarcastic. Orphans were always put to hard work to earn their keep.)
- me-men-Ha = I have remembered -- 1st-sg perfect of root \*men
- eĝo = I -- Subject pronoun is included for special emphasis.

And God said -- The blood of thy brother calls from the earth that has drunk it.

**voq<sup>w</sup>et-q<sup>w</sup>e Deivós -- bhrātrēs esar ĝhvēyeti pibusēs aratōet**

- esar < esH-R/N = blood -- nom-sg (N), declines like \*vod-R/N
- ĝhvēyeti / ĝheveti = call out > Sanskrit *hvayati* / *huvati*, Russian зовѣт
- pib-us-ēs = having drunk -- gen-sg same as abl-sg, to agree with antecedent -- perfect active participle of root \*poH, commonly reduplicated as \*pib / bib

Whenever thou shalt till the field, it shall not feed thee.

**q<sup>w</sup>on-dō aratóm kersēsi, ton-dō tve ne paHyēti**

- q<sup>w</sup>on-dō ... ton-dō = when ... then
- kers-ē-si = thou shalt till -- root \*kers > English *harrow*, *horse*.
- paH-yē-ti = it shall feed -- athematic subjunctive resembles optative
- Irony: \*paHyēti echoes \*paHstor.

So thou shalt flee and wander around the earth.

**ute bheugēsi ambhi-ĝhenĝheHyēsi-q<sup>w</sup>e dheĝhom(m)**

- bheug-ē-si = thou shalt flee > Latin *fugas*, Greek *φευγης* (dialectical root)
- ĝhe(n)-ĝheH-yē-si = thou shalt walk > Sanskrit *jahāyāsi*, Gothic *gangais*, cf. Baltic root *ženg*



## **THE FLOOD**

**(Genesis VI to IX)**

The tale of Noah apparently alludes to the catastrophic Black Sea Flood of 5600 BCE. The legendary history was not scientifically confirmed until the 1980s, when geologists got permission from the Soviet regime to take sediment samples. The evidence remains controversial, but I take Ryan & Pitman's theory as fact.

After the end of last ice age, around 5800 BCE, the sea level rose until the Mediterranean spilled over the thin strip of land separating it from the Pontine -- until then a landlocked freshwater lake -- cutting a narrow channel and filling it with saltwater. By the best estimates of geologists, the water level would have risen 80 meters in two years, and the shoreline would have receded very slowly, allowing the inhabitants to walk to safety with their animals, although boats might have been lifesavers for those who attempted to wait out the flood on high ground and soon found themselves surrounded by rising water.

The preamble tells of a rivalry between "sons of the gods" and "sons of the ground". Lest you have any doubt that *gods* means *sky-gods*, read the tale of Babel closely. The gods *descend* to punish the uppity builders of a tower, most likely a fortified burg on high ground. I read this as an allusion to ethnic warfare between the Proto-Aryans and their neighbors around the Black Sea, so I have reimagined the Nephelim as Proto-Aryans who fancied themselves *nepotes* of the sky-god.

The Semitic authors of Genesis saw themselves as the survivors, and took literary revenge by having both sides drown, but they named the legendary boatman *Noah* -- which makes no sense as a Hebrew word, but perfect sense as the P.I.E. word *Nahus*.



Men had multiplied on the ground,  
**vīroes/oi (d)ĝhēmi avaugér**

and had begotten daughters,  
**ĝeĝonér-q<sup>w</sup>e dhughátr.ns**

and the sons of God had seen  
**ute deivósyo suHnéves vevidér**

that the daughters of men were fair,  
**q<sup>w</sup>od vīro(n)om dhughátres kalyaes**

and had desired them and chosen wives  
**ute lelasér ĝeĝusér-q<sup>w</sup>e g<sup>w</sup>énans**

and begotten Nepotes.  
**ĝeĝonér-q<sup>w</sup>e nepöt.ns**

They were the mighty ones.  
**toi Hneres bhuvont**

- av-aug-ér = they had multiplied -- 3rd-pl perfect, in anterior (pluperfect) sense
- dhughátr.ns / dhúktr.ns = daughters -- acc-pl
- ĝe-ĝon-ér = they had begotten
- ve-vid-ér = they had seen
- le-las-ér = they had [sexually] desired  
(Root \**las-yë* yields Sanskrit *lašati*, Greek *λilαιεται, λαστη.*)
- ĝe-ĝus-ér = they had tasted, chosen
- nepot.ns / nepet.ns = grandsons, nephews -- acc-pl  
(Sanskrit treats the acc-pl as a “weak” case, hence possibly E-grade.)
- toi / yoi = they -- Demonstrative and relative usage varies by branch.
- Hneres = ανηρ, nara -- connotes strength (viz. Gaelic *neri*)

Then said the Lord, "Man is of flesh and blood.

**nūn-q<sup>w</sup>e voq<sup>w</sup>et Deivós -- vīrós krovyos**

- voq<sup>w</sup>-et = he said -- weak-grade aorist

He is mortal, but he shall live for a hundred years."

**m.r.tós esti alyo g<sup>w</sup>eivēti ç.ntom yērons**

- m.r.-tós -- The distinction between *dead* and *mortal* is routinely confused.

And God saw that earth-men and sky-men were enemies,

**ut' vevoide Deivós q<sup>w</sup>od (d)ĝhomikoes/oi deivikoes/oi-q<sup>w</sup>e dusmónes bhuvont**

- (d)ĝhom-ik-oes = earth-men -- Alternatively: \*ĝd<sup>h</sup>om.loi > χθαμαλοι
- deiv-ik-oes = sky-men, god-men
- dus-món-es = enemies

So he was angry, and he said,

**ut' anĝhstor voq<sup>w</sup>et-q<sup>w</sup>e**

- anĝh-stoi = was angry, anxious -- 3rd-sg middle S-aorist
- (Schleicher's fable uses \*agh-nu-toi in the present tense.)

I shall destroy the earth-men and beasts, crawling things and birds.

**noç(e)yōmi vīróns (d)ĝhomikons ĝhvēr.ns-q<sup>w</sup>e (s)negons Hvéins-q<sup>w</sup>e**

- noç(e)y-ōmi = I shall destroy

But God loved Noah.

**alyo Nahu-potim Deivós lubhyet**

- Root \*naHu < \*\*neh<sup>2</sup>u -- possible source of Hebrew name נֹחַ (נח)  
> Greek ναῦς, νηφ-; Sanskrit nāus, nāv-
- Nahu-potis = Noah, ship-master
- lubh-y-et = he loved -- Imperfect

The Earth stank into God's nose,

**(s)mordet dheĝhōm Deivóei en nasom**

- (s)mord-et = stank -- weak-grade aorist of root \*(s)merd > Latin merda
- Alternatively \*pū, but this root can also connote purify.  
> Latin putēre and putāre, Sanskrit pūyati and puñāti
- en nāsom = into the nose -- acc-sg

and he saw that blood had flowed on the Earth.

**vevoide-q<sup>w</sup>e q<sup>w</sup>od krovis susréve (d)ĝhemi**

- su-srév-e = it had flowed -- perfect of root \*sreu > Latin rivus
- krovis / esar = blood

Then God said to Noah,

**ut' voq<sup>w</sup>et Deivós Nahu-potéyei**

I am thinking of putting an end to all living things,

**tong(e)yō antum g<sup>w</sup>eivons toutons**

- tong(e)y-ō = I am thinking -- 1st-sg present indicative
- antum = end -- acc-sg of supine (Root is homophonous with \*an = breathe)

for the earth is full of violence.

**svō dheġhōm g<sup>w</sup>hentéus p.IH.na**

- g<sup>w</sup>hen-téu-s = of violence killing, injury -- gen-sg of supine > Latin *de-fensū*
- p.IH.na = full -- nom-sg (F) -- vocalized as Latin *plēna*, Sanskrit *pūrṇā*



Painting by Simon de Myle (circa 1570)

So make a ship from (with) wood,

**q<sup>w</sup>ere nūn nāhéum dórū-bhi**

- **nāhéum** / nāv.m = ship, navis -- acc-sg, from verbal root *\*(s)naH* = swim
- **dórū-bhi** = with wood -- instrumental construct

and smear it with glue.

**limpe-q<sup>w</sup>e gleio-bhi**

- **limpe** = smear -- imperative
- Synonyms: *\*ong<sup>w</sup>*, *\*selbh* / *selp*

The beam should be 300 cubits long, and 30 cubits high.

**bhalanġs tri-ç.ntom olénans d.IH.ġhos syēt, tri-dec.m-q<sup>w</sup>e olénans ordhos**

- **bhalanġs** / bhalaġnos = beam -- nom-sg
- **d.IH.ġhos** = long -- vocalized as Sanskrit *dīrghas*, but Greek *δολιχος*
- **dec.m** = ten
- **olénans** = cubits -- acc-pl (F)
- **ordhos** = high, arduus, ορθος -- nom-sg

Cover it with a thatch, and put in a door.

**(s)keve (s)tegō-bhi, dheHe-q<sup>w</sup>e dhvor.m**

- (s)kev-e = cover -- imperative
- (s)tegō-bhi = with a thatch -- instrumental construct
- dhvor.m = door -- acc-sg > Latin *fōrum* (Theory predicts O-grade in the NAV cases.)

I shall flood the land to kill all living things,

**upo-plevōmi t.r.sam ute ktenyōmi g<sup>w</sup>eivons toutons**

- Why is God speaking in the Subjunctive instead of the Future? The Subjunctive expresses what *shall* be, by way of injunction, whereas the Future expresses what *will* be, by way of prediction. But God is in a unique position. His will shall be.
- upo-plev-ōmi = I shall flood -- 1st-sg subjunctive of root \*plev-éyë (Compound modeled upon German *über-flutet*, Sanskrit *upa-plavati*.)
- en-unéd-emi = I shall inundate -- 1st-sg subjunctive of \*u(n)d / ved, with the Sanskrit-style nasal infix: *unédmi*
- kten-y-ōmi = I shall kill > Greek *κτείνωμι*
- toutons = all (especially people) -- acc-pl

But you will swim on top of the water,

**tu au udéni uperi (s)naHyēsi**

- udéni = in/on the water -- loc-sg, weak grade of root \*vod-R/N
- (s)naH-yē-si = thou shalt swim -- 2nd-sg subjunctive of root \*(s)naH

together with wife, and sons, and daughters-in-law.

**g<sup>w</sup>.nā som suHnubhís-q<sup>w</sup>e snusabhís-q<sup>w</sup>e**

- som / kom = together with
- g<sup>w</sup>.nā = with wife -- inst-sg
- suHnubhís = with sons -- inst-pl (accent on ending)
- snusabhís = with daughters-in-law (accent on ending)

Of every living thing, bring a pair into the ship, so that they should not die:

**bhere touto(n)ōm g<sup>w</sup>eivo(n)ōm yugóm en nāheum, svō-ne m.r.toes/oi syēnt**

- yugom = yoke, pair, couple -- acc-sg (N)
- The synthetic form \**mor-y-oi-ëntoi* is unspeakably cumbersome.



Horses, ducks, geese, and even hens had not been domesticated by 5800 BCE. Herewith the likely manifest of *\*peçeves* worth saving from the rising waters ...

- aĝyos / capros / ghaidos = goat
- ovis / ag<sup>w</sup>nos = sheep, lamb
- g<sup>w</sup>ous / stauros = cow, steer
- porços / sūs = pork, sow
- çvōn = hound, canis

of walking and running, flying and crawling things,

**ĝhenĝhontōm dromontōm-q<sup>w</sup>e, petontōm serpontōm-q<sup>w</sup>e**

- ...ont-ō'm -- gen-pl of present active participle
- dromons = running
- petons = flying

of male and female animals, wild and tame.

**orĝhilōm dhēlevōm-q<sup>w</sup>e, ĝhverōm damo(n)ōm-q<sup>w</sup>e**

- The gen-pl ending does not always draw the accent. O-stems bear static accent.
- dhēmena = female (sucklable)
- dhēlévia = female (with nipples)
- orĝhilos = male (with ορχιες)
- peselos = male (with penis)
- v.rsen = male (Greek αρσην)
- damos = tame animal

Bring your food: grains and beans and fruits and roots.

**bhere yusterom paHtum -- ĝ.rH.na bhabha-q<sup>w</sup>e karpa vrāda-q<sup>w</sup>e**

- yus-ter-om / vos-ter-om = your -- acc-sg, comparative used as possessive adj.
- yusmōm = your -- gen-pl > Greek `υμων
- bhabha = beans -- nom-pl
- vrāda = roots, worts, rhiza

And Noah did what God had directed.

**dheHt Nahu-potis q<sup>w</sup>od dedoiçe Deivós**

Then God commanded Noah,

**ute diçset Deivós Nahu-potéyei**

- deiç-set = he said -- strong-grade S-aorist



"Go into the ship, with your household,  
**ité nāheum vēiçō som**

- veičos / voiços = household
- domos / demos = house, people

I have seen that thou art righteous.

**vevoida q<sup>w</sup>od rektós essi**

- rek-tós / regús = righteous

Bring with thee seven pairs of all clean animals,

**bhere tve-som çventōm sept.m yugá**

- çventós = pure -- from root \*çundh (cultic)
- putós = pure -- from root \*pū (cultic)
- niq<sup>w</sup>tós = washed -- from root \*ni(n)g<sup>w</sup>
- klustós = washed -- from root \*klud

and one pair of unclean animals,

**ne-çvento(n)ōm-q<sup>w</sup>e oinom yugóm**

and seven pairs of the birds,

**Hveyōm-q<sup>w</sup>e sept.m yugá**

male and female,

**v.rsen dhēlu-q<sup>w</sup>e**

- Even birds must have had nipples back then.
- The Septuagint says *αρσεν και θηλυ*, without case endings.

that their kinds should live on the cleansed earth.

**ute g<sup>w</sup>eivoiēnt ênesa niq<sup>w</sup>tai (d)êhemi**

- niq<sup>w</sup>tai = washed -- loc-sg (F) to agree Earth (F)
- ênes-es-a = kinds, genera -- nom-pl of abstract neuter \*ênen-ēs
- g<sup>w</sup>eiv-oi-ēnt = that they should live -- optative > Latin *vivant*

The clouds will bring rain to the earth for many days and nights,

**ombhroes/oi (d)êhméi v.r.sam bherōnti monêhons dinons nokt.ns-q<sup>w</sup>e**

- monêhons = many -- acc-pl
- poluns = poly -- acc-pl -- from root \*p.lH. = to fill
- v.r.sam = rain -- acc-sg (F) > Latin *rōrem*, Greek *φεσην*, Sanskrit *varšam*

and all living things shall die.

**ute moryōntoi g<sup>w</sup>eivoes/oi toutoes/oi**

- mor-y-ōntoi = they shall die -- subjunctive middle

And Noah did what the Lord had commanded.

**ute dheHt Nahu-potis q<sup>w</sup>od dedoiçe Deivós**

The clouds came, and the rain came down, and the sea rose,

**ombhroes/oi g<sup>w</sup>enyont v.r.sa-q<sup>w</sup>e ni-g<sup>w</sup>omet mori-q<sup>w</sup>e orset**

- or-set = it rose -- active in Greek and Sanskrit, passive in Latin

and the earth became invisible,

**dheġhōm-q<sup>w</sup>e ne-vidmena bhuvet**

- vid-men-a = visible -- present passive participle of root \**veid*
- bhuv-et = it became, fuit -- weak-grade aorist

but the ship swam.

**nāheus-au snaHs(t)**

- snaH-s(t) = it swam > Greek *ενευσε*, Sanskrit *asnāsīt*
- pleu-s(t) = it floated > Greek *επλευσε* (active voice)
- pleu-sto = it floated > Sanskrit *aploṣṭa* (middle voice)

The sea conquered the whole earth

**mori solvom dheġhom(m) soġhet**

- solvom = whole, entire -- acc-sg > Latin *sōlum*, Sanskrit *sarvam*
- soġh-et = took possession > Greek *εσχε* (active voice)
- sek-seto = conquered -- Sanskrit *asakṣata* (middle voice)

and covered the mountains twenty cubits deep.

**(s)toget g<sup>w</sup>orans viçenti olénans bhudhnō**

- (s)tog-et / (s)teg-set = hid, covered > English *thatch*
- (s)kov-et = hid, covered > English *sky*
- g<sup>w</sup>orans = mountains -- acc-pl (F)
- viçenti = twenty

And all living things on the dry land perished,

**moryontoi g<sup>w</sup>eivontes toutoes/oi tersai**

and beasts, birds, and serpents were no more.

**ne bhuvont-q<sup>w</sup>e ġhvēres avéyes-q<sup>w</sup>e serpontes-q<sup>w</sup>e**

But God remembered Noah and the cattle,

**alyo memenet Deivós Nahu-potim peçéum-q<sup>w</sup>e**

- me-men-et = he remembered -- reduplicated aorist

so a wind came, and the clouds left,

**ut' ventós g<sup>w</sup>omet ombhroi-au liq<sup>w</sup>ont**

- ventós / veH-tós / véH-tor = wind
- liq<sup>w</sup>-ont = they left -- weak grade aorist > Greek *ελιπε*, Sanskrit *aricat*, but Latin *liquit* shows strong grade

and after a hundred days, the sea subsided,

**ç.ntom dinons poster ni-sdetoi mori**

- ni-sd-etoï = sat down -- weak-grade aorist (middle voice)

and the ship sat upon a high place.

**ute sodetoi nāheus ëp' ordhóm**

- ëpi = upon > Latin *ob*

And in the tenth month, the mountains appeared.

**ute deçmöi meHnesi bhanont g<sup>w</sup>oraes**

- bhan-ont = they appeared -- from root *\*bhan* > Greek *εφηνε*
- bhaH-sont = they appeared -- from root *\*bhaH* > Sanskrit *abhāsīt*

Now Noah let loose a bird,

**nūn luset Hveim Nahu-potis**

- luet / lūset = he let loose -- alternative aorists from root *\*lū* > Greek *ελυσε*

but the bird nested upon a dry place and did not return,

**alyo ni-sdetoi Hveis ëpi seus(k)om ne vortetoi-q<sup>w</sup>e**

- seusom / seuskom / sesq<sup>w</sup>om = dry -- acc-sg
- vort-etoï = he returned

so he let loose a second bird,

**ut' anterom Hvéim luset**

but this one returned carrying a leaf,

**sos au vortetoi bholyom bherons**

- sos / yos = he

so he knew that the sea had left.

**ut' vevoide q<sup>w</sup>od liq<sup>w</sup>et mori**

So Noah and his wife and sons and wives and cattle left the ship,

**ute liq<sup>w</sup>ont nāheum Nahu-potis g<sup>w</sup>éna-q<sup>w</sup>e suHnéves-q<sup>w</sup>e snusáes-q<sup>w</sup>e peçéves-q<sup>w</sup>e**

and God commanded, "Go forth and multiply and fill the earth."

**diçset-q<sup>w</sup>e Deivós -- ité augsete-q<sup>w</sup>e p.IH.néHte-q<sup>w</sup>e dheĝhom(m)**

- p.l.néH-te -- with nasal infix > Sanskrit *pr̥nāta*
- p.IH.-ete = fill -- 2-pl imperative > Latin *com-plēte*

Then Noah built an altar, and made burnt sacrifices,

**ute Nahu-potis yago-stēlom dhikset dhūméyet-q<sup>w</sup>e**

- yago = worship, hagio -- combining form
- stelom / stolom = stela, stall, stool
- dhūm-éy-et = he smoked -- causative-denominative verb
- Terms for construction: *\*dhi(n)gh* applies to mortar, and *\*teks* to carpentry or textiles, but *\*str\_ng(h)* seems less specific and spawns diverse variants in many branches: *strike*, *strong*, *stringo/strictus*, *σπαραγω*, *stru(v)o/structus*.

and God having smelled the pleasant smoke,

**Deivós-q<sup>w</sup>e svādum dhūmóm (od)odvōs**

- (od)od-vōs = having smelled -- nom-sg of past active participle of root *\*od*

he said in his breast, "I shall not flood the dry land again, and kill the living things

**voq<sup>w</sup>et-q<sup>w</sup>e bhreusōi -- n' anterom upo-plevōmi tersam ktenyōmi-q<sup>w</sup>e g<sup>w</sup>eivons**

Men are evil, but the earth will always remain,

**vīróes/oi duséves s.ńti, alyo dheĝhōm manēti en aivons**

- s.ńti = they are -- 3rd-pl of athematic root *\*es*, with weak grade in plural
- man-ēt = it shall remain

when you sow and harvest, summer and winter."

**q<sup>w</sup>on-dō (se)seHēsi karpēsi-q<sup>w</sup>e samróm ĝheimróm-q<sup>w</sup>e**

- (se)seH-ēs = thou sowest -- 2nd-sg subjunctive of root *\*seseH* > Latin *seres*
- ĝheim-rom = winter -- acc-sg, with optional suffix to match *\*sam-rom*

So Noah became the first tiller of the fields.

**ute Nahu-potis p.r.mos aratōr bhuvet**

Now God said, "Let us make a pact:

**nūn-q<sup>w</sup>e voq<sup>w</sup>et Deivós -- paçoimedha**

- The following verbs are all 1st-pl middle optatives:
- paç-oi-medha = let us make a pact > Latin *pangāmus*, Greek *πηγνοιμεθα*, but Sanskrit *paç* and Gothic *fah* attest unvoiced *\*ç*.
- bheidh-oi-medha = let us trust > Latin *fīdāmus*, Greek *πειθοιμεθα*

Do not eat bloody flesh,

**n' edete krovyom memsom**

- krovyom = raw, cruor, κρεφας
- memsom = meat, mensa

Lest the blood shed by you be remembered as a sin unto you.

**svō-ne yusbhis ġhu(s)tóm esar aghesē yusbhos smeroitor**

- aghesē / agesē = sin, ache, awe -- inst-sg of abstract neuters. (These two roots have been thoroughly confused. English *ache* < *acan* matches Greek *αχος* and Sanskrit *āga* phonetically, whereas *awe* < *agis* matches *αχος* and *aghas*.)
- ġhu-tom / ġhus-tom = poured -- acc-sg (N) of past passive participle. (The root could be either \**ġheu* or \**ġhu(n)d*. The former yields Greek *χευ* and Sanskrit *hu*; the latter Latin *fund* and Germanic *giut*.)
- smeroitor / me-mor-oi-tor = it might be remembered -- 3rd-sg passive optative > Latin *memorātur*, Sanskrit *smareta* (middle voice)

And I too shall not flood the land again

**eġo eti n' anterō upo-plevōmi tersam**

When you shall see the bow after the rain,


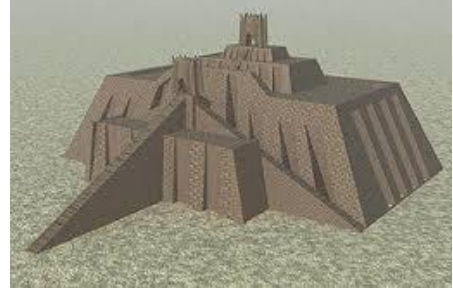
**q<sup>w</sup>on-dō poster v.r.sam bhugóm veidēte**

- bhugóm = bow -- acc-sg

Then it shall be a token of the covenant.”

**ton-dō paçtéus deiçm.n esēti**

- deiç-m.n = token -- nom-sg (N) of verbal noun

	<p style="text-align: center;"><b>TOWER OF BABEL</b></p> <p style="text-align: center;"><b>(Genesis XI)</b></p>
	<p>Mohenjo Daro (above) dates from 2600 BCE.</p> <p>The authors of Genesis may have imagined the tower as a Ziggurat, but the Ziggurat of Ur (at left) was not constructed until 2100 BCE -- long after the linguistic diaspora.</p>

The men of the earth knew one language but few words.

**(dh)ĝhomikoes/oi oinam denĝhúm pava-au vërdha ĝnoHnt**

- pava = few -- acc-pl (N)
- verdha / vordha = words, verba -- acc-pl (N)
- ĝnoH-ënt = they knew -- athematic aorist > Greek *εγνωεν*

They migrated from the east, and they settled in the plain.

**t.rH.sont austroet viĝsënt-q<sup>w</sup>e p.l.tum**

- t.rH.-sënt = they transited > Sanskrit *atāriṣīt*
- p.l.tum / p.l.H-tum = plain, flat -- acc-sg > Greek *πλατυς*, Sanskrit *pṛtus*
- veiĝ-sënt = they settled -- strong-grade S-aorist of root *\*veiĝ* > Sanskrit *avekṣīt*

And formed clay and baked it and said,

**gloiom dheiksënt peq<sup>w</sup>sënt-q<sup>w</sup>e voq<sup>w</sup>ont-q<sup>w</sup>e**

- dheik-sënt = they formed -- S-aorist of root *\*dhi(n)gh* > *adhaikṣīt*, *finxit*
- peq<sup>w</sup>-sënt = they baked -- S-aorist of root *\*pëq* > *apakṣīt*, *coxit* (Note that Latin converts *\*penq<sup>w</sup>e* > *quinque*, *\*peq<sup>w</sup>* > *coqu* in P...Q contexts.)



"Come, let us build ourselves a city,  
**g<sup>w</sup>emete dhidheHyēmē(n) vestum**

and a tower with its head in the heavens,  
**ordhom bhorġhóm-q<sup>w</sup>e kapetē nebhessu**

that we may become famous,  
**ute clutoes/oi bhevoimē**

lest we be scattered over the earth.  
**svō-ne st.rH.toes/oi syēmē(n) t.rH. dheġhom(m)**

The Priest-King of Mohenjo Daro

- dhi-dheH-yē-mē(n) = let us make, let us do -- 1st-pl optative > Greek *τιθεῖμεν*
- vestum = city, *αστυ* -- acc-sg, supine of *\*ves* = to remain, dwell > English *was*
- bhorġhóm = tower, burg, fortis -- acc-sg (M)
- kapetē = head, caput -- inst-sg, E-grade in "weak" cases > Latin *capite*
- st.rH.-toes / st.rH.-toi = scattered -- past passive participle of root *\*st.rH.* (Skeleton root gets vocalized as Old Latin *strātoi*, but Sanskrit *stīrtās*.)
- The compound passive (participle + *\*es*) ultimately adopted in Latin is less cumbersome than the synthetic form: *\*st.rH.-nu-yē-medha*

Then the gods went down to see the man-made city and the tower

**nūn-q<sup>w</sup>e niter eisēt Deivói derçtévei vīrōis q<sup>w</sup>.r.tóm vestum bhorġhóm-q<sup>w</sup>e**

- ni-ter = down, nether
- ei-sēt = they went -- strong-grade S-aorist > Greek *ησαν*, Sanskrit *aišus*
- derç-tévei = to see -- dat-sg of supine from root *\*derç*

And they said, "Behold, they are one people,

**voq<sup>w</sup>ont-q<sup>w</sup>e -- derçete, oina touta s.ńti**

- touta = people, ethnos > Latin *tōtus*, Old English *þēod*, ...

and they speak one language,

**oinam denġhúm veq<sup>w</sup>onti**

- *Tongue* is feminine when used in the specific sense of *language*.
- veq<sup>w</sup>-onti = they speak -- 3rd-pl present > Doric *φεποντι*, Latin *vocant*

they have become like us, and this is only the first of their deeds;

**n.sbhos som.loes/oi bhebhuvér eti svo(n)ōm dheHmenōm p.r.ma esti**

- dheHmenōm = of deeds -- gen-pl > Greek *θεματων*
- bhe-bhuv-ér = they have become -- 3rd-pl perfect > Latin *fuērunt*

whatever they want to do, they attain.

**q<sup>w</sup>od dheHtum volyonti, tod dheHtum maghonti**

- dheH-tum = the doing -- acc-sg of supine
- vol-y-onti = they want -- 3rd-pl present of root \**vəl-yō*
- magh-onti = they can, they may -- 3rd present of root \**magh* > Greek *μηχ...*
- nonç-ontoi = they attain, "carry off" -- 3rd-pl middle present of root \**no(n)ç*

Come, let us climb down and fell the tower,

**g<sup>w</sup>emoimë(n) -- ni-skandoimë(n) çadyoimë(n)-q<sup>w</sup>e bhorğhóm**

- skand-oi-më(n) = let us climb > Latin *scandamus*, Sanskrit *skandema*
- çad-y-oi-më(n) = let us fell > Latin *caedamus*, Sanskrit *śadayama*

and mix-up language to the humans,

**miskoimë(n)-q<sup>w</sup>e denghúm (d)ğhomikoibhos**

- misk-oi-më(n) = let us mix

that one may not grasp the speech of others."

**ute ne ghrebhnyēt oinos alyo(n)ōm voq<sup>w</sup>óm**

So the gods scattered the humans through the earth, to east and west,

**ute st.rH.sënt deivoes/oi (d)ğhomikons t.rH. dheğhom(m) -- austroei vesq<sup>w</sup>eroei-q<sup>w</sup>e**

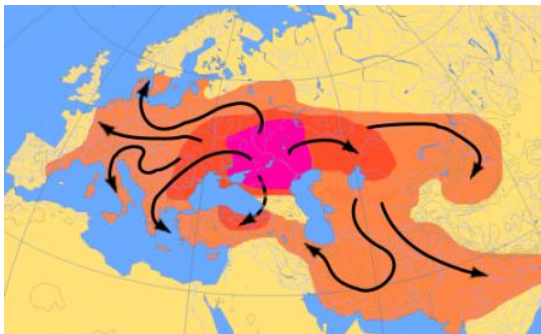
- st.rH.-sënt = they scattered > Greek *εσπορσε*
- st.rH.-et -- alternative aorist > Sanskrit *astarat*

and left the city.

**ut' vestum liq<sup>w</sup>ont**

Its name shall be Babel.

**Hnom.n Bhalbhal esēti**



Map of Indo-European migrations created by D Bachmann  
(Wikimedia Commons)



## ADAM'S PSALM

Psalm 104 (in traditional Hebrew and modern Protestant numbering) or 103 (in the Septuagint, Vulgate, and King James Version) is a uniquely beautiful composition that bears testimony to the Creator through nature and echoes the early chapters of Genesis. This psalm is unusual in employing no abstract vocabulary, and this feature makes it uniquely apt for demonstrating the poetic potential of the proto-language.

The “translation” recovers the terse character of the original Hebrew text. The style was spoiled in the Septuagint by the wordiness of Greek, which uses articles and particles to tiresome excess.

The psalm is first presented as a whole, in two dialects side-by-side -- one biased to Greek & Sanskrit as usual, the other some sort of Proto-Latin. Alternative choices of words are shown in parenthesis. The annotation shows roots in bare stem form, with minimal grammatical commentary.



<p>bhlaĝhoit an.los tom Sont.m Dĝhems-pótim  ō Dĝhems-póti Dyeu-páter meĝistos essi  tu lukē-bhi çlevesē-q<sup>w</sup>e vestós  tu dyeum tetonta svō skevom  tu bh.l.ĝnons vod.r (s)tetogta  tu nebhesa yunéksi svō rotom  tu HveHtobhis ambhi-perHsi svō petrobhis  tva v.rH.dha HveHtōr bherti (...)  tu paHur bh.l.ĝont dhidhēsi bhlaĝhmon.m</p>	<p>bhlaghāt anima eiom Sontem Ĝhom-potim  ō Ĝhom-poti Dyu-pater megistos ess  tu luke clutate-q<sup>w</sup>e vestos  tu dyum tetenesta svei skevōd  tu trabens aq<sup>w</sup>am tetegesta  tu ombhrons yunges svei rotōd  tu ventois ambhi-trās svei petrois  tva verdha ventos bhert  tu ognim bhlegontem dhakyes bhlaghmenem</p>
<p>tu dheĝhom(m) bhudhnóm adi dhidhēta  ute sa ne tremoito (tresoito)  (s)tetogta tam mori-bhi svō vestrō  vedōr k.l.noisu uper staHt  açuēs tvoet v.rH.dhoet apo bhog<sup>w</sup>eto  tontroet apo bhog<sup>w</sup>eto  H.r.s.nt g<sup>w</sup>oreyes ni-sdontoiqe p.l.téves  adi diçtóm stolóm  eti ne-t.rH.menom morgom dhidheHta  ute n-anterom upo-plevēti mori tersam</p>	<p>tu ĝhomom bhundhom adi dhedhakesta  ut eia ne tremāt  tetegesta eiam marīd svē vestrōd  aq<sup>w</sup>a kolnoisu super stāt  acūd tvōd verdhōd apo bhūget  tonetrōd apo bhūget  orsont ardhoi sup-sedontor-qe plānoi  adi dictom stlokóm  eti ne-trāmenom margenem dhedhakesta  ute n-anterōd sub-mezgēt mari tersam</p>
<p>bhreuna loukoisu ghevonti  çloinoisu srevonti (rinéHnti)  p.l.téves ĝhverbhós poHm.n didoH.ńti  eçvoes terstum satyontoi  Hvéyes veičonti ambhi  garyonti osdoisu medhyōi  unétsi k.l.nons ap' v.r.saēs  tersa tvois bhuktóis (doHtóis) satá</p>	<p>bhunes loukoisu ghundont  cleinons enter reivont  plānoi ĝ<sup>w</sup>herebhos pōti(one)m (di)dānt  ecvoi terstum satyontor  avīs veicont ambhi  kanont osdoisu medhiōd  undes kolnons vrosād  tersa tvois bhruktois (donois) satis</p>
<p>augéyesi peçúbhos dhalya ĝ.rH.na-qe  ute arayēt (kersoit) vīrós aĝróns  ute bheryēt karpa apo tersaēs  poHm.n yestóm ute çerd sperghoit  Hbhrūs-qe smeyoito bh.l.ĝéyoito-q<sup>w</sup>e  paHtum-qe ute q<sup>w</sup>erpom Hnerom syēt</p>	<p>augéyes pecubhos bholya ĝrāna-qe  ut arēt vīros aĝróns  ute bherāt karpa tersād  pōti(one)m bhervitam ute cord sperghāt  bhruns-qe meisātor bholgātor-q<sup>w</sup>e  pādhlom ute q<sup>w</sup>orpos nertom syēt</p>
<p>Pergonos meĝ.loes dreuns polHu unésti  bh.rH.ĝaes aiĝoes-q<sup>w</sup>e augsonti  Hvéyes nisdóns medhyōi dhidheH.ńti  (s)trozdoes perq<sup>w</sup>oisu veičonti  açrons karkarons ghaidoes kteionti  eti çasobhos bhorĝhoes s.ńti</p>	<p>Vorsānos magnons druns plēnōd undet  bhrāĝenoi aiĝoloi-q<sup>w</sup>e augsont  avīs nisdons medhiōd dhidhent  trozdoi perq<sup>w</sup>oisu veicont  ardhons karekons ghaidoi ksinont  eti casobhos bhorktoi sont</p>

<p>meHns.m dhidheHta meHtévei samrons  saHul (saHvelyos) vesq<sup>w</sup>erom ênoHti  temos dhidheHta ute bhevoit nokts  q<sup>w</sup>on-dō ghrabhoet g<sup>w</sup>.mskónti êhvères visvoes  v.l.q<sup>w</sup>ikoes memsoet ap' vertonti  reudonti-q<sup>w</sup>e deivoet pre(ç)skóntes  qon-dō saHul H.r.skétoi austerōi  ton-dō i.ńti çeubdhum (çeitum) (lêgdhum)  vīros-au aêrons eiti  verêgeti-q<sup>w</sup>e do vesq<sup>w</sup>erom</p>	<p>mēnsēm dhedhakesta metūi ves(ro)ns  soul vesperom ênōsket  temedhrons dhedhakesta ute bhevāt nokts  q<sup>w</sup>on-dō ghrabhōd g<sup>w</sup>enyont g<sup>w</sup>hères toutoi  luq<sup>w</sup>ikoi memsōd ab-vertont  reudont-q<sup>w</sup>e deivōd precontes  qon-dō soul oryetor austrei  ton-dō eiont cubhitum  vīros-au aêrons eit  verget-q<sup>w</sup>e ad vesperom</p>
<p>ō Dyeus-páter tva verêa mongêa  m.nġi-bhi tvā solvom vevorkta  dheêhōm tvo(n)ōm ktiménōm p.IH.ná  g<sup>w</sup>eivo(n)ōm p.IH.ná  tosmi au meê.lom mori esti  ne-rēdhomnōm dêhuvōm p.IH.nóm  g<sup>w</sup>eivo(n)ōm meê.lōm meinōm-qe  meê.loes og<sup>w</sup>hiyes nāHeves-qe tosmi snaH.ńti  dhidheHta ute skandoient v.l.moisu</p>	<p>ō Dyū-pater tva vorgia plēra  mentġd tvād olnom vevorgesta  tersa tvo(s)ōm (k)seimenōm plēna  g<sup>w</sup>eivo(s)ōm plēna  toteri au magnom mari est  ne-rēmenōm piskōm plēnom  g<sup>w</sup>eivo(s)ōm magnōm meinōm-qe  magnoi anguyes nāves-qe toteri nāvont  dhedhakesta ute skandānt volvoisu</p>
<p>visvoes tubhi derçonti  bhogons didoHsi samroisu  qon-dō didoHsi  ton-dō ghrebhonti (emonti)  qon-dō deiçesi êhestom  ton-dō bhrūsoes su-p.l.néHentoi  qon-dō Hbhrūm ap' vertesi  ton-dō anêhontoi  qon-dō dh.mom lambhesi (...)  ton-dō m.r.tum i.ńti  qon-dō pneum.n st.rH.néusi  ton-dō nevō êneHtōes  novyétoi-q<sup>w</sup>e tersa</p>	<p>toutoi tubhi dercont  bhraktons (di)dās samroisu  qon-dō (di)dās  ton-dō ad-ghendont (kapyont)  qon-dō dices deksterom  ton-dō venteroi su-plēyontor  qon-dō bhrunt.m ab vertes  ton-dō anêhontor  qon-dō an.lom ab-ghendes (kapyes)  ton-dō mortum eiont  qon-dō an.mom sternes  ton-dō novōd ênāskontor  novyétor-q<sup>w</sup>e tersa</p>
<p>çlutós syēt potis en aivons aivōm  satós syēt potis svoisu verêoisu  dheêhōm derçeti tremeti-q<sup>w</sup>e  g<sup>w</sup>orins tanékti ute toi dhūmonti  g<sup>w</sup>.rH.emi potim svō d.IH.ghū g<sup>w</sup>eivōmi  seng<sup>w</sup>hōmi potéyei svō d.IH.ghū aivōmi  svādus svō medhu syēt voqs me(n)os  êhoryōmi potim  lġnq<sup>w</sup>yēnt dúseves apo dêhmēs  ne-reêèves-q<sup>w</sup>e ne bhevōnti (manōnti)  bhlaêhoit an.los Dêhems-potim Dyeu-patér.m  êhvéye svod yaêyom Hnom.n</p>	<p>clutos syēt potis en aivons aivōm  satis syēt potis svois urgois  êghomos dercet tremet-q<sup>w</sup>e  ocrins tanget ut eioi dhūmont  g<sup>w</sup>rātōm potim svei longhōd g<sup>w</sup>eivōm  kanōm potġi svei longhōd aivōm  svādua svē meli syēt voqs mēa  ghoryōm potim  lġnqānt maloi êghomed  ne-rektoi-q<sup>w</sup>e ne bhevānt (manānt)  bhlaghāt anima Êghom-potim Dyū-patrem  en-voq<sup>w</sup>e svod vērom nomen</p>

### **bhlaġhoit an.los tom Sont.m Dġhems-pótım**

#### **ō Dġhems-póti Dyeu-páter meġistos essi**

- bhlaġh / bhlagh = to bless, brahman, flamen, блага
- an(?)lo / an(?)mo = breath, soul, wind
- tom Sont.m = him who is (acc) = YHWH (יהוה)
- Dġhems-pótis = Earth Master (gen-nom)
- Dyeus-patēr = Sky Father (nom-nom)

### **tu lukē-bhi ċlevesē-q<sup>w</sup>e vestós**

- luk = light
- ċlu-ēs = glory, κλεος, слава
- ves = to clothe, vest

### **tu dyeum tetonta (tetenesta) svō skevom**

- tetonta = tetenesta = tendisti
- skevo = covering, sky
- svō / svē = like, as -- Syntax varies when used as preposition. Greek casts its object into same case as the referent, whereas Latin uses the ablative of specification.

### **tu bh.l.ġnons (trabens) vod.r (s)tetogta (tetegesta)**

- bh.l.ġ-no = beam, Balken, fulcrum, φαλαγξ, болозно
- trab = beam, thorpe
- (s)teg = to cover, hide
- (s)tetogta = tetegesta = tegisti

### **tu nebhesa yunéksi svō rotom**

- yu(n)g = to yoke
- roto = chariot

### **tu HveHtorbhis ambhi-persi svō petrobhis**

- vē-tor / vē-to / ven-to = wind (either subject or object of *veH* = to blow)
- perH = to pass -- reduplicated in Sanskrit
- pet-ro = wing

### **tva v.rH.dha HveHtōr bherti (...)**

- v.rH.dho = verb, word, ρρημα
- Synonyms connoting to carry or transport: *bher*, *tol-yē*, *por-yē*, *veġh*, *ne(n)ç*, ...

### **tu bh.l.ġont.m ogním (paHur) dhidhēsi bhlaghmon.m**

- Pun on homophony between *flagrans/φλεγων* and *brahman/flamen*

### **tu dheġhom(m) bhudhnóm adi dhedhēta (dhedhakesta)**

- bhudh-no = bottom, Boden, fundus
- dhedhēta = dhedhakesta = fhefhakeste = fēcisti

**ute sa ne tremoito (tresoito)**

- trem / tres = tremble, τρεμει / τρει

**(s)tetogta tam mori-bhi svō vestrom**

**vedōr k.l.noisu uper staHt**

**açuēs tvoet v.rH.dhoet apo bhog<sup>w</sup>eto (bhuget)**

- k.l.no = hill, collis, κλον
- açu / açru = sharp, acute, acrid
- bhog<sup>w</sup> = to fear, φοβει
- bhug = to flee, φυγει

**tontroet apo bhog<sup>w</sup>eto**

- ton-tro = thunder, tonitrus

**H.r.s.nt g<sup>w</sup>oreyes (açroi) (ardhoi) ni-sdontoiqe p.l.téves (plānoi)**

- H.r. = to rise, oritur, ορνυσι
- g<sup>w</sup>ori = mountain, giri, γορα
- ardho = high, arduus, ορθος
- açro = high, ocris, ακρος

**adi diçtóm stolóm (stlokom)**

- stolo / stloko = locus

**eti ne-t.rH.menom morgom dhidheHta**

- t.rH. = pass through, transit
- -meno = -able

**ute n-anterom upo-plevēti (sub-mezgēti) mori tersam**

- sub-mezgē = submerge

**bhreuna (bhunes) loukoisu ghevontí (ghundonti)**

- bhreun = spring, Brunnen, φρεαρ -- an R/N stem
- bhun = font -- possibly altered to avoid confusion with *front* (forehead)
- louko = clearing, lea, lūcus
- gheu / ghund = to pour, giessen, fundere, χεφει

**çloinoisu sreventi (rinéHnti)**

- çloino = incline, lean
- sreu = to flow, stream, `ρεφει
- rei / ri(n)H = to flow, run
- Latin *rīvus* could derive from either root.

**p.l.téves ghverbhós poHm.n (potionem) didoH.ńti (dant)**

**eçvoes terstum satyontoi**

- terstu = thirst, dryness (supine form used as adjective)

**Hvéyes veičonti ambhi  
garyonti osdoisu medhyöi**

- osdo = branch, Ast

**unétsi k.l.nons ap' v.r.saës  
tersa tvois bhuktóis (bhruktois) satá**

- bhug > bhukto = functus (cf. break, fractus)
- bhrug<sup>w</sup> > bhrukto = fructus

**augéyesi pecúbhos dhalya ĝ.rH.na-qe  
ute arayēt (kersoit) vīrós aĝróns  
ute bheryēt karpa apo tersaës**

**poHm.n yestóm (potionem bhervitam) ute çerd sperghoit  
Hbhrūs-qe smeyoito (mirāt) bh.l.géyoito-q<sup>w</sup>e**

- yesto = yeasted, brewed
- spergh = to spring, σπερχει
- Hbhrū = brow, front, οφρυς
- smei = to smile, miratur, смеется

**paHtum-qe (paHdhrom) ute q<sup>w</sup>erpom Hneróm syēt**

- paHtu / paHdhro = food, pabulum
- q<sup>w</sup>erpo = body, mid-riff, corpus
- Hnero = strong (cf. Hner = ανηρ)

**Pergonos (Vorsanos) meg.loes dreuns polHu unésti (undes)  
bh.rH.ĝaes aiĝoes-q<sup>w</sup>e (aiĝoloi) augsoni**

- I have heretically reimagined Pergonos and Vorsanos as sons of Dyeu-pater.
- Pergonos = Parjanya, Perkunas, Fjorgun -- a lesser rain-god
- Vorsanos = Ouranos -- a lesser sky-god
- bh.rH.ĝo = birch, fraxinus, береза
- aiĝo = oak

**Hvéyes nisdóns medhyöi dhidheH.ńti  
(s)trozdoes perq<sup>w</sup>oisu veičonti**

- (s)trozdo = thrush, turdus, στρουθος

**açrons karkarons (karekons) ghaidoes kteionti  
eti çasobhos bhorĝhoes s.ńti**

- karkaro / kareko = hard, craggy, stony
- ghaido = wild goat, haedus
- ktei = to possess or dwell, κταεται
- bhorĝho / bhorgho = high place, refuge
- çaso = hare

**meHns.m dhidheHta meHtévei samrons  
saHul (saHvelyos) vesq<sup>w</sup>erom ênoHti  
temos (temedhrons) dhidheHta ute bhevoit nokts**

- temedhro = tenebra
- vesq<sup>w</sup>ero = west, vesper, вечер

**q<sup>w</sup>on-dō ghrobhoet g<sup>w</sup>.mskónti êhvēres visvoes (toutoi)**

- ghrobho = lair, grave
- g<sup>w</sup>.msk = βασκει -- iterative of g<sup>w</sup>em / g<sup>w</sup>en-yo
- olno / touto = all, total
- solvo / visvo = all, whole, solus, ϖισος

**v.l.q<sup>w</sup>ikoes memsoet ap' vertonti  
reudonti-q<sup>w</sup>e deivoet pre(ç)skóntes**

- memso = meat, mensa

**qon-dō saHul H.r.skétoi austeröi  
ton-dō i.ńti çeubdhum (çeitum) (lēgdhum)**

- austero = east (cf. dawn)
- çeubh = to lie down, cubere
- çei = to lie down, κειεται
- leg = to lie down, ληγεται

**vīrós-au aêróns eiti  
verêgeti-q<sup>w</sup>e do (ad) vesq<sup>w</sup>erom**

- verêg / verg = to work, φεργεται

**ō Dyeus-páter tva verêga monêha**

- monêho / mongho = many, mnoho, maha (cf. meêg = mickle, magnus, μεγαλος)

**m.nťi-bhi tvā solvom vevorêta (veverêgesta)**

- menti = mind

**dheêhōm tvo(n)ōm ktiménōm p.IH.ná  
g<sup>w</sup>eivo(n)ōm p.IH.ná**

- ktei-m.n = possession, home, κτειμα

**tosmi (toteri) au meg.lom mori esti  
ne-rēdhnōm dg<sup>w</sup>huvōm p.IH.nóm  
g<sup>w</sup>eivo(n)ōm meg.lōm meinōm-qe**

- rēdh / rē = reason, count, rētur/ratio, αριθμος
- meino = minor, from verb root *mi(n)H* = to diminish

**meg.loes og<sup>w</sup>hiyes nāHeves-qe tosmi snaH.ńti  
dhidheHta ute skandoient v.l.moisu (volvoisu)**

- skand = jump, scandere
- v.l.na / v.l.ma = wave, Welle, волна, ūrmī

### visvoes tubhi derçonti

- derç = to look, δερκεται

### bhogons didoHsi samroisu

#### qon-dō didoHsi

#### ton-dō ghrebhonti (...)

- There are many verbs connoting *take, seize, have, grasp*, and figuratively *understand*, but none of them is preserved in more than three branches, and any nuanced distinctions among them are unknown: *em, la(m)bh, ghe(n)d, ghrebh, kap-yë, ghabh-yë*
- bhogo = share of food < to break = Sanskrit *bhajati* > *bhaga* (cf. Greek φαγ)
- bhogo = share of food < to make use = Sanskrit *bhunákti* > *bhoga*
- bhrukto = share of food < to make use = Latin *frangit* > *fractus*

### qon-dō deiçesi ĝhestom

#### ton-dō bhrüsoes su-p.l.néHentoi

### qon-dō Hbhrūm ap' vertesi

#### ton-dō anĝhontoi

- anĝh = be anxious

### qon-dō dh.mom lambhési (...)

#### ton-dō m.r.tum i.ńti

### qon-dō pneum.n st.rH.néusi

#### ton-dō nevō ĝneHtós

- nevō = anew -- adverbial use of instrumental case

### novyétoi-q<sup>w</sup>e tersa

### çlutós syēt potis en aivons aivōm

#### satós syēt potis svoisu vergoisu

### dheĝhōm derçeti tremeti-q<sup>w</sup>e

#### g<sup>w</sup>orins tanékti (tanget) ute toi dhūmonti

### g<sup>w</sup>.r.Hemi (gratōm) potim svō d.IH.ghū (longōd) g<sup>w</sup>eivōmi

#### seng<sup>w</sup>hōmi (kanōm) potéyei svō d.IH.ghū (longōd) aivōmi

#### svadévia svō medhu (meli) syēt voqs me(n)os

- g<sup>w</sup>.r.H -- This root has two meanings, both with reference to the throat:
- (1) he swallows, devours = жрѣт, vorat, βιβρωσκει, giráti
- (2) he sings praise = жрѣт, grātatur, gūrdháyati, grñāti
- seng<sup>w</sup>h = to sing, `ομη
- kan = to sing, hen, cantat

### ĝhoryōmi potim

- ĝhor-yë = to desire, horitur, χαιρει



**linq<sup>w</sup>yēnt duséves apo dġhmēs**  
**ne-regéves-q<sup>w</sup>e (ne-reçtoi) ne bhevōnti (manōnti)**

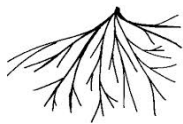
**bhlaġhoit an.los Dġhems-potim Dyeus-patér.m**  
**ġhvéye svod yaġyom Hnom.n**

- ġhvéry / ġheu = to call upon, зовѣр

# ORTHOGRAPHY AND GRAMMAR

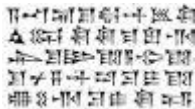


In the course of composing *Before Babel* in a reconstructed language, I was obliged to make numerous arbitrary decisions about orthography, grammar, and usage. Since this is not a scholarly work, I shall not bother to defend them. Herewith a run-down of my idiosyncratic conventions and a more-or-less mainstream précis of grammar ...



## P.I.E. ROOT TEMPLATES

- The basic root structure was Consonant-Vowel-Consonant (CVC), in which the “V” could be a pure vowel, a diphthong, or a liquid (hence, CEC, CEUC, CRC), and the “C” could also be a cluster (hence, SCR\_NC).
- Rare initial clusters included PT, PN, KN, and the permutable “thorn” clusters: KT = TK, GD = DG, GDh = DGh, ...
- Many roots were prefixed with an erratically preserved (“mobile”) S, and some were internally nasalized, but these capricious modifications rarely served to differentiate quasi-homophonous roots.
- Certain sequences of voice and aspiration were originally forbidden (especially D\_G, D\_Gh, and Dh\_K) as well as roots containing two consonants of the identical class (e.g., labials, dentals, palato-velars, labio-velars, or liquids). However, these uncommon sequences could be generated via reduplication or by operation of Grassmann’s Law.
- Taking these constraints and unequal letter frequencies into account, we may estimate that the root template would generate only 600-900 roots, without regard to distinctions among the basic pure vowels. The template could generate a larger number of roots by making distinctions among pure vowels, or by making more use of the rarer phonemes.



## ORTHOGRAPHIC CONVENTIONS

- The hypothetical **laryngeals** are simply written *H* where they serve to generate dialectical vowel prefixes (e.g., *ο-νομα*, *α-στηρ*, *ε-ρεβος*), or to “close” CV roots (e.g., *\*dheH*, *doH*, *staH*). The opaque notation  $h^1$ ,  $h^2$ ,  $h^3$  might be clarified by writing  $h^e$ ,  $h^a$ ,  $h^o$  instead, but linguists continue to debate the number of distinct laryngeals and their correspondence to Semitic counterparts, א ה ח ע.

- **Colored vowels** are commonly supposed to derive from laryngeals (i.e.,  $A < *h^2$ ), but the three basic vowels are simply written  $E/A/O$  in accord with pronunciation, because the bare laryngeals are unspeakable. How would you say  $*h^2-r-h^2$  without actual vowels?
- Germanic and Balto-Slavic merged the two **back vowels**, and Sanskrit merged all three basic vowels, but Latin and Greek preserve the three-way distinction, the ratio in roots (though not stems or endings) being roughly  $E:A:O = 44:33:22\%$ . Pokorny's lexicon gives one the impression that  $E$ 's were overwhelming most common, but whatever the origin of colored vowels,  $A$ 's could not have been rare. Comparison of paired cognates between Latin and Greek shows roughly 70% agreement, or as much as 80% agreement when allowances for routine  $E/O$  gradation are made, and this implies that majority rule is a fairly reliable way to identify original  $A$ 's.
- **Ambiguous vowels**: The colored vowel  $A$  is identified on the basis of classical evidence, unless Greek and Latin disagree. In the absence of other evidence, a colored vowel may be suspected from the absence of telltale  $E/O$  gradation. Vowels of **variable or uncertain grade** are written  $\ddot{E}/\ddot{O}$ .
- **CAC roots** (e.g., *svad*) are problematic because there is no appropriate interior slot for the  $*h^2$  laryngeal in the structural template. Such roots are written with  $A/\bar{A}$  in accord with actual pronunciation.
- The **semi-vowels** are written  $I/U$  in diphthongs or zero-grade contexts, but  $V/Y$  when they serve as consonants without syllabic value.
- **Long vowels** inside CVC roots are attributed to routine  $v\ddot{r}ddh\bar{i}$  gradation, but long vowels elsewhere may arise in other ways:  $\bar{o} < oe$ .
- The unvoiced **velars** are written  $\zeta/K/Q^w/\zeta V$ , the voiced velars  $\hat{G}/G/G^w/\hat{G}V$ , and the aspirated velars  $\hat{G}h/Gh/G^wh/\hat{G}hV$ . The evidence for a four-way distinction among unvoiced velars is very strong, but the  $G/\hat{G}$  distinction is shaky.
- Velars are left **unmarked by default** in the absence of clear evidence to the contrary, to wit, transformation to sibilants in satem languages or to labials in certain centum languages. (Sanskrit muddled the putative  $G/\hat{G}$  distinction by palatizing both, at least before erstwhile front vowels. Consequently, only Balto-Slavic evidence can be fully trusted to distinguish  $G/Gh$  from  $\hat{G}/\hat{G}h$ . Dilemmas arise when Balto-Slavic and Indo-Persian disagree.)
- The **syllabic consonants**, traditionally written  $R/L/M/N$ , are written idiosyncratically here, with dots to either side as potential insertion points for vowels. Thus, roots written in **skeleton form** as  $C.R.C$  may fill out as  $C\ddot{E}RC$  or  $CR\ddot{E}C$ . Liquids combined with laryngeals -- written  $.RH.$  and  $.LH.$  between consonants -- may yield  $\bar{i}r/\bar{u}r$  in Sanskrit, but  $r\bar{e}/r\bar{a}$  in Latin, and  $\rho\eta/\rho\omega$  in Greek. (Two-sided combinations such as  $\delta\omega\lambda\iota\chi\omicron\varsigma$ ,  $\sigma\tau\omicron\rho\epsilon\nu\nu\mu\iota$ ,  $\kappa\epsilon\rho\rho\nu\nu\mu\iota$ ,  $\beta\alpha\lambda\alpha\nu\omicron\varsigma$  also reflect uncontroversial laryngeals, but Latin *culmus*, *culmen*, cognate to Greek *καλαμος*, *κολωνος* do not confirm the presence of a laryngeal.)
- **Pronunciation** -- Those of us not privileged to have been born an Arya in a previous life find it difficult to pronounce the voiced aspirates  $Bh/Dh/Gh/G^wh$ . One will not incur bad karma by pronouncing them as  $B\beta/D\delta/G\gamma/Fw$ . In order to maintain the  $\zeta/K$  distinction, one may pronounce  $\zeta$  as  $\check{S}$ , and likewise  $\hat{G}$  as  $\check{Z}$ .



## PRÉCIS OF GRAMMAR

My grammatical conventions are biased toward Greek and Sanskrit, but they eschew certain clearly dialectical features of this recognized sub-family:

- Grassmann's Law -- deaspiration of the initial phoneme in doubly aspirated contexts such as *dheiǵhos* > Greek *τειχος* and Sanskrit *dehas*
- Past-tense augments, used to mark the Imperfect and the Aorist
- Initial vowels of laryngeal origin, when unique to Greek



## SYNTACTIC CONVENTIONS

- **Word order** follows the rule of *focus-first*, which overrides default SOV order. Restrictive adjectives and possessives are assumed to precede the nouns they modify, but non-restrictive and complex modifiers are placed in trailing position to avoid hideous left-branching structures. We have pompous priests and ancient bards to thank for the convoluted syntactic structures that torment us today.
- **Conjunctions** are indispensable. It is difficult to say much of interest without them. The pedigreed enclitics *q<sup>ve</sup>*, *au*, *vē* are used with simple, strictly parallel elements; whereas *ute*, *eti*, *alyo*, *svō*, *q<sup>wod</sup>* are favored with complex elements such as clauses, and they are usually placed in leading position.
- **Particles** have come to play a triple role as prefixes, prepositions, and adverbs. They are used sparingly here to clarify the usage of noun cases, and they are often associated with the verb instead.

## Particles used as Adverbs, Prepositions, and Prefixes

Basic Form	Meaning	Suffixed Form	Meaning
per, pro	before	proter, proti	against
(s)upo	below, down	(s)uper(i)	above, up
en	in, into	enter	between
vi	apart	viter	against
ni	down	niter	lower than
pos	behind, after	poster	behind, after
ana, nō	on, onto, upward	anti	against, in front
apo, po	from	apter	after
ud	out	utter	outside
som	together, with	sonter	asunder
kom	together, with	konter	against
ecs, eḡ	out, ex		
epi, ob	on		
ambhi	about		
adi, adhi	to		
t.r.H	through, across		
bhi	(instrumental)		
medhi	amid, between		
do, de	to, from		



Photo by Colin

## CONJUGATION OF VERBS

- Tenses and moods -- Greek and Sanskrit display an elaborate system of verb inflections, which may be partly dialectical, since these two branches constitute a recognized sub-family. The tenses include Present, Imperfect, Future, Perfect, and several different Aorist formations; whereas the moods include Indicative, Subjunctive, and Optative, at least in the Present tense. The aspectual distinctions among past-tense formations are muddled in Sanskrit, but they have been either maintained or sharpened in Greek.
- Suffixes and infixes -- The Rix-Cogwill theory lays out the conjugation classes of the Present tense, but it does not provide a convincing account of their aspectual differences, which are speculatively attributed to Aktionsart. Besides causative, factitive, denominative, and inchoative-iterative classes, there are enigmatic nasal infixes and suffixes. The nasal elements were used promiscuously in Latin and Sanskrit, but they are applied

sparingly here. They may have served to disambiguate verbs with homophonous roots (e.g., \*ves = dwell or clothe, \*puH = purify or putrefy, \*gh.r.bh = grab or groove) but each branch made its own choices. There may also have been subtle aspectual distinctions among the various Aorist formations, but they are now obscure, so one must lean on attested forms.

- Voice -- There were Active and Middle voices in Greek and Sanskrit; but there is an R-Passive in Latin, Celtic, and Hittite. The Middle voice was properly used in a reflexive sense, but it was also used (quite superfluously) with many inherently intransitive verbs. In the absence of a rule, one is obliged to follow attested forms.
- Personal endings -- Last but not least, endings, 'nuff said.

So now, in painful detail ...

### Present-Tense Classes of a Model Verb (3rd-sg & 3rd-pl, Active)

Class	Indicative	Subjunctive	Optative
Thematic (Sanskrit Class-1)	deuk-eti deuk-onti	deuk-ēti deuk-ōnti	deuk-oi-t deuk-oi-ent
Stative, Fientive, Factitive (Sanskrit Class-4)	deuk-y-eti deuk-y-onti	deuk-y-ēti deuk-y-ōnti	deuk-y-oi-t deuk-y-oi-ent
Causative (Sanskrit Class-10)	duk-éy-eti duk-éy-onti	duk-éy-ēti duk-éy-ōnti	duk-éy-oi-t duk-éy-oi-ent
Inchoative-Iterative (Sanskrit Class-6)	du(k)-sk-éti du(k)-sk-ónti	du(k)-sk-ēti du(k)-sk-ōnti	du(k)-sk-ói-t du(k)-sk-ói-ent
Thematic + Nasal Infix (Sanskrit Class-6)	dunk-éti dunk-ónti	dunk-ēti dunk-ōnti	dunk-ói-t dunk-ói-ent
Athematic (Sanskrit Class-2)	deuk-ti duk-ńti, -énti	deuk-e-ti deuk-e-nti	duk-yē-t duk-yē-nt
Accented Nasal Infix (Sanskrit Class-7)	dunék-ti dunk-ńti, -énti	dunék-eti dunék-enti	dunk-yē-t dunk-yē-nt
Nasal Suffix NU (Sanskrit Class-5)	duk-néu-ti duk-nu-ńti, -énti	duk-neu-eti duk-neu-enti	duk-nu-yē-t duk-nu-yē-nt

- Definitions
  - Causative verbs signify *to cause an action*.
  - Inchoative/inceptive verbs signify *to begin an action*.
  - Stative/essive verbs signify *to possess a quality*.
  - Fientive verbs signify *to acquire a quality*.
  - Factitive verbs signify *to impart a quality, or to make into a thing*. (They may be described as deadjectival or denominative.)
  - Other denominative verbs signify *to function as a thing*.

- The suffix *-skē-* yields *prcchāti = po(r)scit* and *gacchati = βασκει*, as well as inchoatives in Latin, iteratives in Greek and Hittite, and the *-ish* in English.
- Suffixes reconstructed as *-yē-*, *-h'yē-*, *-eh<sup>l</sup>-*, and *-eyē-* convey a spectrum of stative, fientive, factitive, and causative meanings, but they get mixed-up semantically as well as phonetically, and no branch makes a four-way distinction. (Greek *στελλω < στελιω* and *βαινω < βανιω* versus *κοφεω*; Latin *-venio*, *-caveo*; Sanskrit *-ya-*, *-áya-*; and Slavic *-i-* (и), *-ě-* (ѣ) all show two-way distinctions; whereas Germanic weak verbs display a single suffix *-j-*.)
- There are further denominative verbs bearing the widespread suffix *-ā-* < *eh<sup>2</sup>*. Hittite uses the manifestly laryngeal suffix *-ahh-* on denominative verbs.
- Many (but not all) Class-6 verbs in Sanskrit, characterized by their accented thematic vowel, are nasalized in the Latin fashion: *limpāti = rumpit* and *piṁçāti = piṅk-te = pingit*, but not *tudāti = tundit*.
- There is some correlation between the use of Class-7 nasal infixes in Sanskrit and nasal infixes in Latin: *rinákti = linquit*, *chinátti = scindit*, *bhinátti = findit*, *pinásti = pinsit*, *bhunákte = fungitur*. (Given the paucity of examples, the statistical significance of this correlation bears further analysis.)
- With few exceptions, the nasal suffix applied to CVC roots in Sanskrit & Greek is *-nu-*, but with CV(H) roots *-nā-* or simply *-n-* (e.g., *φθινει*, *κλινει*, *κτεινει*). The suffix *-nā-* could alternatively be regarded as an infix: CVnéH. These elements have no discernable meaning.
- The Slavonic suffix *-нѣ-* (*nǫ*) attests *\*non*, but Lithuanian *-nuo-* attests *\*nō*. (Modern Slavic languages pronounce *-nǫ-* as *-nu-*, but don't be fooled.) These suffixes are used exclusively on perfective verbs.
- The Germanic languages use nasal suffixes on a few denominative verbs, signifying to-act-like-a-(noun) and to-become-(adjective).
- Hittite uses an infix *-nin-* and a suffix *-nu-*, both with causative significance.

### Aorist and Perfect Forms of a Model Verb (3rd-sg & 3rd-pl, Indicative Active)

Model	Them. Aorist	Sig. Aorist	Perfect	Participle	Supine
Sanskrit & Greek	é-duk-et é-duk-ont	é-deuk-s(t) é-deuk-sënt	de-dóuk-e de-duk-ér	duk-tó	dēuk-tu
Latin	deuk-et deuk-ont	duk-set duk-sënt	de-duk-e de-duk-ér	duk-tó	duk-tu

- There is a modest but statistically significant correlation between the form of the Aorist (Thematic vs. Sigmatic) between any pair of classical languages.
- Latin contrasts strong grade in the Present with weak grade in Thematic Aorists (e.g., *venit/vēnit*), or weak grade in the Present with Sigmatic Aorists (*dīcit/dixit*). In Greek and Sanskrit, vice versa.
- In Sanskrit as well as Latin, verbs that use any sort of nasal infixes or closures in the Present show weak grade there. Nasal infixes are rare in Greek.

## Reconstructed Personal Endings

	Active-1	Active-2	S-Aorist Active	Perfect Active	Middle-1	Middle-2	Passive
1-sg	ō, mi	o-m	sēm	a < h <sup>2</sup> e	ai < h <sup>2</sup> oi	a < h <sup>2</sup> o	ar < h <sup>2</sup> or
2-sg	e-si	e-s	s(s)	ta < th <sup>2</sup> e	e-soi	e-so	e-sor
3-sg	e-ti	e-t	s(t)	e	e-toi	e-to	e-tor
1-du	o-vēs(i)	o-vē(n)	svē(n)	vé(n)	o-vedhoi	o-vedha	o-vor
2-du	e-tēs	e-tēm	stēm	tēm	<i>(use plural forms instead)</i>		
3-du	e-tēs	e-tēm	stēm	tēm			
1-pl	e-mēs(i)	o-mē(n)	smē(n)	mé(n)	o-medhoi	o-medha	o-mor
2-pl	e-te	e-te	ste	té	e-dhvoi	e-dhvem	e-dhumor
3-pl	o-nti	o-nt	sēt	ér	o-ntoi	o-nto	o-ntor

Note: *ē* denotes a vowel of variable or uncertain grade or length.

- Primary endings were used with the Present and Future Indicative and also the Subjunctive; secondary endings with the Imperfect and the Optative.
- Athematic roots or suffixes may add either *énti* or *ṅti* (written *.ṅti*) in the 3rd-pl.
- There may have been a distinction between the 2nd-dual and 3rd-dual endings, but idiosyncratic variations among languages frustrate identification of the vowel. Those languages that preserve the secondary endings of the dual contrast them as follows: Sanskrit *tham/tām*, and Greek *τοῦ/τῆν*, but Slavonic flips the contrast to *ta/te* < *\*tō/te*.
- The optional final (*n*) on 1st-pl and 1st-dual secondary endings is modeled on Greek *μεν* and Hittite *weni*, but Sanskrit omits it.
- The S-aorist endings employed in various languages are highly idiosyncratic. Vedic and Slavonic suggest that the 2nd-sg and 3rd-sg may not have borne any ending at all, but Classical Sanskrit and Greek inserted vowels to make *ss* and *st* easier to pronounce. The tense sign could also be combined with Perfect endings to yield *sa*, *sta*, *se*, ... *ser*.
- Sanskrit invented Middle forms for the S-Aorist and the Perfect, but they have no support from Greek.



## Participles and Verbal Nouns

Type	Suffix	Comments
Present Active	o-nt-	formed from 3rd-pl
Present Passive	o-meno-	often conveys “-able”
Perfect Active	vōs, us-	reduplicated
Past Passive	tó- <i>or</i> nó-	always athematic
Infinitive (M or F)	tu- <i>or</i> ti-	focus on action
Verbal noun (N)	mṇ, men-	focus on result
Human agent (M)	tor, tér, tr-	focus on actor
Instrument (N)	tro-, tlo-, dhro-, dhlo-	focus on means



Photo by Florian Seebeck

## SEMANTIC PROPERTIES OF VERB CLASSES

One daring claim of the Rix-Cowgill theory contends that *telic* verbs (i.e., those that express actions with natural endpoints) tended to form root aorists, whereas *atelic* verbs tended to form root presents, and that the nasal elements in the present and the sigmatic element in the aorist served the purpose of aspect-switching. By this token, nasalized presents should go with root aorists, and root presents with S-aorists. (It should be understood that the original root formations eventually became thematic.)

In his last published work, *Lexikon der Indogermanischen Verben*, the late Helmut Rix was more circumspect than others who try to speak in his name. James Clackson, for one, misuses the LIV data to mount a flawed defense of the claim in question. He tallies the data and notes, “Nasal infix presents of the type *linek<sup>ti</sup>* are overwhelmingly found beside root aorist formations.” However, he neglects to tally the counter-examples in order to establish that infixed presents are *disproportionately* found beside root aorists. And yet he dares to conclude, “The nasal infix is used in late PIE to form imperfective present stems from telic verbs.”

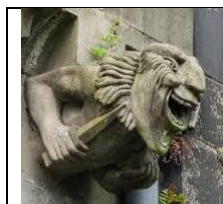
Consider the data: Infixed presents are abundant in Latin, but not in Sanskrit. If we arrange the pedigreed verbs (excluding those with V-suffixed and reduplicated perfects) to look for correlations, we see that Latin data tend to refute Clackson’s first statement. Do you perceive a correlation between verb classes and Aktionsart? I do not.

LATIN	Them. Aorist	Sig. Aorist
<b>Root Present</b>	ag/ēg, cap/cēp, ed/ēd, em/ēm, faci/fēc, fodi/fōd, fru/fru, fugi/fūg, gradi/grad, i/ī, loqu/loqu, lu/lu, ru/ru, su/su, spu/spu, sed/sēd, scab/scāb, stat/stet, veni/vēn, vert/vert, vide/vīd,	auge/aux, coqu/cox, clep/cleps, dīc/dix, dūc/dux, frīg/frix, lūd/lūs, mane/mans, reg/rex, scrīb/scrips, sculp/sculps, speci/spex, torq/tors, trah/trax, trūd/trūs, turge/turs, sūg/sūx, teg/tex, ūr/uss, urge/urs, verg/vers, veh/vex, vīv/vix,
<b>Infixed Present</b>	fend/fend, frang/frēg, fund/fūd, hend/hend, linq/līqu, rump/rūp, scand/scand,	ang/anx, find/finx, fung/funx, jung/junx, ling/linx, ming/minx, mung/munx, ningu/nix, plang/planx, ping/pinx, string/strinx, ungu/unx,

### Tense, Mood, Aspect, Aktionsart (and all that)

Tempus	<i>Present, Past, Future</i> (self-explanatory) <i>Aorist</i> = customary tense of narration, usually remote past <i>Future</i> = predictive, can also express feasible conditions
Mood	<i>Indicative</i> = usual mood of discourse or narration <i>Subjunctive</i> = injunctive, potential, or conditional <i>Optative</i> = expresses first- and third-person imperatives, wishes, purposes, and contra-factual conditions
Aspect	<i>Imperfective</i> = habitual, progressive, or stative <i>Perfective</i> = expresses completed action <i>Anterior</i> = expresses completed actions that bear upon subsequent states, or occur prior to subsequent events
Aktionsart	<i>Telic</i> = closed-ended, may be either punctual or durative <i>Atelic</i> = open-ended, may be either durative or stative

- The Perfect “tense” is actually Present-Anterior. It expresses completed actions that bear upon the present. For example, *has seen* means *knows*.



### DECLENSION OF NOUNS

Photo by Colin

- Stem classes and case endings -- There are two distinct declensions. The *athematic* declension encompasses I, U, A, and consonantal (“C”) stems, and the *thematic* or O-stem declension, which has idiosyncratic case endings.
- Accent and gradation -- Current theory maintains that the athematic declension employed kinetic accent and dynamic vowel grade. The evidence is contradictory and confusing, because recorded languages have generally fixed the position of the accent, although they may show persistent vowel gradation. In deference to current consensus, we follow paradigms that allow for these phenomena.
- Gender -- the joy of sex. A majority of inanimate nouns are masculine by default, but derivational suffixes determine gender. Trees and insects tend to be feminine, but substances tend to be neuter. Things of nature are feminine (e.g., the Earth, Light, Night) when personified as a goddess.

### Reconstructed Case Endings

Case	Singular		Dual		Plural	
	Athem.	O-stem	Athem.	O-stem	Athem.	O-stem
Voc	#	e	H	oH > $\bar{o}$	es	oes, oi
Nom	s, –	os	H	oH > $\bar{o}$	es, os, s	oes, oi
Acc	m	om	H	oH > $\bar{o}$	ns	ons
Gen	es, os, s	osyo	us	ous	$\bar{o}m$	o(?) $\bar{o}m$
Abl	es, os, s	oet > $\bar{o}t$	bh $\bar{o}m$	obh $\bar{o}m$	bhos	oibhos
Dat	ei	oei > $\bar{o}i$	bh $\bar{o}m$	obh $\bar{o}m$	bhos	oibhos
Inst	eH > $\bar{e}$	oH > $\bar{o}$	bh $\bar{o}m$	obh $\bar{o}m$	bhis	$\bar{o}is$
Loc	i	oi, ei	us	ous	su	oisu

- The nom-sg ending on R, L, M, N, and A-stems (sonants) is generally suppressed, but compensatory lengthening takes place: *tors* > *t $\bar{o}r$* , etc.
- Recorded languages struggle to make distinctions among the nom-sg, gen-sg, and nom-pl endings -- all three being variations upon *es/os/s*. Kinetic accent and/or dynamic gradation help to distinguish the gen-sg.
- The gen-sg ending, generically written *ēs*, is realized in various grades, and even in null grade: *évēs* > *eus*, *éyēs* > *eis*.
- The loc-sg ending *i* is thought to be a late development, and it never draws the kinetic accent, hence *udéni* vice *udní* (“in the water”).
- The nom-pl ending *oi* employed in Italo-Celtic and Greek was presumably borrowed from the pronominal declension. Latin seems to have had provincial dialects that favored  $\bar{o}s$  < *oes* over  $\bar{i}$  < *oi*.

- The inst-pl ending was simplified from *oibhis* to *ōis* at some stage. The former appears abundantly in Vedic texts, but the latter is attested in many branches.
- The dat/abl-pl ending is almost too similar to the inst-pl ending, but Germanic and Slavic have *-m-* wherever Sanskrit and Italo-Celtic have *-bh-*. One school of thought argues that the dat-pl ending was properly *mos*, and the inst-pl ending *bhis*. (This theory is not half so amusing as my own waggish idea that the substitution was due to a stuffed-up nose. As the Elephant's Child said to the Crocodile who stretched his nose into a modern trunk in Rudyard Kipling's story, "You are hurtig be.")
- The inst-sg ending is ostensibly nothing but an elongated vowel, but instrumental constructs with *bhi* yield Greek  $\varphi\iota(v)$  and Slavic  $oM(b)$ .
- The abl-sg ending *et* or *ed* is attested by Hittite *it*. It is applied to all five stem classes in Old Latin, but only to the O-stem declension in Sanskrit.

### Kinetic Accent and Dynamic Gradation in Athematic Declensions

	Strong Form	Weak Form
Father	patér-	patr-'
Brother	bhrā'ter-	bhrā'tr-
Tree (F)	dréu-	dru-'
Wood (N)	dóru	dórv-
Sky	dyéu-	div-'
Ship	naHéu-	naHu-'
Son	suHnéu-	suHnu-'
Dog	ḡvón-	ḡun-'
Door	dvór-	dur-'
Earth	dhéḡhom-	(d)ḡhm-'
Generic	Co'C- Cē'C- CéuC- CénC-	CeC-' CeC-' CuC-' CṅC-'
Suffixed	CV'C-os CV'C-u, i, tu, ti- CV'C-mṅ CV'C-tor- CVC-tér-	CV'C-es- CVC-éu, éi, téu, téi- CVC-mén- CV'C-tor- CVC- tr-' or -tṛ'-
R/N-stem	védor or vód-ṛ	védn- or udn-'

- O-stems bear static accent, either on the root or the stem.
- The NAV cases (except possibly for the acc-pl) are considered “strong” cases. The principle of kinetic accent is that the accent advances toward the end in “weak” cases, but it recedes to the root in the voc-sg.
- The professional terminology is designed to bewilder: *acrostatic*, *proterokinetic*, *hysterokinetic*, *amphikinetic*, etc. Why not say *leapfrog*?
- The “weak” form of U/I-stems is ostensibly *CVC-éu*, *éi*, but the suffix gets reduced to *ú*, *í* before the endings *bhos*, *bhis*, *su*. The accent is unaffected.
- In Greek and Sanskrit, contra Ringe, the “weak” form of the suffix *tér* is *tr-* before vowels, but *tr'-* before *bhos*, *bhis*, *su*.
- Theories about water, and about R/N-stems generally, are in flux. Recent theories, subject to incessant revision, argue for a distinction between water the substance and bodies thereof, but the newer theories are not necessarily less fishy.
- A good reference on this topic is Don Ringe’s *From Proto-Indo-European to Proto-Germanic*, but his presentation is doctrinaire, and the reader should take the details with salt. (He was probably wrong to conflate *tree* with *wood*.) *Wikipedia*, that dubious modern oracle, throws its weight behind Ringe’s paradigms.

The application of these rules to “tree” and “wood” -- key words in the tales -- is tricky. Sanskrit and Greek make a clear distinction: *drus* vs *dāru*, and *δρῦς* vs *δόρυ*. Sanskrit declines these nouns as regular U-stems, but Greek declines them differently from U-stem adjectives, which are included for comparison. Neither language shows kinetic accent on these words.

### Declensions of “Tree” and “Wood” in Sanskrit & Greek

Case	per Ringe	Tree	Tree	Wood	Adjective
nom-sg	*dóru	drus	δρῦς	δόρυ	βαρύς
acc-sg	*dóru	drum	δρῦν	δόρυ	βαρύν
gen-sg	*dréus	dros (āus)	δρυός	δούρος	βαρέφος
dat-sg	*drévei	drave (avāi)	δρυί	δούρι	βαρέφι
inst-sg	*drúh <sup>1</sup>	druna, dṛvā			
loc-sg	*drévi	drāu			
nom-pl	*dóruh <sup>2</sup>	dravas	δρύες	δοῦρα	βαρέφες
acc-pl	*dóruh <sup>2</sup>	drūs (uns)	δρῦς (υς)	δοῦρα	= nom-pl
gen-pl	*drévoHom	drūnām	δρυών	δούρων	βαρέφων
dat-pl	*drúmos	drubhyas			
inst-pl	*drúbhi	drubhis			
loc-pl	*drúsu	drusu	δρυσί	δούρεσσι	βαρέσι

Umlaut: *δουρ* < *δορφ*. Digamma was lost in classic Greek: *βαρεῖς* < *βαρέφες*.

The declension of “sky” demonstrates kinetic accent and dynamic gradation more clearly, and the classical languages agree closely.

### Declension of “Sky” in Sanskrit & Greek

Case	per Clackson	Sanskrit	Greek
nom-sg	*dyeu-s	dyaus	Ζεῦς
acc-sg	*dyeu-m	dívam	Δίψα
gen-sg	*div-és	divás	Διφός
dat-sg	*div-éi	divé	Διπί
inst-sg	*div-éh <sup>1</sup>	divā'	
loc-sg	*dyév-i	diví	



### DERIVATIONAL SUFFIXES

- Common adjectival suffixes include *-ó*, *-tó*, *-nó*, *-ló*, *-kó*, *-liko*, *-yo*, and *-u*.
- Another common suffix appearing on both nouns and adjectives is *-ró*.
- Comparatives and superlatives are formed with *-yos/isto* or *-tero/temo*.
- Nouns possessing qualities can be made from adjectives with *-mon* or *-mén*. (Compare verbal nouns formed with *-mṇ* or occasionally *-mo*.)
- The only widely attested suffix for expressing abstract qualities as nouns is *-ēs*. Dialectical suffixes include *-tāti* (F), *-osti* (F), and *-tvo* (N).
- Animate agent nouns are routinely made from verbs with *-tor* or *-tér*.
- Inanimate instruments are expressed with *-tro*, *-tlo*, *-dhro*, *-dhlo* (N)
- The common diminutive suffixes are unaccented *-ko* and *-lo*.
- Feminine forms bear the suffixes *-ia* or simply *-a < h<sup>2</sup>*.



## MINI-LEXICON

The standard reference work of Indo-European lexicography is Julius Pokorny's hypertrophic *Indogermanisches Etymologisches Wörterbuch*, which lists 2,222 suspected roots. Many users conclude that Pokorny set low thresholds for phonetic and semantic matching. It is difficult to discredit any given entry by objective criteria, but many of them are very doubtful.

An even more fantastical work is Calvert Watkins's *American Heritage Dictionary of Indo-European Roots*. The few of his fanciful etymologies that can be verified serve to make the point that a given root can spawn derivatives with very diverse meanings.

Unlike these bloated horrors, my conservative mini-lexicon is confined to roughly 700 adequately attested roots, plus variants and derivatives. It is apparent that Pokorny chose to err on the side of including doubtful items, whereas I choose to exclude them. I rate the items in terms of the number of major branches of the Indo-European tree that attest them, but there is no sound way to identify and discount inter-branch loans.

I have split off the most obvious Greco-Latin loanwords, but roughly one-quarter of the remaining items are thinly attested, being found in no more than two branches. Such items are particularly suspect when the branches in question are in geographic or cultural contact. It is even evident that the Balto-Slavic branch must have been in cultural contact with the Indo-Persian branch at some point.

A significant number of the thinly attested roots are found only in Greek and Sanskrit, which are thought to constitute an eastern sub-family on account of their virtually identical verb systems. These items should be deemed dialectical.

Some even more thoroughly attested items are suspect for a different reason. Just as animals have legs, so do their names, and plants can travel too. Such items should be deemed post-P.I.E. *Wanderwoerter* unless their distribution is nearly universal.

Roots found in only one branch are effectively lost, because there is no sound way to distinguish them from roots newly coined within that branch. There is no way to know how many valid roots have been dismissed for lack of a second attestation.

It is possible to tell the damndest lies with statistics, and bloated compilations that include unknown amounts of spurious material furnish the raw material for mischief. One might hope that a well-scrubbed database of indisputably inherited roots would provide reliable material for statistical investigations of phonological or grammatical phenomena. For example, it might be possible to test selected claims of laryngeal theory and the Rix-Cowgill theory of verb classes by examining inter-branch correlations.

It is difficult to make the proper phonetic distinctions between quasi-homophonous roots. The working vocabularies of recorded languages typically comprise 3,000 roots, but the monosyllabic template does not generate quite so many distinct roots unless all essential phonetic distinctions are taken into account. Unfortunately, the key phonetic distinctions have sometimes been effaced in the attesting branches. Distinctions among pure vowels, among velar sub-classes, and among aspiration states are most frequently elusive.

It is also difficult to make the proper semantic distinctions among quasi-synonymous roots. There are too many alternative terms for fire, flame, and burning; for grasping, capture, taking, and having; and so forth.

Topical arrangement highlights the preoccupations of P.I.E. culture: family, farming, fishing, food, fire, fighting, religion, rule, and crafts. The working vocabulary of the proto-language must have been rich in specialized terms, but only a fraction of the specialized terms can be recovered.

The full mini-lexicon takes the form of two downloadable Excel files: (1) sorted root list without supporting attestations, and (2) a topically arranged spreadsheet of attestations, along with my snide, amateurish, and speculative comments. I am perpetually revising these files as I come to regret my prior follies.<sup>1</sup> A simplified version of the root list is appended below, without notes on reliability or distribution.

### Sorted Root List

MEANING	RECONSTRUCTED FORMS
hear, acoustic	(a)kous
man, strong, andro-	(a)ner
star	(a)ster
blow like wind	(a)veH
remain, dwell > was	(a)ves
want	(e)g <sup>wh</sup> .l.H
free, liber (cf. people, grow)	(e)leudh-ro
nine	(e)nev.m
darkness, erebos	(e)reg <sup>w</sup> -ēs-
belch, eructate	(e)reug
red, ruddy, erythro-	(e)rudh-ro
brow, front	(o)bhrū
tooth < eating	(o)dont

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<sup>1</sup> You may contact the author to request a current copy. E-mail: BBarrois@verizon.net



navel  
rain, cloud, umbra  
mist, fog, rain < micturate  
nail  
name  
reach, arrive (cf. REG)  
run, flow  
apple  
stone, hammer, anvil  
sharp, pointed, high, acrid, sour  
to  
drive, act  
driven animal, goat  
field, acre  
axle, shoulder  
awe, fear  
ache, pain; sin, distress  
axe  
lamb, agnus  
heat, burn, kindle  
oak  
early, morning  
bronze, ore  
eternity, eon, ever  
life, health  
young  
nourish, aliment > old, tall, full-grown  
other, but, otherwise  
all  
white  
elk, fawn, hind  
alder  
around, both  
end  
other, second  
breathe > soul, anima  
onto, until, ante, anti  
duck, anet  
narrow > anxious  
ankle, joint, corner  
asuras, aesir  
water, riverbank  
reach, attain, touch, apt  
from, after  
water  
arm, joint  
white, silver, clear  
earth, pasture, tillage  
rowing, oar  
plough, oar

(o)mbh-lo  
(o)mbh-ro  
(o)miġh-lo  
(o)nogh  
(o)nomen  
(o)reig  
(o)ri(n)H  
abl-o, aml-o, māl-o (?)  
ac-mon  
ac-u, -ru, -ri, -ro  
adi, adhi  
aġ  
aġ > āġ-o, aġ-yo, aiġ  
aġ > aġ-ró  
aġ > aks-i, -lo  
agh-ēs, ag-ēs-  
agh-o, ag-o  
ag<sup>w</sup>esi, aksi, aski (?)  
ag<sup>w</sup>n-o  
aidh > i(n)dh  
aiġ-o, aiġolo, aġōlo (?)  
air, ayer  
ais, ayes  
aiv > aiv-ó  
aiv > ayu  
aiv > yov-en, yun-ko  
al > al-tó  
al > al-yo, al-tero  
al > ol-no > ol-lo  
albh-o  
alc-yo  
aln-o  
ambhi  
an > an-tó  
an > an-yo, an-tero  
an(ə) > an-mo, -lo  
ana, anu, anti, na  
anat-í, ant-í  
anġh-u  
ang<sup>w</sup>-lo, angu-lo  
ans-u  
āp  
āp, (y)ap (?)  
apo, ap-ter  
aq-o  
ar > ar-mo, ar-dhro  
arġ-u  
arH > ar-tó  
arH > rē ... -tro, -dhro, -mo  
arH > rō ... -tro, -dhro, -dhlo

arrow  
bear, ursus  
righteous, ready  
noble, aryan, aristo-  
autumn, harvest  
however (enclitic)  
wax, eke, augment  
burn  
dawn, aurora  
dawn, east  
spring, vernal  
away  
bird  
grandparent, uncle (mother's side)  
big, strong, good  
flame, torch, char, black, bleach  
beam, phalanx  
blow, inflate  
blue, flavus, white  
bladder, follis, phallos  
bloom, flora, folia, phylla  
burg, barrow, fort, high place  
bright  
boil, brew, yeast  
birch (cf. bright)  
bean, fava  
beech  
announce, show, appear  
beard, barba  
barley, farina  
thick, fat, pachy-  
beaver (cf. brown)  
good, well-being, better  
run, frighten  
fear  
fidelity, bide, federate  
bind  
bear, carry  
be (fientive), become  
alert, wake; notice  
bow, bend  
flee, frighten  
bee  
split, fission, bite  
bless > priest, brahman, flamen  
bake, prepare food  
bore, split  
bare, barefoot  
brother  
break

arq-o  
artk-o > arkt-o > .r.kt-o  
art-o  
ār-yo  
asen-  
au  
aug-éyo, auks, vaks-yo  
aus > aus, eus, ves  
aus > aus-ēs-  
aus > aus-tero  
aus > ves-ēr, ves-ro  
avo, au  
av-í > vi  
av-o  
bel-o, bol-sko (?)  
bh.l.ġ  
bh.l.ġ-no > bhalanġ  
bh.l.H > bhīē-s, bhīē-w  
bh.l.H > bhīē-vo, bhēl-o  
bh.l.H > bhol-yo, bhīē-dhro  
bh.l.H > bhol-yo, bhīō-ēs, bhīō-mo  
bh.r.ġh > bhorġ-o  
bh.r.ġ-o  
bh.r.v  
bh.rH.ġ-o  
bha-bha, bha-ko  
bhāg-o  
bhaH, bhan-yo  
bhardh-a/o  
bhars  
bhe(n)ġh-u  
bhebher-o  
bhed-ro  
bheg<sup>w</sup>-yo  
bhei  
bheidh  
bhendh  
bher  
bheu, bhū  
bheudh  
bheuġ(h)  
bheug-yo  
bheu-ko  
bhi(n)d  
bhlagh > bhlagh-món  
bhog  
bhor  
bhos-o  
bhrāter  
bhre(n)ġ

grumble, thunder  
fry, roast  
well, spring  
belly, breast  
partake, use, brook, fruct-  
brow, front  
partake, function  
bottom, fundus  
goat, buck, bull  
short, fast, brevi-, brachy-  
stalk, straw, reed  
hundred  
heart  
have faith or trust, put-heart  
herd, crowd, troop  
separate, sieve, riddle  
mix, cook  
fall, cause downfall  
shitty, bad  
cold  
toil, tire  
hoof  
goat, boar, deer (cf. hoof)  
hare  
hate, battle, enemy  
lie down  
horn  
gray, hoary  
incline, (h)lean  
arse, tail, thigh, buttock  
hear, listen  
heard-of, renown, fame  
branch, plough  
shell, conch  
shoulder, hip  
whistle  
white  
sacrifice, house, sanctify, purify  
dog, hound  
green, cyan, black  
long, dolicho-  
look  
tree, wood, oak  
tears  
brother-in-law (husband's brother)  
tame, domestic  
to, from  
ten  
finger, digit < ten  
day < division

bhrem  
bhresġ  
bhreu-R/N  
bhreus-o  
bhrūġ<sup>w</sup>  
bhruH  
bhu(n)ġ  
bhudh-no, -men  
bhūġ-o, bhuk-ko  
breg<sup>w</sup>h-u, mreg<sup>w</sup>hu  
c.l.m-o > colmo, calamo  
c.n.tom  
c.r.d  
c.r.d-dheH  
c.r.dh-o  
c.r.H > crei > crei-dhro  
c.r.H > cri(n)H, c.r.H-nu  
cad-(é)yo  
cak-o  
cal-dho  
cam(n)H, cam-yo  
cap-o  
cap-ró  
cas-o  
cat ... -ro, -ru  
cei  
cer-no, -o  
cēr-o  
cli(n)H > cloi-nó  
cloun-i  
clu(n)H, cl(n)u  
clu(n)H > cluH-ēs  
cōk-o  
congh-o  
cub-o  
cveis  
cveit-o, cveid-o  
cven-dh > cundh, cventó  
cvon, cun  
cvyan-o, cān-o, cēn-o, cein-o (?)  
d.lH.gh-u  
d.r.c  
d.r.v > doru, dreu  
d-acr-u  
daiver, daig<sup>w</sup>er  
dam-o  
de, do  
dec.m  
dec-to-lo  
dei > di-no, dei-no, -mo, -to (?)

point out, teach  
right  
house, timber  
household, people  
tongue (cf. call out)  
tooth < eating  
tear  
pull, tug, tow  
right, duty  
sleep > dream  
pull, drag, draw, hold tight  
dare, brave  
daddy, uncle  
divide  
foliage, thallo-  
burn  
day  
do, put  
suck, suckle > teat  
run, flow  
yesterday  
humus, ground (feminine)  
human, chthonian, of the ground  
fish, ichthys  
decline, phthisis  
dough, mortar, shape, wall  
bad, evil, deception  
daughter  
smoke > breath, soul  
smoke > dusk, dust, fuscus  
door  
give  
run  
work or fight together  
town, fence, fort  
mal-, dys- (prefix)  
hatred, enemy  
two  
god < sky  
day < sky  
god < sky-father  
out of, ex  
horse  
eat, feed  
tooth < eating  
hedgehog  
I (nominative form)  
go  
seek, ask  
that (is,ea,id)

deic  
deks-o, deks-tero  
dem > dem-dhro > dem-bhro  
dem > dem-o, dom-o, dom-u  
d-en-ġhu  
dent < ed-ont  
der  
deuk  
dh.l.gh  
dh.r.+ > dhrei, dhroim, dhroum (?)  
dh.r.ġh  
dh.r.s  
dhadh-o, dhe-i-o  
dhail  
dhal-yo  
dheġh  
dheġh > dheġh-ó  
dheH  
dheH, dhe-i, dhēl (?)  
dheu  
dh'ġhes-ter > ġhester  
dh'ġhom > ġdhom  
dh'ġhom > ġhomon  
dh'ġhū > ġdhū  
dh'ġwhī > ġwhi(n)H  
dhi(n)ġh  
dhreug  
dhughater > dhukter  
dhuH > dhū-mó  
dhuH > dhū-sko  
dhver, dūr  
doH  
drom  
drough  
dū-no  
dus  
dus-men, -món  
dvo  
dyu > deiv-ó  
dyu > dyeu, div  
dyu > dyu-patér  
ecs, eġ  
ecv-o, eq-o  
ed  
ed > od-ont > dent  
eġh-i  
eġo, eġho  
ei  
ei > ei-sk  
ei-o, yo, yosmo

ice  
elk, fawn, hind  
wound, ulcer  
buy, seize  
in, into  
sword  
boar  
atop, around  
goat, sheep, aries  
be (perm.)  
blood  
and even, and also  
breath, soul, atman  
heart, veins  
wide, broad  
sister-in-law (brother's wife)  
graph, scribe, carve (cf. groove)  
grow old and gray, geronto-  
grain  
call, cry out  
call, cry out  
indeed (enclitic)  
cold  
kin, kind  
son-in-law  
beget, be born  
chin, cheek (feminine)  
knee (neuter)  
chew (cf. jaw)  
taste, choose  
dig, grave, groove (cf. carve)  
grab, grip, grasp (fig. understand)  
go, approach  
give, have, take  
goat  
goose, gander  
get, grasp  
defecate  
go, walk, leg  
gape, yawn  
winter  
yellow, gold  
desire, yearn, greed  
yesterday  
hand  
pour, libate  
call, cry out (cf. tongue)  
smooth, glabrous  
ground, earth (feminine)  
man, of the ground

eis  
el > el-ni-o, el-it (?)  
elc-ēs-  
em  
en, en-ter  
ens-i  
eper-o = vepr-i (?)  
epi > ob  
eri-o, arvi-ko, vervi-ko (?)  
es  
esa-R/N  
eti  
ētm-én, -ó  
ēt-ro, ēt-or  
eur-u  
ĝ.lou(s)  
g.r.bh > grabh  
ĝ.r.H > ĝer, ĝrē-u  
ĝ.rH.n > ĝern-o, ĝrān-o  
gal > gal-yo ...  
gar > gar-yo ...  
ge, ghe  
gēl-dho, -u  
ĝen > ĝen-ēs, ĝen-t  
ĝen > ĝen-ró, -tó  
ĝen > ĝnā-tó  
ĝen-u  
ĝen-u  
ĝeu  
ĝeus  
gh.r.bh  
gh.r.bh  
gh.r.dh-yo  
ghabh-(é)yo  
ghaid-o  
ĝhans, -ro  
ghe(n)d  
ĝhed  
ĝheH, ĝhen-ĝheH  
ĝhei, ĝhai, ĝhan-yo (?)  
ĝheim ... -ro  
ĝhel ... -u, -to, -ro  
gher-yo > gher-no  
ghester = dh'ghes-ter  
ĝhes-to, ĝhes-ro  
ĝheu, ĝheud, ĝhu(n)d (?)  
ĝheu, ĝhve-yo (?)  
ghladh-o  
ĝhom = dh'ĝhom  
ĝhomen = dh'ĝhomen

garden, fence  
gut-string, yarn, hernia  
gorse, horror (hair standing on end)  
stranger, guest  
glow  
wild animal, ferox, thera  
cleave, split  
clay, cleave, glue  
can, know  
peg, nail, comb, tooth  
bird calls (echoic)  
throat > swallow, cry out  
acorn  
calf, womb, globus, brephos, delphys  
heavy, difficult, serious, sad  
throat > praise, call out  
mountain  
throat > swallow, devour  
live, alive  
kill, torment, hurt  
come, go  
woman, wife  
want  
decline, phthisis  
kill, harm, smite, strike  
burn, heat > warm  
animal's den  
granule, grind, frendere, hordeum  
cow  
bow  
island  
hill-top, rise  
bald  
circle, ring  
cart, harrow; to plough  
black  
beloved, friend  
hailstone  
one-eyed, blind  
healthy, hale, whole  
forest, heath  
beautiful, kallo  
curve, bend, bow, camber  
sing, throat, hen  
hemp  
head  
capture  
hard, harsh, stony  
fruit, harvest  
hollow > cup, bowl

ghordh-o  
ĝhorn-o  
ghors-yo  
ghost-i  
ĝhvel  
ĝhvēr = g<sup>w</sup>hēr  
gleubh > skulp  
gloi ... -o, -no, -to  
ĝnoH  
ĝombh-o  
gran-o, grak-o, grū  
g<sup>w</sup>.l.\_ > gol, glu  
g<sup>w</sup>.lH.nd, g<sup>w</sup>.lH.n-o  
g<sup>w</sup>.r.bh-o = g<sup>w</sup>.l.bh-u  
g<sup>w</sup>.r.H > guru, grav, βαρυ  
g<sup>w</sup>.r.H > g<sup>w</sup>.r.(n)H, g<sup>w</sup>.rH.dh-yo  
g<sup>w</sup>.r.H > g<sup>w</sup>ora, giri  
g<sup>w</sup>.r.H > vora, βρω  
g<sup>w</sup>eiv, g<sup>w</sup>ig<sup>w</sup>-o  
g<sup>w</sup>el-yo  
g<sup>w</sup>em, g<sup>w</sup>en-yo, g<sup>w</sup>.N-sko  
g<sup>w</sup>en-a  
g<sup>w</sup>h.l.H  
g<sup>w</sup>h'dhi(n)H = dh'g<sup>w</sup>hi(n)H  
g<sup>w</sup>hen  
g<sup>w</sup>her > g<sup>w</sup>hēr-mo  
g<sup>w</sup>hōlyo  
g<sup>w</sup>hre(n)dh  
g<sup>w</sup>ov  
g<sup>w</sup>y-o  
k.l.mo > kolmo, holm  
k.l.no > koll, klon, kolon  
k.l.v-o > kalvo  
k.r.gh-o > krengho, kerko  
k.r.s  
k.r.sn-o  
kā ... -ro, -ra, -mo, -ma (?)  
kagh-lo  
kaik-o  
kail-o  
kait-o  
kal-yo  
kamb  
kan  
kaneb  
kap-ot, kap-olo  
kap-yo  
kar > kar-dho, kar-kar-o  
karp-o  
kau > kauk-o, kauc-o

hew wood  
hollow > bone, reed, stalk  
high, heap  
hind (hornless)  
limp, march  
skeleton  
cherry, red fruit tree  
hart, cerf (cf. horn)  
hide, conceal  
(h)lade, load, place  
clamor, (h)laugh  
close, exclude > (key)  
steal, thief  
clean  
shinbone, ham  
gnat, (h)nit  
nut  
hook, claw  
hip, coccyx, vertebra  
split wood  
neck  
with, together; against  
war, army, reprisal  
hazel  
bone, rib  
sense > hear, acoustic  
sense > pay attention, show  
heap, accumulate  
bird calls, croak, cough  
onion, garlic, (h)ramp  
meat, raw, blood  
with  
kill, harm, cten- (cf. phthisis)  
possess, reside > home  
grasp, catch  
hare  
bark, bay, weep, howl, babble  
left  
salmon, lox  
lake, puddle, hole  
desire, lust, wanton  
reach, climb, surmount  
lip  
lie, lay  
light, easy, swift  
let, allow, lenient  
lick (cf. tongue = \*denġhu)  
grease, glue, adhere  
lumbar  
long

kau > kau-yo, kau-dh  
kau > kav-o, kau-lo  
kauk-o  
kem-o  
keng  
kenk-lo  
keremus-o  
kër-vo  
keudh, kūdh  
klādh  
klag, klak  
klāv-i, klau-dh (?)  
klep-t  
klūd-o  
knā-mo, kon-mo  
kneid-a  
knū > (k)nūd, (k)nūk  
kog-...  
koks-o  
kol  
kols-o  
kom, kon-ter  
kor-yo  
kosel-o  
kost-??  
kou > (a)kou-s  
kou > kov-eyo, s-kou-yo  
koup-yo  
kra..., k.r.k  
krem-s-o  
krov-yo, krov-i, kroiv-o  
ksun  
kten-yo  
kti(n) > ktoi-mo, kti-tu  
la(m)bh  
lagus-o, algus-o (?)  
laH  
laiv-o, lav-yo  
laks-o  
lak-u, lag-u  
las-yo  
lë(n)ġh  
leb-a  
legħ  
leg<sup>w</sup>h-u  
leH > lēd, lēn (?)  
leiġh  
leip  
lendh-o  
lëngħ-o < d.IH.gh-o

desire, love, enjoy  
people, free, grow  
tell a lie  
light, illumination  
leave  
linen  
play  
wash, lye, lather  
foliage, leaf  
lea  
loosen, solve, dissolve  
louse  
soft, mild < milled  
mill  
milk  
dead, death, murder  
die  
forget  
not  
can, may  
boy, girl  
neck, mane  
mark, margin, border, road  
ocean  
mare  
mother  
me (oblique form)  
mix, mingle  
crush  
honey, mead  
amid, middle  
much, big, mega-  
measure (cf. moon, month)  
moon, month  
measure, merit  
mix, mingle  
deception, evil, mal  
multi, melior, μαλα  
blue-black, painted  
meat  
remain  
remember, mind  
boy, girl (cf. mortal)  
submerge, plunge  
micturate, uninate  
mist, fog, rain  
diminish > minor  
wage, reward  
speak incoherently  
mutual exchange, common

leubh-yo  
leudh-o  
leugh  
leuk  
li(n)q  
līn-o  
loid, lUSD (?)  
lou  
loubh-o  
louk-o  
lū, lūs  
lūs  
m.l.\_ > m.l.-dho, m.l.-du  
m.l.\_ > m.l.-yo  
m.l.g > lact-o, galakt (?)  
m.r.\_ > m.r.-tó, m.r.-dhro  
m.r.\_ > m.r.-yó  
m.r.s  
mā  
magh  
maghu, maqu  
man-yo  
marg-o  
mari, mori (?)  
mark-o  
māter  
me  
me(n)gh  
me(n)k  
medh-u, mel-i  
medhy-o  
meĝ-o, meĝ-lo, moĝ-no  
meH > med, met, mēr  
meH > mēn-s, men-ōt  
meH > mēr-éyo  
meisk = meiks  
mel, mol, mal  
mel, mol, mal  
melan-ó  
mems-o, mens-o  
men  
men > me-men, men-ti  
meryo-ko  
mesg > merg  
mi(n)ĝh  
mi(n)ĝh > miĝh-lo  
mi(n)H > mein-o  
misd-o  
mluH  
moin



fur, hide  
much, many  
soon  
ant, pis-mire (cf. worm)  
marrow, brain  
moss, wet  
mucus, blow the nose, nostril  
mute, mystery, mutter  
moo  
mouse  
fly, midge, mosquito  
granny, nanny  
water  
nose  
not, un-  
attain, carry  
fog, heaven  
kidney  
lead  
nephew, grandson  
man, strong, andro-  
need, be necessary, use  
nine  
new  
wash, clean  
nether, down  
nest < sit down  
navel  
kill, harm, be noxious  
nail  
naked  
night  
name  
we, us (oblique forms)  
now  
eight  
swift  
smell  
fire  
one  
forearm, elbow, ulna  
raw, uncooked  
shoulder  
anoint  
snake, eel, ophidian  
eye  
raise, rise, ortho, arduous  
eagle, erne  
orphan, heir, worker  
testicle, male

mois-o  
mongh-o  
moqs  
morvi-ko  
mosġ-o > marg-o  
mos-o, mosk-o  
mu(n)g > muk-ter  
mūd-yo  
mūk, mūg-yo  
mūs  
mūs-a, musk-a  
nan-a, ann-a  
nār-o  
nās-o  
ne  
ne(n)c, no(n)c  
nebh > nebh-ēs, nebh-lo, ombh-ro  
neg<sup>w</sup>h-ro  
nei  
nep-ōt  
ner-o  
neud  
nev.m = enev.m  
nev-o  
ni(n)g<sup>w</sup>  
ni, ni-ter  
ni-sd-ó  
nobh > nobh-o, ombh-lo  
noc ... -(é)yo  
nogh > nogh-lo, onogh  
nog<sup>w</sup> ... -ó, -nó, -tó  
nokt, neq<sup>w</sup>t  
nomen = onomen  
nos, n.smo  
nūn  
oct.m, octo  
ōc-u  
od-(é)yo  
ogn-i  
oin-o  
olena  
ōm-o  
oms-o  
ong<sup>w</sup>, ong  
ong<sup>w</sup>h-i, og<sup>w</sup>h-i  
oq-o  
or ... -yo, -nu, -sko, -dho  
or > or-no, or-lo  
orbh-o  
orġh-i

arse, tail, thigh, buttock  
mouth, oral  
branch, twig  
ash tree  
bone, rib  
aurochs, bison  
ear  
sheep, ewe  
egg (cf. bird = AVI)  
fill  
full, complete  
plural, poly-  
folk, plethora, plebs  
feel, palm, finger  
field, flat, plain  
before, ...  
first, prime  
pass through  
fasten (fig. binding promise)  
fall, fall upon  
feed > fodder, pabulum  
feed > shepherd  
fire  
father  
few, small, child  
livestock, property  
chest, wing, flank  
axe (weapon)  
skin, pelt  
five  
cook, digest  
fart  
oak, fir  
heel  
last year  
penis  
fly, dart  
fern  
feather, wing  
paint, color  
pound > sand, dust  
pound > pestle  
fat (substance)  
fish  
beat; weep, complain (fig. beat breast)  
plait  
swim, float, flow  
flea  
sneeze, pneuma  
foot

ors-o  
ōs  
osd-o  
os-ko, os-no, os-i (?)  
ost-i  
our-o  
ous  
ov-i  
ōvi-o, oi-o (?)  
p.l.H<sup>1</sup> > p.l.(n)H  
p.l.H<sup>1</sup> > plē-nó, plē-tó  
p.l.H<sup>1</sup> > pol-ú  
p.l.H<sup>1</sup> > pol-yo, pol-ko, plē-dho  
p.l.H<sup>2</sup> > pāl, pala-ma, pāl-ko (?)  
p.l.H<sup>2</sup> > plā-nó, p.l.-tó, p.l.-tú  
p.r.\_ > per, pro, prai  
p.r.\_ > per-mo, prī-mo  
p.r.H > pera, por-tó  
pac, pa(n)g  
pad  
paH ... -dhro, -dhlo, -no  
paH > paHs  
paH-v-R/N  
patér  
pau ... -ró, -ko  
pecu  
pekt-o  
pelecu  
pel-to, pel-no  
penqe  
peq  
perd  
perq-o  
persn-a  
peruti  
pes > pes-no, pes-lo, pes-ēs-  
pet  
pet > pern, papart, pterid ...  
pet > pet-tro  
pi(n)ĝ, pi(n)c, peic, poic  
pi(n)s > pē(n)s-o  
pi(n)s > pis-tlo  
piH-v-R/N  
pisk-o, pisk-i  
pla(n)g, plāk  
plec-t  
pleu  
plūs-a  
pneu-s, sneu-s  
pod

drink  
pale, pallid, fallow  
foal, young  
path, bridge (2)  
piglet, farrow  
after, post  
master, husband  
ask, request  
be friends, be at peace  
freeze  
against  
sneeze  
fight with fists, puncture  
purify, cleanse  
foul, stink, rot, pus  
make, create  
worm  
body, midriff  
cut, shorten  
and (enclitic)  
four  
who, what  
price, penalty  
circle, wheel  
buy  
regulate, direct, reach  
ruler, rex, reich  
righteous, upright  
reach, arrive  
darkness, erebos (cf. ARĜU)  
discuss, reason, converse, count  
item of property  
tear, cut, scratch  
ride  
rigid (cf. REG)  
rope, rod  
weep, wail, roar  
red, ruddy, erythro-  
belch, eructate  
run, flow  
wheel, ride, chariot  
rip, rob, rive, rift, bereave  
care, love, respect, guard, sorrow  
seek, follow  
sun  
salt  
summer  
understanding  
satisfied, perfect  
sit, set

poH, pib, pi(n)  
pol-o  
pōl-o  
pont-o  
porc-o  
pos, pos-ter  
pot-i  
prec-sk  
prei  
preus ... -to, no, vo  
pro-ter, pro-ti  
pter, ster  
pu(n)g  
puH ... pu-tā, pu-ro, pu(n)H  
puH ... pu-téyo, pu-yo, pu-lo  
q.r.\_ > qer  
q.r.m-i = v.r.m-i  
q.r.p-o  
q.r.t = s-k.r.t  
qe  
qetv.r  
qo, qi  
qoin-a  
qol-o, qoql-o  
qri(n)H  
reg  
reg > rēg, rēg-én  
reg > reg-u  
reg > rēig > rēnk (?)  
reg<sup>w</sup>-ēs-  
reH, rē-dh  
rei  
reic  
reidh  
reig-ó  
rēsg-o  
rēud  
rēudh-o, -ro  
rēug  
ri(n)H, ri-nu  
ro-tó  
ru(m)p, roubh  
s.r.gh, st.r.g, st.rH.g (?)  
sāg  
saH-v-L/N, sāvel-yo  
sal  
sam-ro  
sap-yo  
sa-tó  
sed > sed-(é)yo, si-sd

be victorious  
sow > seed  
cut, saw, section  
six  
willow, swallow  
salve (cf. slip, lipo-)  
half  
sing  
old, senior  
seven  
seek, follow; say; see  
serpent, reptile  
dry, sere, sec  
cut, cleave  
cut, shear  
cut, sharp  
cut, shear, shorten  
hollow out  
left  
jump, climb  
cover, contain (fig. sky)  
hide, leather  
cut, skin, scythe, schizo-  
shit, sharn, scato-  
shadow, shade  
slack, relax  
slip, slime, slide, slick, lapse  
cheek, chin, mustache  
smile, smirk  
remember  
stink  
small  
berry  
mess, mud, smut  
swim  
swim > boat  
snake, snail  
spin, sew > needle  
sinew, nerve (cf. sew)  
snow  
marry  
daughter-in-law  
whole, intact, safe  
with, together; without, hetero  
same, all  
that (M/F/N nominative)  
jump, hurry, be eager, frog  
look  
spit, spew  
spur, ankle > spurn, kick

seĝh  
seH > sē-men, sē-tó, se-s-  
sek  
seks, sveks  
selk-o  
selp-ēs-, solp-i  
sēmi  
sēng<sup>wh</sup>  
sen-o  
sept.m  
seq  
serp-ent  
seus-o, seus-ko > ses-qo  
s-k.l.p  
s-k.r.\_  
s-k.r.p  
s-k.r.t  
skabh  
skaiv-o, skav-yo  
skand  
s-keu  
s-keu > s-ku-tó  
ski(n)d  
sko-R/N  
skot-o  
s-lāg, langu  
s-leim, leib, lab  
s-mac-ro  
s-meī > smeil, meid, meir  
s-mer, me-mor  
s-merd  
s-mol-o  
s-mor-o  
s-mūd-o  
s-naH  
s-naH > naH-u  
s-neg-o  
s-neH > s-nē-dhlo  
s-neH > s-nēv-R/N > s-neu-ró  
s-neig<sup>wh</sup>  
s-neu > neubh, numbh  
s-neu > s-nus-a/o/u  
solv-o  
som, son-ter  
som-lo  
sos, sa, tod  
s-p.r.gh > s-pre(n)gh, s-pru(n)g  
s-pec  
s-peiv > spyū, stiv, ptu  
s-per(n)

spray, sprinkle (cf. strew)  
spleen  
foam (cf. spit)  
arse, tail, thigh, buttock  
whale  
nose  
stream, flow  
star, stella, aster  
scatter, strew, extend  
stand, stop  
establish, support  
steer, taurus, bull  
thatch, cover  
step, stamp, trample  
stick, puncture, prod  
climb, march  
(st)locus, stall, stela, stool  
resound (cf. thunder)  
strong, strict  
scrape, shave  
arrow  
thrush, starling, stroutho-  
storm, turbulence, twirl  
self, own (cf. TU)  
suck, suckle  
sow, swine, hog  
be fertile, give birth > son  
sweet, pleasant  
father-in-law (husband's father)  
sweat  
sleep  
sister  
so, as, thus  
sound, swan  
swarthy, black  
sew  
suffer, bear, carry  
speak, interpret, loquacious  
rub, abrade, attrite  
pull, drag, touch  
through, cross, terminus  
thorn  
twist, turn, torque > spindle  
thirsty, dry, terrain  
touch, take  
thaw, digest  
silent, quiet, tacit  
heel, sole, flat surface  
daddy, uncle  
silent, quiet

s-per-yo  
s-plēġh-én  
s-poim-o  
s-pūg-a  
s-qal-o  
sren  
s-reu > sreu-mo, reiv-o  
st.r.\_ > ster-lo, ster-no  
st.r.H > st.r(n)H, st.rH.(nu)  
staH  
staH > stabh, stambh  
s-taur-o  
s-teg-o  
steib  
s-teig  
steigh  
stel-o  
s-ton  
strē(n)g(h) (?)  
streig  
strēl-o  
s-tro-sd-o  
s-tver-mo  
su, sv-o  
suġh, suc  
suH  
suH > suH-nú, -nó, -tó  
svād-u  
svecur-o  
sveid > svoid-ó, -ró  
svep  
svesor  
svō, svei  
svon  
svord-o  
syu > seiv  
t.l.H > tlā, tol-yo, tul-yo (?)  
t.l.q  
t.r.\_ > ter-yo  
t.r.gh  
t.r.H > ter, trā  
t.r.n-o  
t.r.q  
t.r.s-o  
ta(n)g  
taH  
tak-o  
tāl-o, talamo  
tat-o, att-o, tei-o  
taus-o

thick, dense  
flow, rush  
beget (fig. flow from source)  
weaving, carpentry, techno, textile  
axe  
dark, darkness, tenebra  
cut  
tense, stretch  
heat, tepid  
people, total population  
possess > home  
kill, harm, cten-  
that (oblique)  
think, imagine  
thunder  
house, beam, thorpe  
three  
tremble  
shake  
thrust  
push, strike, beat, thud  
thou, thee, thy  
swelling, tumor, thumb  
out of  
udder  
womb, entrails, belly  
upward  
accustom, learn, teach  
oxen  
tall, high  
under, over, above, up  
oven  
and then, and thus, so that  
wave (cf. wool)  
moist, cloud  
wool, hair, curl (cf. waves)  
drag, pull (cf. helix)  
wound  
fox  
wolf  
root, wort, radix  
speak > word, verb  
speak > rhetor  
worm  
height, surface, upwards  
rain, dew (from on high)  
male  
become, turn  
wield power, ruler; well, valid, prevail  
wane, want, waste, vanish, vacuum, vast

te(n)g  
tek  
tek > tok-yo  
teks  
teks-lo  
tem ... -no, -ës, -dhro  
tën-d, tem(n)H  
ten-u  
tep  
tëut-a  
t'kei > kti(n) > ktei-mo  
t'ken > kten  
to, tosmo  
tong  
ton-tro  
trab  
trei  
trem  
tres  
trūd  
tu(n)d  
tu, tv-o  
tūm > tum-ó, -ró  
ud, ut-ter  
ūdh-R/N  
ud-tero, ven-tero (?)  
uĝ  
uk, uk-(é)yo  
uks-én  
ūp, up-s  
upo, uper  
uq-nó  
ute  
v.l.\_ > vol-v, vol-na, ūl-mi, vel-ik  
v.l.g-o  
v.l.H > vel-na, vlā-na, ūl-na  
v.l.k  
v.l.n-ës-  
v.l.p-a  
v.l.q-o  
v.r.d-o > vrād-o  
v.r.H > vër-dho  
v.r.H > vrē-tor  
v.r.mi = q.r.mi  
v.r.s  
v.r.s > vers-a, vrōs-a  
v.r.sen > arsen  
v.r.t  
val > val-dh, val-tor  
van = eun, ūn

wet > wave  
wet > water, wave  
alert, wake  
convey, weight  
or (enclitic)  
blow, wind  
weave  
dwell > village, wick, eco-  
see > wit, know  
we (nominative form)  
win, love  
wish  
boar  
wasp  
speak  
be aware  
work, urge, energy  
true, trusted, verity  
evening, vesper, west  
spring, vernal < burn  
clothe > vestment  
remain, dwell > was > settlement  
price, sale, wares, goods, vend  
well, good, eu-  
year, old age, veteran  
be victorious  
apart, against  
twenty  
widow, batchelor  
forest, wood  
manly, virile, heroic  
poison, medicine  
all, same, iso  
vow  
wax  
want, will  
vomit  
you (oblique forms)  
rye  
worship, adore, holy, hagio-  
copulate  
twin  
daughter-in-law (brother's wife)  
liver, roe  
year, hour, season  
boil, brew, yeast, juice, zyme  
wheat, barley, zea  
young (having life)  
yoke  
you (nominative and extended forms)

ved > u(n)d  
ved > vod-R/N  
veġ  
veġh  
veH  
veH > vĕ-to, vĕ-ter, ven-to  
vei = vebh  
veic > vic-ó  
veid  
vei  
ven  
ven > ven-sko  
vepr-i = eper-o  
veps-a, vesp-a  
veq  
ver-(é)yo  
verg  
vĕr-o  
ves > veq-ero, vesp-ero, vest-ero  
ves > ves-ĕr, ves-ro, ves-no  
ves > ves-ti, -tro  
ves > ves-tu, αστυ  
vesn-o  
vesu, su-  
vet-ĕs-  
vi(n)k  
vi, viter  
vĭc.nti < dvĭc.nti  
vidhev-a/o  
vidhu  
vĭ-ró  
vĭs-ó  
visv-o  
vog<sup>w</sup>h-(é)yo = eugh  
voks-o  
vol-yo  
vom-(é)yo  
vos, usmo  
vrūġhi-o, rūġhi-o  
yag  
yebh-yo  
yem-o  
yenater  
yeq-R/N  
yĕr-o, yōr-o  
yes, yeus, yūs (?)  
yev-o  
yov-en, yun-ko < aiv  
yu(n)g > yug-ó  
yu, yusmo

## Classical and Etymological Dictionaries Online

- J. Pokorny, *Indogermanisches Etymologisches Wörterbuch*, 1959,  
<https://archive.org/details/indogermanisches02pokouoft/>,  
<http://indo-european.info/pokorny-etymological-dictionary/whnjs.htm>
- A. MacBain, *Etymological Dictionary of the Gaelic Language*, 1911,  
<https://archive.org/details/etymologicaldict00macbuoft/>
- D. King, *In Dúil Béirai*, (The Book of Language: Old Irish Glossary),  
<http://www.smo.uhi.ac.uk/sengoidelc/duil-belrai/>
- K. Kanga, *Complete Dictionary of the Avestan Language*, 1900,  
<http://www.avest.org/kanga/>
- Monier-Williams, *Sanskrit-English Dictionary: Etymologically and Philologically Arranged with Special Reference to Cognate Indo-European Languages*, 1899,  
<http://www.sanskrit-lexicon.uni-koeln.de/monier/>
- Liddell & Scott, *Greek-English Lexicon*, 1871,  
<http://www.perseus.tufts.edu/>
- Lewis & Short, *Latin Dictionary*, 1879,  
<http://www.perseus.tufts.edu/>
- M. Bedrosian, *New Dictionary Armenian-English*, 1879,  
<https://archive.org/details/ClassicalArmenianDictionary/>
- M. Vasmer, *Этимологический Словарь Русского Языка*, 1958,  
<http://starling.rinet.ru/>
- G. Koebler, *Althochdeutsches Woerterbuch*, 1993,  
<http://www.koeblergerhard.de/ahdwbhin.html/>
- G. Koebler, *Altnordisches Woerterbuch*, 2014,  
<http://www.koeblergerhard.de/anwbhinw.html/>