



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

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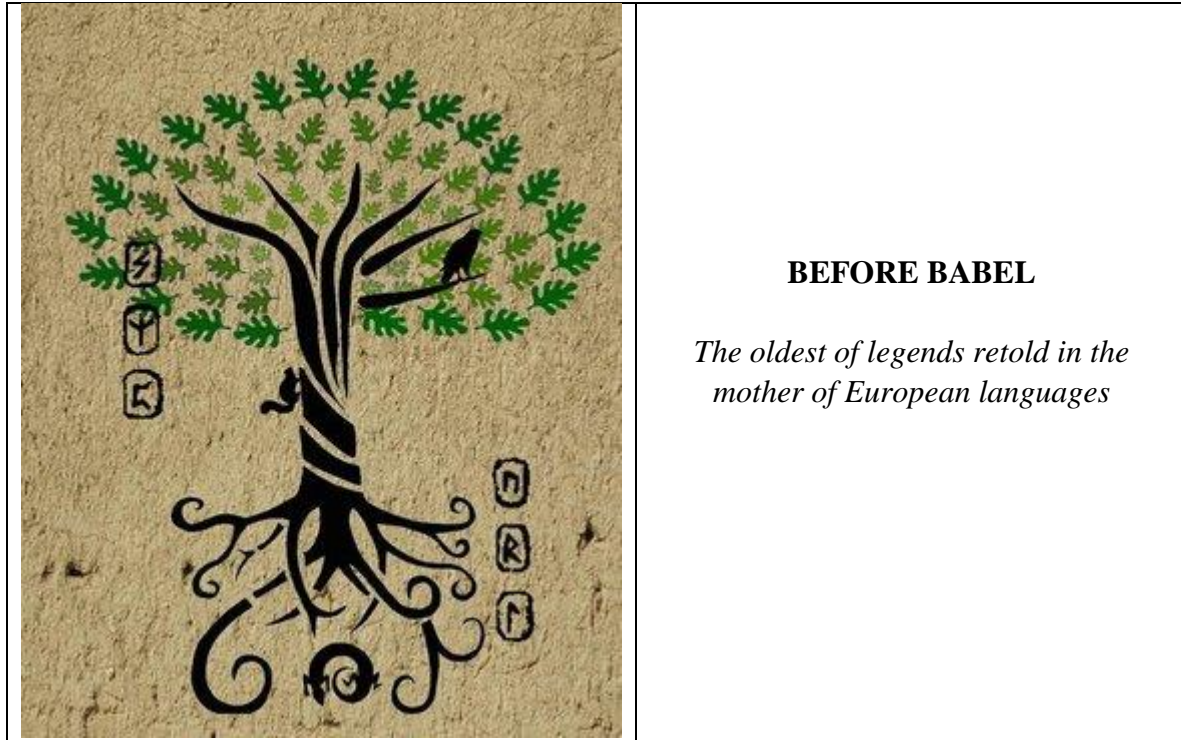


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**Before Babel: Ancient Tales from Genesis
Retold in Reconstructed Proto-Indo-European**

Bertrand C Barrois

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BEFORE BABEL

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

duende14.deviantart.com/art/Yggdrasil-The-World-Tree-59953621
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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 Schleicher's fable is clever, but his outdated theories of the proto-language were comically Indo-centric, and his little fable does not do justice to the poetic power of the language.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 Dn̥ghū'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 **Nah²u*. Might *Cain* (קַיִן), *Abel* (הָבֶל), 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.

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	<p style="text-align: center;">CREATION</p> <p style="text-align: center;">(Genesis I)</p> <p style="text-align: center;">The Earth was without form and void ...</p>
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In the beginning, God created the Heavens and the Earth.

protemō q^woret Deivós nebhesa dheġhom(m)-q^we

- pro-tem-ō = first -- inst-sg of superlative used as adverb. (Superlative suffixes include **temo, mo, isto, istimo*.)
- q^wor-et = he made -- weak-grade aorist from root **q^wer* > 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* = γενοϝ/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^we temos bhevet

- bhudh-noisu = bottom, fundus, πυθμην -- loc-pl > Sanskrit *budhnesu*
- tem-os = darkness -- nom-sg of abstract neuter **tem-ës*
- reg^w-os = darkness, ερεβοϝ -- 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*, ανεμοϝ, *anilam*, *anāl* (Old Irish)
- Synonym: *ātman*, ατμοϝ, *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^we voq^wet Deivós -- bhevoit leuks ute bhuvet leuks

- nūn = now
- q^we = and -- enclitic conjunction used in simple lists
- voq^w-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^we q^wod kalya

- vid-et = he saw -- weak-grade aorist of root **veid*
- q^wod = that -- subordinating conjunction
- kalya = good, beautiful -- nom-sg (F) > Greek *καλλη*

and he separated the light from the darkness.

skidet-q^we 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^we 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*, *dheġh*, 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 *veπτ* vice *vuκτ* in Greek.)

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

vesq^weros ausos-q^we bhuvetēm-- dinos p.r.mos

- vesq^weros / 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^we voq^wet -- bhevoit açmōn udēni medhyōi

- 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^we 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^weros ausos-q^we 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^we voq^wet -- son-g^wemoit vedōr ute bhanyoit tersa

- son / som = together -- particle used here as prefix
- g^wem-oi-t = let it come -- optative > Sanskrit *gamet*, Gothic *kumaiþ*
- g^wen-y-oi-t = let it come -- optative > Latin *veniat*, Greek *βαῖνοι*
- 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, *φαῖν* = 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^we 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^we q^wod 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^wet -- bheroit t.r.sa bholya ġ.rH.na karpa-q^we

- bher-oi-t = let it bear -- optative > Latin *ferat*
- bhol-ya / dhal-ya = folia, φύλλα, θάλλα -- 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^wod kalya

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

vesq^weros ausos-q^we bhuvetēm -- dinos treitos

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

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

ute voq^wet -- 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^we

- 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^we dheHt en nebhesa luktévei dheghom(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^weros ausos-q^we bhuvetēm -- dinos q^weturtos

- q^wetur-tos = fourth -- ordinal of **q^wetvōr*

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

nūn-q^we voq^wet -- gneHskoit vedōr g^weivons

- g^weivons = alive -- acc-pl of adjective
- gneH-sk-oi-t = let it generate -- optative of an inchoative-iterative verb form, modeled on Latin root *gnasc*. The basic root is simply **gen*.

and let birds fly in the heavens."

petoiënt-q^we Hvéyes nebhessu

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

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

q^woret-q^we meg.lons og^whins peiskons-q^we em-p.IH.s(t)-q^we vod.r

- og^whins / ong^whins = serpents, ophidians -- acc-pl
- peiskons = fishes -- attested only in Latin & Germanic
- ġdhuves = fishes, ἰχθυες -- attested in Greek and Baltic
- em-p.IH.-s(t) = filled -- S-aorist, modeled on Greek ἐν-ε-πλησε

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

q^woret-q^we Hvéins mūskans-q^we vespans-q^we em-p.IH.s(t)-q^we an.mom

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

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

q^woret-q^we ġhvēr.ns serpont.ns-q^we em-p.IH.s(t)-q^we dheġhom(m)

- ġhvēr.ns / g^whēr.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^weros ausos-q^we bhuvetēm -- dinos penq^wetos

- penq^we-tos = fifth -- ordinal of *penq^we

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

nūn-q^we voq^wet -- ġneHskoit dheġhōm g^weivons

wild beasts and cattle and crawling things.

ġhvēr.ns peçuns-q^we (s)negons-q^we

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

And he saw that they were good.

videt-q^we q^wod kalyoes/oi

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

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

ut' voq^wet -- q^weroimē(n) vīróm som.lom n.sbhos

- q^wer-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^we ġhvēr.ns serpont.ns-q^we

- reġ-oi-t = let him rule

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

ute (d)ġh.m.n.ns svoei som.lons q^woret -- vīróns g^w.nans-q^we

- (d)ġh.m.n.ns = homines -- acc-pl, derived from *dheġhom (Skeleton root gets vocalized as *homines*, *gumans*, *žmones*, *doīni*)
- g^w.nans = women -- acc-pl of A-stem feminine

And he said to them, "Go and multiply,

voq^wet-q^we -- ite augsete-q^we

- 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.

reġete-q^we peisk.ns moréisyo avéins-q^we an.mosyo ġhvēr.ns-q^we (d)ġhmosyo

- 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^we karpa-q^we 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^wroHm.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^weros ausos-q^we bhuvetēm -- dinos sekstos

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

And thus the heavens and the earth were finished.

ute kom-q^w.r.toes/oi bhuvont nebhesa dheġhōm-q^we

- 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^w.r.-toes / q^w.r.-toi = made -- nom-pl of perfect passive participle from root *q^wer

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

alyo sept.mom dinom verġo(n)om antom est ute ċoieto Deivós

- sept.m-os = seventh -- ordinal of *sept.m
- verġo(n)om = of the works -- O-stem gen-pl ending varies: *ōm* / *ōnōm* / *ōsom*
- ċoi-eto = lay down -- weak-grade middle aorist from root *ċei
- 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^wet-q^we -- sept.mos dinos yağyos syēt

- eti = and also -- used interchangeably with **ute*
- yağyos = 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^weq^wore nebhesa dheğhom(m)-q^we

- q^we-q^wor-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^we ombhroes/oi dheğhom(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^we aratōr ağro(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)
- ağro(n)om = of the fields

but now a mist came and watered the ground.

ute nūn miġhla g^womet udet-q^we dheġhom(m)

- g^wom-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^we vīróm ute g^weiv.s(t) vīrós

- bhlaġh-s(t) = S-aorist of root **bhlaġh* or *blagh*
- g^weiv-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^we vīróm stelyet

- ghordom = garden, hortus
- aus-trom = east -- acc-sg, related to **aus-ēs* (dawn) from root **aus* (burn). Opposed to **vesq^wero / vespero / vestero* (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^woei karpa-q^we 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, lick -- dat-sg

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

eti dreum-q^we 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^we 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 vīróṃ en ghordhom aratrō

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

and he commanded the man, saying,

deiçs(t) vīróei, veq^wons --

- 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^wo-svō edēsi apo taēs, to-svō m.r.tos esēsi

- q^wo-svō ... to-svō = if ... then -- fanciful reinvention of conditional conjunctions. The conjunctions coined by recorded languages are not authentic models. Greek uses *εἰ ... αὖ*, 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^wet Deivós -- ne-vesū q^wod 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^we q^woret 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^we 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 āgrosyo Hvibhós-q^we an.mosyo ġhverbhós-q^we 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^we

- 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^we v.l.nom bhreusōi (s)kutō-bhi

- (s)teg-s(t) = covered, hid -- strong-grade S-aorist > Latin *texit*, 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^woret-q^we ap' ostéis g^wénam bhoret-q^we 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^wet vīrós -- sã tod ósti me(n)oet ostéyet tod krovi-q^we 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^weti vīrós patér.m mātér.m-q^we

- tosmoet = therefore -- abl-sg of extended root **tosmo* > Sanskrit *tasmāt*
- linéq^w-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^we = father and mother -- acc-sg. Accent shifts in weak cases.

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

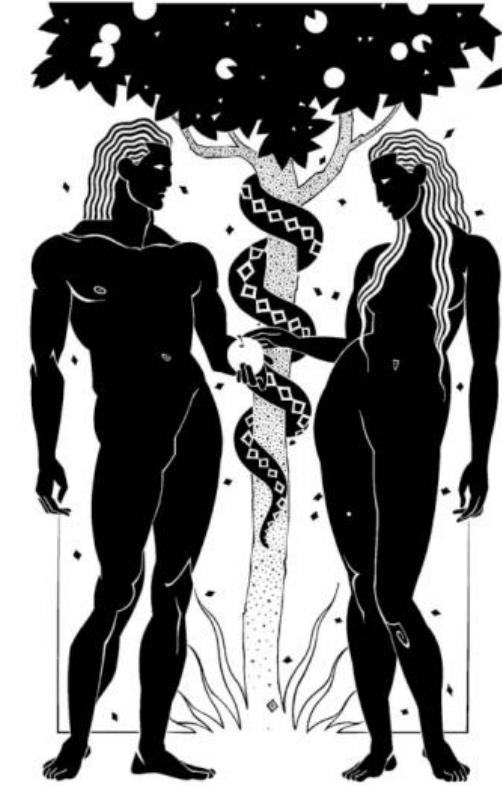
g^w.náei au adi gloiēti ute yugóm bhevōnti

- 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^we

- 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^w.tō estēm alyo ne ġnoHtēm

- nog^w.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^whis = 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^wet-q^we g^w.náei -- proti-dedoīçe Deivós estum apo druōm ghordhoi

- 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^wet g^wéna og^whéyei -- 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 oīnam dreum medhyōi

- oīnam = 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^wet alyo og^whis g^w.nāei --

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

ne g^wdhinéHetēs ghe -- Deivós ġnoHti q^wod (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^wdhiH-sy-etēs = you will perish, decline -- 2nd-dual S-future of root *g^wdhiH > Greek *φθίσετον* (active) or *φθίσεσθον* (middle)
- g^wdhinéH-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^wōis, bheusyetēs-q^we deivō, ġnoHsyetēs-q^we vesum deusom-q^we

- 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^wéna (ve)vidusia q^wod bhereti dreus su-karpa eti oq^woibhos svāduṣ est

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

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

ġnoHtim ġhoryonta-q^we labhet g^wroHt-q^we 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*
- ġ^wroH-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^we sa ablom vīróei bheids(t)-q^we sos

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



and they saw, and they knew their nakedness,
ute videtēm ġnoHtēm-q^we svom nog^w.tum

and they sewed clothes from leaves.
sivetēm-q^we 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 ġ^wéna-q^we 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^wosmi essi ?

- ġhv-et = called out -- weak-grade aorist of root *ġhve-yë
- q^wosmi = where? -- cf. *q^woter = whither?

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

voq^wet-q^we 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^wosmoet nog^w.tos esmi ute kekudha

- bhe-bhoi-Ha = I have been afraid -- 1st-sg perfect of root *bhei
- q^wosmoet = because, why? -- abl-sg of extended root *q^wosmo
- 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^wet Deivós -- q^wis dedoiçe q^wod nog^w.tos essi

- q^wis = who? (M/F)
- q^wod = what? (N)
- q^woteros = 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^wet-q^we Deivós ġ^w.náei -- q^wod 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^wet-q^we ġ^wéna -- apo-dedouke me og^whis 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^wet-q^we Deivós og^whéyei

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

svō-q^we dhidheHta ute pecévōm ġhvērōm-q^we 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^we (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^wénam tve-q^we dhidheHōmi enter tvons suHtóns svons-q^we 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 ġpi steibēti sperneuti-q^we svam persnam-au g^whenēsi

- kapot = head -- acc-sg (N) -- O-grade in NAV cases, E-grade in "weak" cases
- ġpi / opi / ana = upon, onto (dynamic) -- with object in accusative
- steibh-ēti = he shall step -- subjunctive > Greek *σταιβηι*
- 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^when-ēsi = thou shalt injure > Sanskrit *hanasi*, Latin *de-fendas*

And God said to the woman,

voq^wet-q^we Deivós g^w.náei

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

g^wherbhosyo g^wolóm augéyōmi eti sununs g^woló-bhi tokyēsi

- g^wherbhosyo = of the womb -- gen-sg
- g^wolóm = pain -- acc-sg, derived from verbal root **g^wel-yē*
- g^woló-bhi = with pain -- instrumental construct
- tok-y-ēsi = thou shalt bring forth -- 2nd-sg subjunctive of **tek-yē* > 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^wet-q^we vīróei

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

q^wosmoet çeçluta g^wénam ededta-q^we apo druēs

- çe-çlu-ta = thous 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^w-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^wom vertēsoi (d)ġhomóei

- dō-q^wom = until -- Inversion of *q^won-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^wenam Hava, q^wosmoet 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^wet-q^we -- bhebhúve oinoei n.sōm som.los, vesum deusom-q^we 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* < **ḡsmōm*

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

svō-ne ghrebhnuyēt karpa apo druēs ute bhevoit-q^we 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^weivoit-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^we speċtōr.m austrōi

- aĝ-oi-më(n) = let us drive -- 1st-pl optative > Latin *agāmus*
- *aĝ originally referred to driving goats, hence *aĝyos > αἶζ
- 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^we druëi 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^we son-çoi-onto ute suHnéum ĝneHtëm

- Atta = Adam, Daddy
- Hava = Eve, Ancestress -- possible related to Hebrew חוה
- 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^wet-q^we Hava -- q^weq^wriHa 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^we-q^wriH-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^woinom ap' ačréus q^woinoet ghordhoi

- q^woinom = price, ποινη, цѣна -- acc-sg (M)

And in the second summer, she bore his brother.

ute anteröi samröi-q^we 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 karpōet ghordhöi

- The name Abel (הבל) 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^woinos 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^woinos Potéyei aratósyo karpons

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

but Abel brought a firstling of his flock.

Ablos au pečēvōm g^werbhom

- g^w.r.bhom / g^w.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 ĕpi Ablom donóns-q^we vortet-au apo Q^woinoet

- smei-s(t) .. ĕpi = smiled upon

To Cain he said -- Why are you angry?

Q^woinóei voq^wet -- q^wosmoet anĝhus essi?

- q^wosmoet = why, whence? -- abl-sg of extended root *q^wosmo
- anĝhus = angry, anxious, narrow
- g^w.r.H-us = heavy, (fig.) sad

If you act well, then you will win.

q^wo-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) > *αῖεῖ*
- 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 *sūrṣ*, Greek *στεργ*, Russian *срoж*

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

q^wo-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^wh.l.H-yē-si = you will desire > Greek *εθελῆσεις*, 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^woinos bhrātrei voq^wet -- g^weme -- iyēvē(n) aratóm

- g^wem-e / g^wen-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^whonet senyōs yunyos.m

- (y)ei-vos-ē = having gone to -- nom-dual, nominative absolute
- g^whon-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^wet Deivós -- q^wosmi bhrāter?

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

voq^wet-au Q^woinos -- ne memena -- esmi eġo 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
- eġo = 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^wet-q^we Deivós -- bhrātrēs esar ġhvēyeti pibusēs aratōet

- esar < esH-R/N = blood -- nom-sg (N), declines like *vod-R/N
- ġhvēyeti / ġheveti = call out > Sanskrit *hwayati* / *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^won-dō aratóm kersēsi, ton-dō tve ne paHyēti

- q^won-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-ġhenġheHyēsi-q^we dheġhom(m)

- bheug-ē-si = thou shalt flee > Latin *fugas*, Greek *φευγῆς* (dialectical root)
- ġhe(n)-ġheH-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)ĝhémi avaugér

and had begotten daughters,
ĝeĝonér-q^we dhughátr.ns

and the sons of God had seen
ute deivósyo suHnéves vevidér

that the daughters of men were fair,
q^wod vīro(n)om dhughátres kalyaes

and had desired them and chosen wives
ute lelasér ĝeĝusér-q^we g^wénans

and begotten Nepotes.
ĝeĝonér-q^we 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-yě* 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 *nert*)

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

nūn-q^we voq^wet Deivós -- vīrós krovyos

- voq^w-et = he said -- weak-grade aorist

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

m.r.tós esti alyo g^weivēti ċ.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^wod (d)ĝhomikoes/oi deivikoes/oi-q^we dusmónes bhuvont

- (d)ĝhom-ik-oes = earth-men -- Alternatively: **ĝdhom.loi* > *χθαμαλοι*
- deiv-ik-oes = sky-men, god-men
- dus-món-es = enemies

So he was angry, and he said,

ut' anĝhstor voq^wet-q^we

- 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^we (s)negons Hvéins-q^we

- noç(e)y-ōmi = I shall destroy

But God loved Noah.

alyo Nahu-potim Deivós lubhyet

- Root **naHu* < ***neh²u* -- possible source of Hebrew name NWH (נֹחַ)
> Greek *vaŭç*, *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^we q^wod 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^wet Deivós Nahu-potéyei

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

tong(e)yō antum g^weivons 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^whentéus p.lH.na

- g^when-téu-s = of violence killing, injury -- gen-sg of supine > Latin *de-fensū*
- p.lH.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^were 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^we gleio-bhi

- limpe = smear -- imperative
- Synonyms: **ong^w*, **selbh* / *selp*

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

bhalanġs tri-ç.ntom olénans d.lH.ġhos syēt, tri-dec.m-q^we olénans ordhos

- bhalanġs / bhalaġnos = beam -- nom-sg
- d.lH.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^we 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^weivons 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^w.nā som suHnubhís-q^we snusabhís-q^we

- som / kom = together with
- g^w.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^weivo(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 ...

- aġyos / capros / ghaidos = goat
- ovis / ag^wnos = sheep, lamb
- g^wous / stauros = cow, steer
- porços / sūs = pork, sow
- çvōn = hound, canis

of walking and running, flying and crawling things,

ġhenġhontōm dromontōm-q^we, petontōm serpontōm-q^we

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

of male and female animals, wild and tame.

orġhilōm dhēlevōm-q^we, ġhverōm damo(n)ōm-q^we

- The gen-pl ending does not always draw the accent. O-stems bear static accent.
- dhēmena = female (sucklable)
- dhēlévia = female (with nipples)
- orġhilos = 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 -- ġ.rH.na bhabha-q^we karpa vrāda-q^we

- 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^wod 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

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

I have seen that thou art righteous.

vevoida q^wod 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^wtós = washed -- from root *ni(n)g^w
- klustós = washed -- from root *klud

and one pair of unclean animals,

ne-çvento(n)ōm-q^we oinom yugóm

and seven pairs of the birds,

Hveyōm-q^we sept.m yugá

male and female,

v.rsen dhēlu-q^we

- 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^weivoiēnt ġenesa niq^wai (d)ġhemī

- niq^wai = washed -- loc-sg (F) to agree Earth (F)
- ġen-es-a = kinds, genera -- nom-pl of abstract neuter *ġen-ēs
- g^weiv-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)ġhméi v.r.sam bherōnti monġhons dinons nokt.ns-q^we

- monġhons = 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 *varṣam*

and all living things shall die.

ute moryōntoi g^weivoes/oi toutoes/oi

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

And Noah did what the Lord had commanded.

ute dheHt Nahu-potis q^wod dedoiçe Deivós

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

ombhroes/oi g^wēnyont v.r.sa-q^we ni-g^womet mori-q^we orset

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

and the earth became invisible,

dheġhōm-q^we 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^worans viçēnti olénans bhudhnō

- (s)tog-et / (s)teg-set = hid, covered > English *thatch*
- (s)kov-et = hid, covered > English *sky*
- g^worans = mountains -- acc-pl (F)
- viçēnti = twenty

And all living things on the dry land perished,

moryontoi g^weivontes toutoes/oi tersai

and beasts, birds, and serpents were no more.

ne bhuvont-q^we ġhvēres avéyes-q^we serpontes-q^we

But God remembered Noah and the cattle,

alyo memenet Deivós Nahu-potim peçéum-q^we

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

so a wind came, and the clouds left,

ut' ventós g^womet ombhroi-au liq^wont

- ventós / veH-tós / véH-tor = wind
- liq^w-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 deçmõi meHnesi bhanont g^woraes

- 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^we

- seusom / seuskom / sesq^wom = dry -- acc-sg
- vort-etoï = he returned

so he let loose a second bird,

ut' anterom Hvëim 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^wod liq^wet mori

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

ute liq^wont nāheum Nahu-potis g^wéna-q^we suHnéves-q^we snusáes-q^we peçéves-q^we

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

diçset-q^we Deivós -- ité augsete-q^we p.lH.néHte-q^we dheĝhom(m)

- p.l.néH-te -- with nasal infix > Sanskrit *prṇāta*
- p.lH.-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^we

- 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*, *σπαργω*, *stru(v)o/structus*.

and God having smelled the pleasant smoke,

Deivós-q^we 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^wet-q^we bhreusōi -- n' anterom upo-plevōmi tersam ktenyōmi-q^we g^weivons

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^won-dō (se)seHēsi karpēsi-q^we samróm ĝheimró-m-q^we

- (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^we voq^wet Deivós -- paçoimedha

- The following verbs are all 1st-pl middle optatives:
- paç-oi-medha = let us make a pact > Latin *pangāmus*, Greek *πηγννοιμεθα*, 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^won-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;">TOWER OF BABEL</p> <p style="text-align: center;">(Genesis XI)</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)ġhomikoes/oi oinam denġhúm pava-au vërdha ġnoHnt

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

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

t.rH.sont austroet viġsënt-q^we 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*
- veġ-sënt = they settled -- strong-grade S-aorist of root **veġ* > Sanskrit *avekṣīt*

And formed clay and baked it and said,

gloiom dheiksënt peq^wsënt-q^we voq^wont-q^we

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



"Come, let us build ourselves a city,
g^wemete dhidheHyēmē(n) vestum

and a tower with its head in the heavens,
ordhom bhorġhóm-q^we 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^we niter eisēnt Deivói derġtévei vīrōis q^w.r.tóm vestum bhorġhóm-q^we

- ni-ter = down, nether
- ei-sēnt = they went -- strong-grade S-aorist > Greek *ἦσαν*, Sanskrit *aiśus*
- derġ-tévei = to see -- dat-sg of supine from root **derġ*

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

voq^wont-q^we -- derġete, oina touta s.ńti

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

and they speak one language,

oinam denġhúm veq^wonti

- *Tongue* is feminine when used in the specific sense of *language*.
- veq^w-onti = they speak -- 3rd-pl present > Doric *ῥεποντι*, 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 *θεμάτων*
- bhe-bhuv-ér = they have become -- 3rd-pl perfect > Latin *fuērunt*

whatever they want to do, they attain.

q^wod dheHtum volyonti, tod dheHtum maghonti

- dheH-tum = the doing -- acc-sg of supine
- vol-y-onti = they want -- 3rd-pl present of root **vēl-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^wemoimē(n) -- ni-skandoimē(n) çadyoimē(n)-q^we bhorġhóm

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

and mix-up language to the humans,

miskoimē(n)-q^we denġhúm (d)ġhomikoibhos

- misk-oi-mē(n) = let us mix

that one may not grasp the speech of others."

ute ne ghrebhnuyēt oinos alyo(n)ōm voq^wóm

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

ute st.rH.sënt deivoes/oi (d)ġhomikons t.rH. dheġhom(m) -- austroei vesq^weroei-q^we

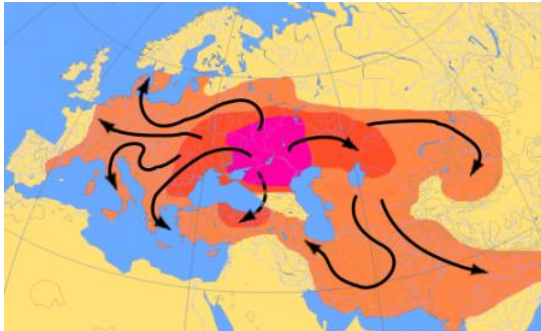
- st.rH.-sënt = they scattered > Greek *εσπορσε*
- st.rH.-et -- alternative aorist > Sanskrit *astarat*

and left the city.

ut' vestum liq^wont

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>bhlaġhoit an.los tom Sont.m Dġhems-pótim ō Dġhems-póti Dyeu-páter meġistos essi tu lukē-bhi ċlevesē-q^we vestós tu dyeum tetonta svō skevom tu bh.l.ġnons 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.ġont dhidhēsi bhlaġhmon.m</p>	<p>bhlaghāt anima eiom Sontem Ġhom-potim ō Ġhom-poti Dyu-pater megistos ess tu luke clutate-q^we vestos tu dyum tetenesta svei skevōd tu trabens aq^wam tetegesta tu ombhrons yunges svei rotōd tu ventois ambhi-trās svei petrois tva verdha ventos bherť tu ognim bhlegontem dhakyes bhlaghmenem</p>
<p>tu dheġhom(m) bhudhnóm adi dhidhēta ute sa ne tremoito (tresoito) (s)tetogta tam mori-bhi svō vestrō vedōr k.l.noisu uper staHť açuēs tvoet v.rH.dhoet apo bhog^weto tontroet apo bhog^weto H.r.s.nt g^woreyes ni-sdontoĩ-qe p.l.téves adi diċtóm stolóm eti ne-t.rH.menom morgom dhidheHta ute n-anterom upo-plevēti mori tersam</p>	<p>tu ġhomom bhundhom adi dhedhakesta ut eia ne tremāt tetegesta eiam marīd svē vestrōd aq^wa kolnoisu super stāt acūd tvōd verdhōd apo bhūget tonetrōd apo bhūget orsont ardhoi sup-sedontor-qe plānoi adi dictom stlokom eti ne-trāmenom margenem dhedhakesta ute n-anterōd sub-mezgēt mari tersam</p>
<p>bhreuna loukoisu ghevonti ċloinoisu srevonti (rinéHnti) p.l.téves ġhverbhós poHm.n didoH.ńti eçvoes terstum satyontoi Hvéyes veĩonti 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 ġ^wherebhos 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 ġ.rH.na-qe ute arayēt (kersoit) vīrós aġróns ute bheryēt karpa apo tersaēs poHm.n yestóm ute ċerd sperghoit Hbhrūs-qe smeyoito bh.l.ġéyoito-q^we paHtum-qe ute q^werpom Hnerom syēt</p>	<p>augéyes pecubhos bholya ġrāna-qe ut arēt vīros aġrons ute bherāt karpa tersād pōti(one)m bhervitam ute cord sperghāt bhruns-qe meisātor bholgātor-q^we pādhlom ute q^worpos nertom syēt</p>
<p>Pergonos meġ.loes dreuns polHu unésti bh.rH.ġaes aiġoes-q^we augsonť Hvéyes nisdóns medhyōi dhidheH.ńti (s)trozdoes perq^woisu veĩonti açrons karkarons ghaidoes kteionť eti çasobhos bhorġhoes s.ńti</p>	<p>Vorsānos magnons druns plēnōd undet bhrāġenoi aiġoloi-q^we augsonť avīs nisdons medhiōd dhidhent trozdoi perq^woisu veicont ardhons karekons ghaidoi ksinont eti casobhos bhorktoi sont</p>

<p>meHns.m dhidheHta meHtévei samrons saHul (saHvelyos) vesq^werom ênoHti temos dhidheHta ute bhevoit nokts q^won-dō ghrabhoet g^w.mskónti êhvēres visvoes v.l.q^wikoes memsoet ap' vertonti reudonti-q^we deivoet pre(ç)skóntes qon-dō saHul H.r.skétoi austerōi ton-dō i.ńti çeubdhum (çeitum) (lēgdhum) vīros-au aêrons eiti vergeti-q^we do vesq^werom</p>	<p>mēnsem dhedhakesta metūi ves(ro)ns soul vesperom ênōsket temedhrons dhedhakesta ute bhevāt nokts q^won-dō ghrabhōd g^wenyont g^whēres toutoi luq^wikoi memsōd ab-vertont reudont-q^we deivōd precontes qon-dō soul oryetor austrei ton-dō eiont cubhitum vīros-au aêrons eit verget-q^we ad vesperom</p>
<p>ō Dyeus-páter tva verêa mongha m.ńtī-bhī tvā solvom vevorkta dheêhōm tvo(n)ōm ktiménōm p.lH.ná g^weivo(n)ōm p.lH.ná tosmi au meê.lom mori esti ne-rēdhomnōm dêhuvōm p.lH.nóm g^weivo(n)ōm meê.lōm meinōm-qe meê.loes og^whiyes nāHeves-qe tosmi snaH.ńti dhidheHta ute skandoient v.l.moisu</p>	<p>ō Dyū-pater tva vorga plēra mentīd tvād olnom vevorgesta tersa tvo(s)ōm (k)seimenōm plēna g^weivo(s)ōm plēna totēri au magnom mari est ne-rēmenōm piskōm plēnom g^weivo(s)ōm magnōm meinōm-qe magnoi anguyes nāves-qe totēri 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^we tersa</p>	<p>toutoi tubhi dercont bhraktōns (dī)dās samroisu qon-dō (dī)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 novéyetor-q^we tersa</p>
<p>çlutós syēt potis en aivons aivōm satós syēt potis svoisu verêoisu dheêhōm derçeti tremeti-q^we g^worins tanékti ute toi dhūmonti g^w.rH.emi potim svō d.lH.ghū g^weivōmi seng^whōmi potéyei svō d.lH.ghū aivōmi svādus svō medhu syēt voqs me(n)os êhoryōmi potim linq^wyēnt dúseves apo dêhmēs ne-reêèves-q^we ne bhevōnti (manōnti) bhlaêhoit an.los Dêhems-potim Dyeu-patér.m êhvēye svod yaêyom Hnom.n</p>	<p>clutos syēt potis en aivons aivōm satis syēt potis svois urgōis êghomos dercet tremet-q^we ocrins tanget ut eioi dhūmont g^wrātōm potim svei longhōd g^weivōm kanōm potīi svei longhōd aivōm svādūa svē meli syēt voqs mēa ghoryōm potim linqānt maloi êghomed ne-rektoi-q^we ne bhevānt (manānt) bhlaghāt anima Êghom-potim Dyū-patrem en-voq^we svod vērom nomen</p>

bhlaġhoit an.los tom Sont.m Dġhems-pótim

ō Dġhems-póti Dyeu-páter meġistos essi

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

tu lukē-bhi ċlevesē-q^we 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, ῥημα
- Synonyms connoting to carry or transport: *bher*, *tol-yē*, *por-yē*, *veġh*, *ne(n)ç*, ...

tu bh.l.ġont.m ogním (paHur) dhidhēsi bhlaġhmon.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, τρέμει / τρέει

(s)tetogta tam mori-bhi svō vestrom

vedōr k.l.noisu uper staHt

açuēs tvoet v.rH.dhoet apo bhog^weto (bhuget)

- k.l.no = hill, collis, κλον
- açu / açru = sharp, acute, acrid
- bhog^w = to fear, φοβέει
- bhug = to flee, φευγει

tontroet apo bhog^weto

- ton-tro = thunder, tonitrus

H.r.s.nt g^woreyes (açroi) (ardhoi) ni-sdontoι-qe p.l.téves (plānoi)

- H.r. = to rise, oritur, ορνυσι
- g^wori = mountain, giri, ῥοπα
- ardho = high, arduus, ὀρθος
- 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 ghevonti (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 srevonti (rinéHnti)

- çloino = incline, lean
- sreui = to flow, stream, ῥεφει
- 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 veĩçonti ambhi
garyonti osdoisu medhyõi**

- osdo = branch, Ast

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

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

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

**poHm.n yestóm (potionem bhervitam) ute ċerd sperghoit
Hbhrūs-qe smeyoito (mirāt) bh.l.géyoito-q^we**

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

paHtum-qe (paHdhrom) ute q^werpom Hneróm syēt

- paHtu / paHdhro = food, pabulum
- q^werpo = body, mid-riff, corpus
- Hnero = strong (cf. Hner = ανηρ)

Pergonos (Vorsanos) meg.loes dreuns polHu unésti (undes)

bh.rH.ġaes aiġoes-q^we (aiġoloi) augson̄ti

- 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.ġo = birch, fraxinus, береза
- aiġo = oak

Hvéyes nisdóns medhyõi dhidheH.ńti

(s)trozdoes perq^woisu veĩçonti

- (s)trozdo = thrush, turdus, στρουθος

açrons karkarons (karekons) ghaidoes kteion̄ti

eti çasobhos bhorġhoes s.ńti

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

meHns.m dhidheHta meHtévei samrons
saHul (saHvelyos) vesq^werom ġnoHti
temos (temedhrons) dhidheHta ute bhevoit nokts

- temedhro = tenebra
- vesq^wero = west, vesper, вечер

q^won-dō ghrobhoet g^w.mskónti ġhvēres visvoes (toutoi)

- ghrobho = lair, grave
- g^w.msk = βασκει -- iterative of g^wem / g^wen-yo
- olno / touto = all, total
- solvo / visvo = all, whole, solus, ὅλος

v.l.q^wikoes memsoet ap' vertonti
reudonti-q^we 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 aġróns eiti
verġeti-q^we do (ad) vesq^werom

- verġ / verg = to work, φεργεται

ō Dyeus-páter tva verġa monġha

- monġho / mongho = many, много, maha (cf. meġ = mickle, magnus, μεγалος)

m.nťi-bhi tvā solvom vevorġta (veverġesta)

- menti = mind

dheġhōm tvo(n)ōm ktiménōm p.lH.ná
g^weivo(n)ōm p.lH.ná

- ktei-m.n = possession, home, κτειμα

tosmi (toteri) au meg.lom mori esti
ne-rēdhomnōm dg^whuvōm p.lH.nóm
g^weivo(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^whiyes 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 ġhestom

ton-dō bhrüsoes su-p.l.néHentoi

qon-dō Hbhrūm ap' vertesi

ton-dō anġhontoi

- anġh = be anxious

qon-dō dh.mom lambhési (...)

ton-dō m.r.tum i.ńti

qon-dō pneum.n st.rH.néusi

ton-dō nevō ġneHtóes

- nevō = anew -- adverbial use of instrumental case

novyétoi-q^we tersa

çlutós syēt potis en aivons aivōm

satós syēt potis svoisu vergoisu

dheġhōm derçeti tremeti-q^we

g^worins tanékti (tanget) ute toi dhūmonti

g^w.r.Hemi (gratōm) potim svō d.lH.ghū (longōd) g^weivōmi

seng^whōmi (kanōm) potéyei svō d.lH.ghū (longōd) aivōmi

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

- g^w.r.H -- This root has two meanings, both with reference to the throat:
- (1) he swallows, devours = *κpēt, vorat, βιβρωσκει, girāti*
- (2) he sings praise = *κpēt, grātatur, gūrdháyati, grñāti*
- seng^wh = to sing, `ομφη
- kan = to sing, hen, cantat

ġhoryōmi potim

- ġhor-yë = to desire, horitur, χαιπει

linq^wyēnt duséves apo dġhmēs
ne-regéves-q^we (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

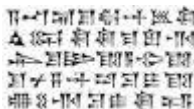


In the course of composing *Before Babel* in a reconstructed language, I was obliged to make numerous arbitrary decisions about orthography, grammar, and usage. Since this is not a scholarly work, I shall not bother to defend them. Herewith a run-down of my idiosyncratic conventions and a more-or-less 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., *o-voua*, *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 נ 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 $vrddh\bar{i}$ 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 $\delta\acute{o}\lambda\iota\chi\omicron\varsigma$, $\sigma\tau\omicron\rho\epsilon\nu\nu\mu\iota$, $\kappa\epsilon\rho\alpha\nu\nu\mu\iota$, $\beta\alpha\lambda\alpha\nu\omicron\varsigma$ also reflect uncontroversial laryngeals, but Latin *culmus*, *culmen*, cognate to Greek $\kappa\alpha\lambda\alpha\mu\omicron\varsigma$, $\kappa\omicron\lambda\omega\nu\omicron\varsigma$ 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 ζ/K distinction, one may pronounce ζ 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 *dheighos* > 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^{we}*, *au*, *vē* are used with simple, strictly parallel elements; whereas *ute*, *eti*, *alyo*, *svō*, *q^{od}* 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, eġ	out, ex		
epi, ob	on		
ambhi	about		
adi, adhi	to		
t.r.H	through, across		
bhi	(instrumental)		
medhi	amid, between		
do, de	to, from		



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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-ōnti	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-ōnti	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-*, *-eh¹-*, 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-* < *eh²*. 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 *piṃçāti* = *piñk-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-* (*nq*) attests **non*, but Lithuanian *-nuo-* attests **nō*. (Modern Slavic languages pronounce *-nq-* 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 ² e	ai < h ² oi	a < h ² o	ar < h ² or
2-sg	e-si	e-s	s(s)	ta < th ² 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	(use plural forms instead)		
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	sēnt	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 *ṇti* (written *.ṇti*) 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 *τον/την*, 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 *linēk^{ti}* 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: Infixated 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
Root Present	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,
Infixed Present	fend/fend, frang/frēg, fund/fūd, hend/hend, linqu/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*.

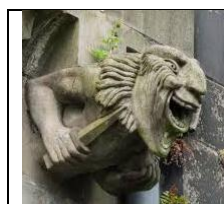


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DECLENSION OF NOUNS

- 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 > ō	es	oes, oi
Nom	s, –	os	H	oH > ō	es, os, s	oes, oi
Acc	m	om	H	oH > ō	ns	ons
Gen	es, os, s	osyo	us	ous	ōm	o(?)ōm
Abl	es, os, s	oet > ōt	bhōm	obhōm	bhos	oibhos
Dat	ei	oei > ōi	bhōm	obhōm	bhos	oibhos
Inst	eH > ē	oH > ō	bhōm	obhōm	bhis	ōis
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* > *tōr*, 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 *ōs* < *oes* over *ī* < *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 *φι(ν)* and Slavic *ом(ь)*.
- 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	çvón-	çun-'
Door	dvór-	dur-'
Earth	dhéghom-	(d)ghm-'
Generic	Co'C- Cē'C- CéuC- CénC-	CeC-' CeC-' CuC-' CṇC-'
Suffixed	CV'C-os CV'C-u, i, tu, ti- CV'C-mṇ 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 ¹	druna, dṛvā			
loc-sg	*drévi	drāu			
nom-pl	*dóruh ²	dravas	δρύες	δοῦρα	βαρέφες
acc-pl	*dóruh ²	drūs (uns)	δρῦς (υνς)	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* < *δορρ*. 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	Δίφα
gen-sg	*div-és	divás	Διφός
dat-sg	*div-éi	divé	Διφί
inst-sg	*div-éh ¹	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*. Dialectal 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*².



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.¹ 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 ^{wh} .l.H
free, liber (cf. people, grow)	(e)leudh-ro
nine	(e)nev.m
darkness, erebos	(e)reg ^w -ēs-
belch, eructate	(e)reug
red, ruddy, erythro-	(e)rudh-ro
brow, front	(o)bhrū
tooth < eating	(o)dont

¹ 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^wesi, aksi, aski (?)
 ag^wn-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^w-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 > bhlē-s, bhlē-w
 bh.l.H > bhlē-vo, bhēl-o
 bh.l.H > bhol-yo, bhlē-dhro
 bh.l.H > bhol-yo, bhlō-ēs, bhlō-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^w-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, housel, 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
 bhrūg^w
 bhruH
 bhu(n)ġ
 bhudh-no, -men
 bhūġ-o, bhuk-ko
 breg^wh-u, mreg^whu
 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^wer
 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'g^whī > g^wdhi(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
 ġ.lou(s)
 g.r.bh > grabh
 ġ.r.H > ġer, ġrē-u
 ġ.rH.n > ġern-o, ġrān-o
 gal > gal-yo ...
 gar > gar-yo ...
 ge, ghe
 gēl-dho, -u
 ġen > ġen-ēs, ġen-t
 ġen > ġen-ró, -tó
 ġen > ġnā-tó
 ġen-u
 ġen-u
 ġeu
 ġeus
 gh.r.bh
 gh.r.bh
 gh.r.dh-yo
 ghabh-(é)yo
 ghaid-o
 ġhans, -ro
 ghe(n)d
 ġhed
 ġheH, ġhen-ġheH
 ġhei, ġhai, ġhan-yo (?)
 ġheim ... -ro
 ġhel ... -u, -to, -ro
 gher-yo > gher-no
 ghester = dh'ghes-ter
 ġhes-to, ġhes-ro
 ġheu, ġheud, ġhu(n)d (?)
 ġheu, ġhve-yo (?)
 ghladh-o
 ġhom = dh'ġhom
 ġhomen = dh'ġhomen

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
 ġhorn-o
 ghors-yo
 ghost-i
 ġhvel
 ġhvēr = g^whēr
 gleubh > skulp
 gloi ... -o, -no, -to
 ġnoH
 ġombh-o
 gran-o, grak-o, grū
 g^w.l._ > gol, glu
 g^w.lH.nd, g^w.lH.n-o
 g^w.r.bh-o = g^w.l.bh-u
 g^w.r.H > guru, grav, βαρυ
 g^w.r.H > g^w.r.(n)H, g^w.rH.dh-yo
 g^w.r.H > g^wora, giri
 g^w.r.H > vora, βρω
 g^weiv, g^wig^w-o
 g^wel-yo
 g^wem, g^wen-yo, g^w.N-sko
 g^wen-a
 g^wh.l.H
 g^wh'dhi(n)H = dh'g^whi(n)H
 g^when
 g^wher > g^whēr-mo
 g^whōlyo
 g^whre(n)dh
 g^wov
 g^wy-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
 kã ... -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
kēr-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
krems-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
lē(n)ġh
leb-a
legħ
leg^wh-u
leH > lēd, lēn (?)
leiġh
leip
lendh-o
lēngh-o < d.lH.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, $\mu\alpha\lambda\alpha$
 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
 mātér
 me
 me(n)gh
 me(n)k
 medh-u, mel-i
 medhy-o
 meġ-o, meġ-lo, moġ-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)ġh
 mi(n)ġh > miġh-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^wh-ro
 nei
 nep-ōt
 ner-o
 neud
 nev.m = enev.m
 nev-o
 ni(n)g^w
 ni, ni-ter
 ni-sd-ó
 nobh > nobh-o, ombh-lo
 noc ... -(é)yo
 nogh > nogh-lo, onogh
 nog^w ... -ó, -nó, -tó
 nokt, neq^wt
 nomen = onomen
 nos, n.smo
 nūn
 oct.m, octo
 ōc-u
 od-(é)yo
 ogn-i
 oin-o
 olena
 ōm-o
 oms-o
 ong^w, ong
 ong^wh-i, og^wh-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.H¹ > p.l.(n)H
 p.l.H¹ > plē-nó, plē-tó
 p.l.H¹ > pol-ú
 p.l.H¹ > pol-yo, pol-ko, plē-dho
 p.l.H² > pāl, pala-ma, pāl-ko (?)
 p.l.H² > 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
 pelecū
 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^w-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^{wh}
 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^{wh}
 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-plēgh-én
 s-poim-o
 s-pūg-a
 s-qal-o
 sren
 s-reu > sre-u-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
 svā-d-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
 tēn-d, tem(n)H
 ten-u
 tep
 tēut-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 (?)
 uġ
 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 > vēr-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 > vē-to, vē-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
 vēr-o
 ves > veq-ero, vesp-ero, vest-ero
 ves > ves-ēr, ves-ro, ves-no
 ves > ves-ti, -tro
 ves > ves-tu, αστυ
 vesn-o
 vesu, su-
 vet-ēs-
 vi(n)k
 vi, viter
 vīc.nti < dvīc.nti
 vidhev-a/o
 vidhu
 vī-ró
 vīs-ó
 visv-o
 vog^{wh}-(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
 yēr-o, yōr-o
 yes, yeus, yūs (?)
 yev-o
 yov-en, yun-ko < aiv
 yu(n)g > yug-ó
 yu, yusmo

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