The Greek Prothetic Vowel and the Sanskrit Long-Reduplicant Perfect: A Statistical Evaluation of the Indo-European Laryngeal Theory

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Abstract

JEFFREY T. CONN: The Greek Prothetic Vowel and the Sanskrit Long-Reduplicant Perfect: A Statistical Evaluation of the Indo-European Laryngeal Theory.
(Under the direction of H. Craig Melchert)

Although now accepted almost universally, the "Laryngeal Theory" of Indo-European linguistics has been criticized in the past as being too abstract and formalistic; making excessive claims for the effects of the posited "laryngeal" segments; and implying typologically odd features of the proto-language. This study addresses a small subset of these concerns by statistically measuring the degree of correlation between two phenomena which the Laryngeal Theory implies should be correlated. These are the "prothetic vowel" of Greek, and the lengthened reduplication-syllable of certain Sanskrit perfects. Both of these are attributed by the Laryngeal Theory to the presence of a laryngeal segment at the beginning of the root in proto-Indo-European. If the Laryngeal Theory is correct, there should be more roots whose reflexes show *both* of these developments than should occur by chance. The correlation is measured by the Fisher's Exact test. For the set of all roots as defined traditionally, the P value is 0.25349; for roots grouped together without distinguishing between root-extensions and similar alterations, the value is 0.26401; and for resonant-initial roots the value is 0.67371. These figures are consistent with the predictions of the Laryngeal Theory, but also with the hypothesis that both the Greek prothetic vowel and the Sanskrit long-reduplicant perfects are due to epenthesis before resonant-initial roots.

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Needless to say, the opinions and conclusions - and especially any errors - in this work are entirely the responsibility of the author.

Table of Contents

List of Tables v

List of Abbreviations - Sources vi

List of Abbreviations - Languages vii

List of Symbols viii

1 Introduction 1
1.0.1 Alternate Explanations 5

2 The Relevant Indo-European Phonology 8
2.1 The Phonemes of Proto-Indo-European 8
2.2 Proto-Indo-European Morphophonemics – Ablaut 9
2.3 An Outline of the Laryngeal Theory 10
2.3.1 Evidence from the Nasal-Infixed Present Stems 10
2.3.2 Evidence from Ablaut 12
2.4 Reception of the Theory 13

3 The Sanskrit Verbs having a Long Reduplication Syllable 16
3.1 Synopsis of the Sanskrit Verbs with Long Reduplication in the Perfect 37

4 The Greek Verbs with Prothetic Vowel 38
4.1 The Greek Prothetic Vowel 38
4.2 Procedures Used in Assembling the Word List 40
4.3 List of Greek Words showing Prothesis 47

5 Indo-European Etymologies of the Attested Sanskrit Perfects 125

6 Correlations between pIE Roots, Greek Prothesis, and Sanskrit Long-Reduplicant Perfects 274
6.0.1 Evaluation of the Correlations 290

Appendix 1 - Altered Data Sets 298

Appendix 2 - A Computer Simulation 304

Appendix 3 - Residue of Prothetized Forms 310

Appendix 4 - Families of Roots 312

References 316

List of Tables

1. A Generalized Correlation Table 3

2. Specimen Correlation Table - No Correlation 4

3. Specimen Correlation Table - Strong Correlation 4

4. Phonemes of pIE 8

6. Sanskrit Nasal Presents - Surface Forms 10

7. Sanskrit Nasal Presents - Underlying Forms 11

8. Sanskrit Nasal Presents - Laryngeal Analysis 11

9. The Germanic Word for 'Bridal Gift' 81

10 The Four pIE Roots developing Gk Prothesis and Skt Long-Reduplication 291

11. Fisher's Exact Test Results, Case I - Conservative Definition of Root 291

12. Fisher's Exact Test Results, Case II - Liberal Definition of Root 292

13. Fisher's Exact Test Results, Case III - Resonant Initials Only 292

List of Abbreviations - Sources

B	Beekes 1969, *The Development of the Proto-Indo-European Laryngeals ...*
CEG	Blanc &al 1996*ff*, *Chronique d'Étymologie Grecque* (cited by installement number, e.g. CEG.i = installment 1; see bibliography for details.)
Ch	Chantraine 1968, *Dictionnaire Étymologique de la Langue Grecque*
DIL	Royal Irish Academy *Dictionary of the Irish Language*
EM	Ernout & Meillet 1959, *Dictionnaire Étymologique de la Langue Latin*
EWA	Mayrhofer 1986*ff*, *Etymologisches Wörterbuch des Altindoarischen*
Fr	Frisk 1960*ff*, *Griechisches Etymologisches Wörterbuch*
Fl	Fraenkel 1965, *Litauisches Etymologisches Wörterbuch*
GPC	*Geiriadur Prifysgol Cymru*
KEWA	Mayrhofer 1956*ff*, *Kurzgefaßtes Etymologisches Wörterbuch des Altindischen*
LIV	Rix & Kümmel 2001, *Lexikon der Indogermanischen Verben*, 2d ed.
LSJ	Liddell, Scott, & Jones 1940, *A Greek-English Lexicon*
LS	Liddell & Scott 1871, *A Greek-English Lexicon*, abridged
OLD	*Oxford Latin Dictionary*
P	Pokorny 1959, *Indogermanisches etymologisches Wörterbuch*
We	Werba 1997, *Verba Indoarica*
Wh*R*	Whitney 1885, *Roots, Verb Forms ...*
Wh*G*	Whitney 1889, *Sanskrit Grammar (2d ed)*
Wy	Wyatt 1972, *The Greek Prothetic Vowel*

Citation Format: References are givenin parentheses. Citations apply to all the preceding material up to another citation or some other obvious break-point. But a citation at the end of a section in square brackets applies only to what is in those brackets, and the first citation after the bracketed stretch applies also to what comes immediately before the brackets. So with:

Puer 'boy'; [*puellam* 'girl' (Smith:596)]; *amat* 'love' (Jones:250)

the definitions of *puer* and *amat* are to be found at Jones, page 250, and the definition of *puellam* at Smith, page 596.

Anything that is not so attributed is either common knowledge or the opinion of the author.

Citations are usually given in the fullest form possible, giving e.g. both page and section numbers. Page numbers are introduced by a colon, section numbers by a sigil, and item numbers by a pound sign. Dictionaries are cited by entry, the head-word being enclosed in angular quote-marks. When two headwords in e.g. a dictionary are homophonous, the original numbering is kept and prefixed to the entry with a period: 1.ἐίργω . When a source is cited by name alone, the reference is to the entry in that source pertaining to the headword in discussion. So, Fortson:91§5.37 means: Fortson, *Indo-European Language and Culture*, page 91, section 5.37. And Frisk «λύω» denotes the entry for λύω in Frisk, *Griechisches Etymologisches Wörterbuch.*

Works are generally identified by the (first) author's last name, followed when necessary by the date of publication as given in the bibliography. Volumes are indicated by small roman numerals: KEWA.i:100 = page 100 of KEWA, volume 1.

List of Abbreviations - Languages

Alb	Albanian	*3
Arm	Armenian	
Av	Avestan	GAv = Gatha-Avestan
Gc	Germanic	
Gk	Greek	*3
Go	Gothic	
Hes	Hesychius	*4
Hit	Hittite	
Hom	Homer(ic)	Il = Iliad, Od = Odyssey
IE	Indo-European	
Lat	Latin	OLat = Old Latin
Latv	Latvian	
Lith	Lithuanian	OLith = Old Lithuanian
MDu	Middle Dutch	
MLG	Middle Low German	
OCS	Old Church Slavic	*2
OE	Old English	
OFr	Old Frisian	
OHG, MHG, NGH	Old, Middle, New High German	
OIr, MIr, NIr	Old, Middle, Modern Irish	
ON	Old Norse	*1
OS	Old Saxon	
p-	proto	prefix, e.g. pIE
Skt	Sanskrit	
Tok	Tokharian	TochA, TochB = dialects A & B *5
Ved	Vedic	

***1** Dialects not distinguished. ***2** Of local varieties, only Russian Church Slavonic is distinguished. ***3** Dialect supplied in parentheses where appropriate. ***4** Forms recorded by the Byzantine lexicographer Hesychius are standardly cited as *citation* · *gloss*; the dialect is given in parentheses. ***5** Tok *pärk/parka* means TokA *pärk*, TokB *parka*

List of Symbols

$\underset{\wedge}{\mathrm{x}}$	infix	vi$\underset{\wedge}{\mathrm{n}}$co
-	inflection	vinc-o
⸗	compound	book⸗case
\	root extension *vel sim.*	mel\d, mel\dh, mel\h_2
&	reduplication	cu&currit *1
·	preverb	ab·esse
+	prothesis	$\acute{\alpha}$+$\mu\acute{\epsilon}\lambda\delta\omega$
#	word boundary	
×	nonexistent (vs. reconstructed) form	*2
... *	secure but unattested form	*2
X :: Y	X in comparison/contrast with Y	
X↔Y	X cognate with Y	
X ← Y	X is grammatically derived from Y	
√	root	*3
e	e-grade	e√meld
o	o-grade	o√meld (i.e. mold)
z	zero-grade	z√meld (i.e. m$\underset{\circ}{\mathrm{l}}$d)
l	lengthened grade	l√meld (i.e. mēld)
f	full grade	f√meld (i.e. meld *or* mold) *4
s	schwebeablaut	s√meld (i.e. mled)
$^{e}/_{o}$	ablauting vowels (morphophoneme)	
$\frac{X}{Y}$	either X or Y	
⎧X,Y,Z⎫	either X or Y or X	
(X,Y,Z)	optional X or Y or Z, i.e. X or Y or or Z or ∅	
Ç	voiced consonant	

***1** Following Austerlitz. ***2** Following Sihler:34 ***3** pIE roots are standardly cited in the e-grade. The alphabetic prefixes here can be combined, e.g. os√meld = mlod. When these prefixes are lower-case, they are *operators*: they refer to the designated grade of the cited form. So z√wel denotes w$\underset{\circ}{\mathrm{l}}$, the zero-grade counterpart of wel. When they are upper-case, they are *labels*: they identify the grade of the cited form. So Z√w$\underset{\circ}{\mathrm{l}}$ refers to the form w$\underset{\circ}{\mathrm{l}}$, and labels it as being in the zero-grade. The idiom 'z√wel = w$\underset{\circ}{\mathrm{l}}$' is useful in fully explicating forms. ***4** Useful only for Sanskrit (= the traditional grammatical term *guṇa*).

Orthography: In most cases, cited forms are given according to their sources; sometimes, small adjustments have been made silently. But two exceptions deserve to be noted. Headwords from LIV have been converted to the system of citing proto-Indo-European given immediately below (with removal of parentheses around optional or dubious items such as ĝ with parenthesized palatal diacritic, or "movable s-". Additionally, the Greek iota subscript is *always* written as adscript. Otherwise, the orthographies used here are the standard ones for the respective languages, including the following conventions for prehistoric Greek:

- ⟨*h*⟩ and ⟨*j*⟩ have their IPA values.
- *σ̌σ̌* can be used to indicate the reflex of palatalized velars, which appears in historic Greek as *ττ* (Attic) or *σσ* (elsewhere), e.g. *glo***tt***al* :: *glo***ss***ary*.

Proto-Indo-European - bristling with aspirates, syllabic resonants, and laryngeals of uncertain quality which are labelled by numerical subscripts - is not well-served by the Roman alphabet. Examples like $g^w hig^w \underset{\circ}{n} h_1 seti$ and $dh\underset{\circ}{h}_1 s$ are extreme, but they do illustrate the problem (Fortson:57§3.17; Fortson:91§5.37). It is helpful to remember that plain ⟨h⟩ *always* indicates aspiration; whereas a laryngeal *always* comes with a subscript, e.g. ⟨h_1⟩. The only improvement that can be made without departing too far from the established conventions is to move the superscript ^{w} over the *g*, so it becomes a diacritic; thus, *ǧ*. This is in fact

close to IPA practice (Pullum & Ladusaw:162). Note also that ⟨k̂⟩ etc. represent palatal stops; and that a subscript circle (e.g. ⟨r̥⟩) indicates *syllabicity*, not voicelesness. The whole system of proto-Indo-European phonology is set out below.

Chapter 1

Introduction

The purpose of the present investigation is to evaluate the so-called *Laryngeal Theory* of Indo-European linguistics by testing one of its predictions, in a way which does not depend on merely impressionistic evaluation of the voluminous and complicated data.

The modern standard version of this theory holds that certain segments in the proto-language, of unclear phonetic nature but conventionally labelled "laryngeals", are responsible for a variety of effects in the documented languages, as laid out below, in particular, generating long vowels and vowels of [a] and [o] timbre. The theory has been defended in a number of versions during the past century and a quarter, and has been the subject of controversy on many points which will be discussed shortly. Despite the near-unanimity with which the theory is accepted today, it remains desirable for certain of these reservations which have been raised to be addressed directly. Of course it is impossible to treat all of these issues exhaustively in the present thesis, but there is one aspect of the theory which is well suited to investigation here.

As I have mentioned, the standard Laryngeal Theory claims that a number of superficially disparate phenomena in various Indo-European languages in fact result from the effects of "laryngeal" segments in the parent language. If this is the case, then there should be a tendency for all these phenomena to be found in the reflexes of the *same* subset of Indo-European roots. More specifically, the set of words showing some effect - let us call it $effect_1$ - in a particular attested language, will imply a set of pIE roots having a laryngeal in the position appropriate to that effect. If there is an $effect_2$ (in the same or another language) which reflects a laryngeal in the same position as for $effect_1$, then every pIE root which produces either effect should also produce the other (or else, be unattested in that language). This is an idealized formulation of the situation: in real life, later developments (such as the analogical extension, and metrical adjustment, of long reduplicants in Sanskrit) can obscure an originally perfect correlation. So what is being investigated is whether there is

a statistically detectable correlation between the roots which show one of these phenomena, and those which show the other.

If this correlation could be demonstrated, it would be a persuasive argument in favor of the Laryngeal Theory, as it would imply that *the same thing* is involved in the development of all these phenomena. This is actually quite an obvious argument, and its *absence* from the general literature on the Laryngeal Theory is striking (An apparent exception is Beekes:124 citing Kuryłowicz 1927, but the referenced article by Kuryłowicz does not make this argument explicitly).

This thesis attempts to test whether this clustering effect of "laryngeal" effects with respect to pIE roots is in fact present. As a test case, I have selected two phenomena. First is the Greek "prothetic vowel" which appears in cognates having no vowel outside Greek (*ἐρυθρός* : Lat. *rufus* : English *red*); the second is the unexpected lengthening of the vowel in the reduplication-syllable of some Sanskrit perfects.

It should be made clear that the fundamental mode of argumentation of this thesis is somewhat different from what is commonly seen in linguistic literature, and resembles instead a style of investigation characteristic of biology, psychology, sociology, etc. This is purely a work of *hypothesis testing*, as one might see in the evaluation of a purportedly effective medical procedure. It does not attempt to be a general discussion of all debatable points of the Laryngeal Theory, nor to furnish a comprehensive account of Greek vowel-prothesis or the Sanskrit long reduplicant. In particular, it is not the aim of this work to argue for or against a laryngealistic or other explanation of these Greek and Sanskrit phenomena. The aim is only to test the prediction of the modern version of the Laryngeal Theory, that these two phenomena should be correlated in a certain way, that is, that the *same* pIE roots tend to show both the Greek prothetic vowel and long reduplication in Sanskrit.

More specifically, the test procedure is this. Since the Sanskrit long-reduplicant perfect occurs, of course, only in verbal root, there is no information to be gained by considering Sanskrit non-verbal roots. Similarly, if a pIE root has no attested reflex as a Sanskrit perfect form, then it is meaningless to make the claim that it either has or lacks lengthened reduplication in the perfect. These two stipulations allow us to narrow the set of items to be considered to *pIE roots having reflexes as Sanskrit verbs with attested perfects.* Nothing outside this class can be relevant. Next, each of these roots is marked according to whether or not it shows a Greek reflex with the prothetic vowel. If there is no attested Greek cognate then the root must be eliminated from consideration, further narrowing the set of roots to

be considered.

The corpus of Greek verbs with prothetic vowel will be assembled from Beekes 1969 and Wyatt 1972. In order to reduce statistical noise, the less certain examples will not be used. The corpus of Sanskrit verbs with long reduplication will be assembled from Whitney 1885, Werba 1997, and Krisch 1996. Again, only firm examples will be used. Whitney 1885 furnishes the background population of all verbal roots. The set of Indo-European roots is (with quite frequent exceptions as noted) defined on the basis of Pokorny 1959, *not* on the basis of the now-standard LIV. This is deliberate. Imagine a case where Greek shows an (imaginary) *ἐτέρτω* with an evident Sanskrit cognate perfect *ta&tart-*: Pokorny, ignoring modern Laryngeal Theory (see his pg. 3) would list these as cognate from *$\sqrt{}$tert. But LIV, guided by laryngealist doctrine, would be tempted to set up two roots, *$\sqrt{}$Htert for the Greek, and *$\sqrt{}$tert for Sanskrit. If this latter system is followed, the test procedure becomes circular: the Laryngeal Theory's prediction that the Greek prothetic vowel and Sanskrit long-reduplicant perfect correlate *cannot* be shown to fail in a case such as this.

Because Pokorny is the principal source for the present set of pIE roots, his reconstruction of their phonetic form - and his numbering system - is retained, though again with frequent modifications. It should be pointed out that the *reconstructed form* of a word is irrelevant to the statistical procedure employed here; it serves only to label a member of a set of data.

We will construct a table of the following form, with the total population of pIE verb roots which have attested Sanskrit perfect reflexes with Greek cognates divided between the four cells which are formed by two axes, one axis representing the presence or absence of a Greek reflex with prothesis, the other representing the presence or absence of length in the reduplication-syllable of the Sanskrit perfect:

	Gk Reflex +Prothetic Vowel	Gk Reflex -Prothetic Vowel
Skt Reflex +Long Reduplicant Perfect	*some number*	*some number*
Skt Reflex -Long Reduplicant Perfect	*some number*	*some number*

A Generalized Correlation Table

This is precisely the format of data which is used as input to the *Fisher's Exact Test* for group cross-correlations. This test is a more accurate and versatile alternative to the

familiar *chi-square* test (See Agresti:60*ff* §3.5.1). These are both familiar statistical tests, and are commonly used to draw inferences about whether a correlation found in a sample is an artefact, or is a genuine characteristic of the sampled population. But in this case, the inference which is being made is not one about the characteristics of a sampled population, but about the common origin of the two effects which are investigated.

The mechanics of the test can be illustrated with a simple example. Suppose that you teach a class of thirty-five children, and are wondering whether gender is linked to a preference for chocolate or vanilla ice cream. You can compile a list of each child's preference, and this list can be converted into a 2x2 chart with gender along one axis, and flavor along the other; there will be four cells, showing the number of boys who prefer vanilla, boys who prefer chocolate, girls who prefer vanilla, and girls who prefer chocolate. If gender has nothing to do with flavor preference, the numbers in the cells should be similar:

	Boys	Girls
Vanilla	7	9
Chocolate	9	10

Specimen Correlation Table - No Correlation

On the other hand, if boys show a strong, systematic preference for chocolate, and girls for vanilla, you might find a chart something like this:

	Boys	Girls
Vanilla	4	13
Chocolate	12	6

Specimen Correlation Table - Strong Correlation

The Fisher's Exact test yields a P-value which varies from 0 (impossibility) to 1.0 (certainty). There are, in fact, three 'flavors' of the test. The *two-tailed* version tests for *any* correlation in the data; the P-value represents the likelihood that a sample from a truly random population would exhibit the degree of apparent correlation seen in the given data. The *right one-tailed* version is used when a correlation along one diagonal axis is being tested, e.g. when a correlation along the opposite axis is considered out of the question. The *left one-tailed* version is the inverse of the right one-tailed test. The right one-tailed version is the appropriate test to employ in the present case. It is the version used in e.g. evaluations of the effectiveness of medical treatments, which are in their logical structure identical to question we face here: one tests the hypothesis that treatement and recovery correlate,

the other tests the hypothesis that Greek vowel-prothesis and Sanskrit long-reduplication correlate.

As a further verification of the correctness of using the right one-tailed test, and of the correctness of the present statistical approach in general, I have written a small computer program (source text presented in the Appendix) which simulates a situation in which a given number of cases of prothesis occur *randomly* within a set of roots which are partitioned between long-reduplicant and normal perfect groups. Repeated iterations of this procedure will yield an empirical measure of how often prothesis can be expected by chance alone in long-reduplicant roots. The results are in very high agreement with the results of the right one-tailed Fisher's Exact test.

Note that what is being tested here is *one component* of the *modern standard version* of the Laryngeal Theory: that the Greek prothetic vowel and the Sanskrit long reduplicant share a common origin (in */H/). It is important to remember that the test per se is capable of detecting only the fact of a common origin, *not* the nature of the common element (i.e. whether it is the presence of */H/ or something else, perhaps just the phonotactics of the root). Consequently, a low P-score yielded by the test (indicating a low chance that the results are correlated by mere chance) will count, strictly speaking, in the Laryngeal Theory's favor as a confirmed prediction; but it will *not* prove that a laryngeal (or anything else one might specify) is involved. More interesting and provocative would be a high P-score. This would cast doubt on the laryngealist explanations of these phenomena, but would not constitute a definitive refutation of such: one could always posit that an originally perfect distribution of prothetic vowel and long reduplicant has been eroded by time until nothing of the original correlation is detectable. However, the use of these phenomena as *evidence* for the validity of the Laryngeal Theory would be somewhat compromised.

1.0.1 Alternate Explanations

The long-reduplicant perfects of Sanskrit are explained, by those who do not appeal to the Laryngeal Theory, as metrical effects, long reduplication-syllables appearing with short root syllables. This pattern is claimed also for reduplicated aorists (Szemerény:290; Kuryłowicz 1956:342; Schwyzer I:648). Krisch (pp.48, 110) accepts this, but *only* as a mechanism for the erosion of the developed system of long reduplicants: these show a tendency to shorten with long root syllables.

The best-known attempt to explain the Greek prothetic vowel is that of William Wyatt

(whose monograph is one of the primary sources for the present thesis); his conclusion is that these vowels are in fact old cases of epenthesis, governed by regular phonetic rules. Initially, a [ə] develops before (Slightly paraphrased from Wyatt:119; see e.g. pp. 88, 98 for examples clarifying Wyatt's own notation):

$$\begin{bmatrix} r \begin{bmatrix} C^{+voi} \\ C^{+asp} \end{bmatrix} \\ w \\ other\ R \begin{bmatrix} RC \\ C^{+asp} \begin{bmatrix} y \\ l \\ r \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

and this [ə] subsequently develops to:

$$\begin{array}{l} e/\_ \begin{bmatrix} wiy \\ (u)RV \\ \begin{bmatrix} la \\ Re \end{bmatrix} \begin{bmatrix} u \\ n \end{bmatrix} \end{bmatrix} \\ o/\_Rei\ where\ e \not\sim o \\ a/elsewhere \end{array}$$

Wyatt divides his material into several categories: the 'Widely-Accepted Cases' (pg. 11 *ff*) number by my count 37, of which Wyatt rejects several, sometimes as the result of involved argumentation (See for example pp 20-23). By Wyatt's own count (pg. 44), he is left with 26 firm cases. "Possible additions" (pg. 45 *ff*) number 41, of which Wyatt (pg. 56) considers 13 to be good. Together these classes produce a data-set containing from 26 to 78 items.

Under 'Apparent Exceptions' (pg. 57 *ff*) are listed 16 words which show prothesis contrary to Wyatt's proposed rules. The converse, 'Where Prothesis Fails [to Develop]' (pg. 65 *ff*) includes 78 items, with another 65 of unclear etymology, and some borrowings which I have not bothered to count. Wyatt lists 16 of these as the cases most troublesome for his hypothesis (pg. 86 *f*).

Wyatt's rule for epenthesis, then, can cover 26 to 78 items with reasonable success, but fails to predict prothesis in the case of 16 words, and for at least 78 words, fails to predict prothesis. These are raw figures, and Wyatt's detailed examination of the apparent exceptions to his rule reduces the number of problem words to only 4 (pp. 63, 89). The precondition for reducing all this evidence to a truly workable set of rules is that the rules themselves sometimes have a complex and rather ad-hoc character (see pg. 79 §5.6.0), and that some very specific assumptions need to be made about the prehistory of individual forms. (see pg. 118 *f*).

If these alternate explanations are accepted, it is unlikely that the two phenomena will show a correlation. I say *unlikely* because there is a possible if not very persuasive sequence of events which could lead from prothesis as explained by Wyatt to long reduplication; this will be described later. Conversely, alternate explanations for these phenomena, implying no correlation, might be disconfirmed by the discovery of such a correlation.

Chapter 2

The Relevant Indo-European Phonology

2.1 The Phonemes of Proto-Indo-European

The phonemic system of Proto-Indo-European is set out below; cover-symbols for each class of sound are given at the top of each table.

It must be pointed out that the traditional subgrouping of these phonemes is unusual, in that [i] and [u] are removed from the roster of vowels and placed with the resonants. This is because the same syllabification rules govern the alternations between syllabic and nonsyllabic [i]~[y], [u]~[w] on one hand, and [r]~[r̥], etc., on the other. There seem to be exceptions to these rules, so some of these pairs were perhaps marginally phonemic; the issue is unclear (Sihler:498§453; Meier-Brügger:85§L212). Notice also that there were apparently rare cases of long /ī/ and /ū/ (Meier-Brügger:83§L211(6),(7)). Surprisingly, the laryngeals - sounds whose phonetic nature is unclear, apparently produced in the back of the vocal tract, somewhere from the velum to the glottis - obey the same syllabification rules. Probably the syllabic versions were realized by epenthesis, c.f. the similar case of Berber.

Plosives (cover symbol T):

	Bilabial	Dental/Alveolar	Palatal	Velar	Labiovelar
-Voi-Asp	p	t	k̂	k	k̑
+Voi-Asp	b	d	ĝ	g	ǵ
+Voi+Asp	bh	dh	ĝh	gh	ǵh

Fricative:

s

Resonants and Laryngeals (cover symbols R and H):

Syllabic, Long	ī	ū							
Syllabic, Short	i	u	r̥	l̥	m̥	n̥	h̥$_1$	h̥$_2$	h̥$_3$
Nonsyllabic	y	w	r	l	m	n	h$_1$	h$_2$	h$_3$

Vowels (cover symbol V):

LONG	ē	ā	ō
SHORT	e	a	o

Phonemes of pIE

A few other cover symbols may be introduced. "L" subsumes the liquids /l/ and /r/; and "N" the nasals /m/ and /n/. "K", "G", and "Gh" represent respectively the tectal groups /k̂, k, k̑/, /ĝ, g, ǧ/, and /ĝh, gh, ǧh/. These can be used where it is impossible to tell whether a word's Indo-European ancestor had e.g. /k̂/, /k/, or /k̑/ - a rare situation, but conceivable with Old Irish /c/, or something like Augustan Latin ⟨ecus⟩ in the absence of cognates. Much commoner are cases where the uncertainty is between *two* possibilities. This will happen when a word with e.g. /k/ in an Eastern language such as Indic or Slavic has no Western cognate to reveal whether the pIE form had */k/ or */k̑/. Conversely, a Latin /c/ without Eastern cognates could be from either pIE */k/ or */k̂/. Many sources use the typographically difficult expedient of parenthesizing the diacritic of the ⟨k̑⟩ or ⟨k̂⟩ here. Instead, I add the appropriate diacritic to the cover symbol. So "K̂" means either */k/ or */k̂/, and "K̑" means either */k/ or */k̑/. And so for "Ĝ", "Ĝh", etc.

A similar problem appears when there is uncertainty between *two* of the three possible laryngeals. This is notated as e.g. $H_{1,2}$.

In some older works the plain velars /k g gh/ are represented by the symbols <q ɑ ɑh>.

2.2 Proto-Indo-European Morphophonemics – Ablaut

Most Proto-Indo-European roots and derivational suffixes were subject to a morphologically determined alternation between forms which contained an /e/, forms with an /o/, and forms with no vowel at all (in which case a neighboring resonant was subject to vocalization). Unsurprisingly, the descendant languages disrupted this scheme to varying degrees, often generalizing one form or another. Hence, our ***pe**dal* from Latin, but ***po**diatrist* from Greek. In addition, there were rarer forms with /ē/ and /ō/, apparently due originally to compensatory lengthening (Sihler:130§126). The entire system is known as *ablaut*, less frequently as *apophony* or *vowel gradation*. The individual forms are cited as "e-grade", "o-grade", and "zero-grade"; those with long vowels are known as "lengthened grades", those with short vowels as "full grades". The symbol "$^e/_o$" can be used as a cover symbol for all these variants, but the e-grade is usually chosen as the citation form of a verbal root. Examples from Greek *pat$^e/_o$r*, "father" (Szemerény:84§5.3):

	e	o
zero	*patr-́os*	
full	*patér-a*	*eu-pátor-a*
long	*patḗr*	*eu-pátōr*

Grades of the morphophoneme $^{e}/_{o}$

There are also a few cases showing /a/∼/o/∼/∅/ or /o/∼/o/∼/∅/ instead of the normal /e/∼/o/∼/∅/; on these se §1.3.2, "Evidence from Ablaut", below.

An additional phenomenon is *schwebeablaut* (on which see Anttila 1969); this refers to the existence of *two* full-grade forms with the vowel in a different position: TeRT :: TRet. After Benveniste (who analyzed such forms as beging originally a a root plus a suffix, the combination ablauting normally as TeR-∅T :: T∅R-eT), these forms are respectively labelled Theme (or State) I and Theme II.

2.3 An Outline of the Laryngeal Theory

2.3.1 Evidence from the Nasal-Infixed Present Stems

Sanskrit verbs are traditionally classified according to how the verb forms its present stem. Three of these classes (numbers 5, 7, and 9) form their present stems with a nasal element, which takes a slightly different form in each class. This nasal element is clearly of Indo-European origin; compare Latin present $vi\underset{\wedge}{\overset{n}{}}c\text{-}\bar{o}$ versus perfect $vi\underset{\wedge}{\overset{\emptyset}{}}c\text{-}\bar{\imath}$; Greek present $ma\underset{\wedge}{\overset{n}{}}th\text{-}\acute{a}n\text{-}\bar{o}$ versus aorist $\acute{e}\text{-}ma\underset{\wedge}{\overset{\emptyset}{}}th\text{-}on$ (Sihler:500§454.1. The suffixal *-an-* in the Greek present is of obscure origin.) The following table lists specimens of these verbs, giving the root, the present 3d sg indicative, and the verbal noun of instrument:

Class	Root	Present	VN
5	śru	śr̥ṇóti	śrótra
7	yuk	yunákti	yóktra
9	pū	punā́ti	pavítra

Sanskrit Nasal Presents - Surface Forms

The composition of these forms becomes clearer if we alter the standard orthography to add morpheme (including infix) boundaries, and replace surface [v] and [o] with their underlying representations /w/ and /aw/:

Class	Root	Present	VN
5	śru	śr̥$\frac{\text{ná}}{\wedge}$w-ti	śráw-tra
7	yuk	yu$\frac{\text{ná}}{\wedge}$k-ti	yáwk-tra
9	pū	pu-nā́-ti	pawí-tra

Sanskrit Nasal Presents - Underlying Forms

It is clear now that the fifth and seventh classes are really the same. In both, the present stem is made by infixing *-na-* before the last phoneme of the root. This process is transparent in the seventh class, but in the fifth class the root ends in the resonant /u/, which loses its syllabicity after the infixed *-na-*. This combination yields /naw/; a post Indo-Iranian sound change turns this into the attested surface form [no], obscuring the underlying structure (Meier-Brügger:108§L315(1),(2); Lehmann 1952:24§3.3; Fortson:418§75; some forms from Whitney 1885:132, 179).

In 1878 Ferdinand de Saussure realized that the ninth class can be assimilated to the same pattern. In this class the vowel of the nasal element is long: *nā*. So, indeed, is the vowel of the citation form of the root. At the same time, an *i* has appeared at the end of the stem in the verbal noun. If we interpret this *i* as the original final phoneme of the root, the long vowels in the other parts can be explained as compensatory lengthening upon the loss of this phoneme after a vocalic segment. (Note that in the verbal noun, the /u/ of the root has lost its syllabicity due to the appearance of an /a/ before it. This is due to the root going from zero to full grade.) Even better, the composition of the present stem is now identical to that of the other two classes. This can be seen if we rewrite the table again, using *X* as a makeshift for the original final segment of the roots of the ninth class:

Class	Root	Present	VN
5	śru	śr̥$\frac{\text{ná}}{\wedge}$w-ti	śráw-tra
7	yuk	yu$\frac{\text{ná}}{\wedge}$k-ti	yáwk-tra
9	puX	pu$\frac{\text{ná}}{\wedge}$X-ti	pawX-tra

Sanskrit Nasal Presents - Laryngeal Analysis

This analysis, with *X* interpreted as /ə/, became standard during the late 19th century (Meier-Brügger:110§L318, L319). This /ə/ in fact forms a regular correspondence set, appearing as /i/ in Indo-Iranian and as /a/ elsewhere. It is found both in verbal forms of construction cognate to the above (Greek *dám-n***a***-ti*), and in independent items of vocabulary (Sanskrit *p***i***tár*, Greek *p***a***tḗr*, "father") (Meier-Brügger:109§L316).

In 1912 it was established by Albert Cuny that this segment was not [ə] but a consonant of some kind (Cowgill:144§1.2, Meier-Brügger:110§L319). This is apparent from the Sanskrit

reflexes of verbal roots having the form C$^e/_o$Rə. The full grade develops as expected, its /e/ becoming /a/, and the "ə" becoming /i/. So from the root *$p^e/_o$lə "fill" comes the Sanskrit future *pari-ṣya-ti* (Whitney 1885:100). The zero-grade ought to be *plə, yielding Sanskrit *pri-*, but in fact Sanskrit has *pūr*. And other roots of similar construction have a long vowel here. This is intelligible if instead of [ə] we assume a consonant which forced the resonant to syllabify, and then dropped with compensatory lengthening of the syllabic resonant: *$pl̥$ $C >$ *$pl̥̄ >$ *$p\bar{u}r$.

In 1927 Jerzy Kuryłowicz showed that many instances of this segment were preserved in Hittite as *ḫ(ḫ)*. This confirmed Herman Møller's intuition of 1880 that we are dealing with a laryngeal segment of some sort (In Englische Studien v.3 pg.151; seconded by Henry Sweet in the same year, Transactions of the Philological Society, 1880-1:155-162 (Polomé:11)). Consequently, we can rewrite the root for "fill" as *$p^e/_o lH$. Furthermore, we can specify that /H/, *when vocalized*, emerges in Sanskrit as /i/ and elsewhere as /a/; that *when consonantal* it can disappear after a vowel with compensatory lengthening, but sometimes survives in Hittite.

2.3.2 Evidence from Ablaut

There is in Greek a group of verb roots comprising an athematic (i.e., without a suffix ending in $^e/_o$) conjugation class (The "mi-verbs" of the school grammars); these show an alternation between short and long vowel in e.g. the 1st singular present indicative active form, and the verbal adjective (respectively). These are canonically full and zero grade forms. Moreover, the short vowels in the verbal adjectives are cognate with Sanskrit forms in /i/ and e.g. Latin forms in /a/, indicating a pIE *H̥. The long vowel in the 1st sg present would then be due to compensatory lengthening upon the loss of the *H. Saussure realized that these would be identical in their original structure to Indo-European roots of the form T$^e/_o$RT, which form their zero-grades as TR̥T; e.g. Greek e-grade *péi̯th-ō*, zero-grade *é-pi̯th-on*. There is, however, one problem: the apparent full-grade in the Greek verbal adjectives, corresponding to /i/ or /a/ elsewhere. Some have explained this as due to analogy, but Saussure and investigators following his lead have adopted a more abstract explanation, holding that there were *several* *H's, which are reflected as /e/, /a/, and /o/ when vocalized in these Greek forms. The notations h_1, h_2, h_3 have become standard for these three different laryngeals. This assumption of several laryngeals can be made to do other useful work. In particular, it clears up the problem of unusual ablaut patterns

showing not /e/∼/o/∼/∅/, but /a/∼/o/∼/∅/ and /o/∼/o/∼/∅/. These can be reduced to the normal pattern by reconstructing /$H_{2,3}{}^{e}/_{o}$/ instead of simple $\frac{a}{o}$ or $\frac{o}{o}$, in conjunction with the standard view that /h_2/ and /h_3/ affect the quality of a following /e/, but not an /o/. For example: *$\sqrt{}h_2$eĝ- "drive" > Skt. *ajati*, Gk. *agei*, Lat. *agit*; beside its o-grade, *$\sqrt{}h_2$oĝ- > Gk. *ogmos*, "furrow" (Sihler:118f§117+refs; Meyer-Brügger:149§L417).

This is currently the standard form of the theory.

2.4 Reception of the Theory

Saussure's explanation of the various Sanskrit nasal present formations as reflexes of a single type, including one with a segment "ə", which is nowhere directly attested, quickly became standard. But the further postulate, that there were *several* such segments which were capable of coloring neighboring vowels, was generally ignored until the evidence from Hittite renewed interest in the topic. After Kuryłowicz' article on these Hittite gutturals, the original proposal of Saussure as modified by Cuny began to gain acceptance, gradually but steadily. Today it is accepted by all but a small minority of conservative linguists.

During this period of growing acceptance, it became apparent that the inferred laryngeals might be responsible for an assortment of otherwise puzzling phenomena in various languages, entirely separate from those phenomena which inspired the theory. In fact, the productivity of the Laryngeal Theory in dealing with such cases led to excesses: laryngealist explanations (of varying degrees of plausibility or lack thereof) have been proposed for a great variety of problems in Indo-European. In the view of more conservative linguists, this did not reflect well on the theory as a whole; it tends to suggest that even the better-supported uses of the theory may be more the result of special pleading than objective evaluation of the facts. This suspicion is hardly mitigated by the fact that many introductory treatments of the topic present rather exaggerated accounts of the evidence. For example, one often reads (without any qualification) that Hittite shows /ḫ/ where Saussure's reasoning predicted a laryngeal; but in fact, the correlation is much less straightforward, with only /h_2/ surviving on a large scale, and even this subject to certain conditions. And the circumstance that some authorities introduce an ad-hoc *fourth* laryngeal to patch up these discrepancies in Hittite does not make things seem any more convincing (Szemerény:138§6.6.9)!

Despite these excesses, a consensus has formed which acknowledges a number of phenomena as originating in laryngeals. Among these are:

- The Greek (also Armenian and ?Phrygian) "prothetic vowel", /a/, /e/, or /o/ appearing at the beginning of a word where other languages have nothing. Gk. **a***nēr* but Skt. *nāra-*, "man", Lat. *Nero*. Hypothetically from *#HC.

- Vedic reduplication-syllables whose vowels are unexpectedly long. Hypothetically C$\bar{\text{V}}$&C < *CV&HC, by compensatory lengthening.

- Vedic verbs whose prefixed "augment" {*a-*} is lengthened; same explanation as above (Lehmann 1952:33§3.6E).

- Vedic compounds whose first member ends in an unexpectedly long vowel; same explanation as above, again: e.g. *sū-nāra-* from *su-Hnēr- (Lehmann 1952:33§3.6E)

- "Laryngeal hiatus" in Sanskrit and Avestan meter: what appears in the liturgically transmitted forms of these hymns as a *single* vowel seems to require *two* vowels in order to conform to metrical principles; these cases occur when the vowel is from pIE *VHV (Fortson:204§11.7;Fortson:208§11.21;Lehmann 1952:33§3.6E).

- The *unvoiced* aspirates of Indo-Iranian appear to originate in sequences of TH. Positing a pIE series of unvoiced aspirates to explain these raises the embarrasing question why there is no significant evidence for these outside Indo-Iranian (Lehmann 1952:33§3.6 D).

- Many apparent exceptions to Brugmann's Law (by which pIE *o > Indo-Iranian ā *in open syllables*) can be disposed of by assuming that the syllable in question was actually closed by a laryngeal (Meier-Brügger:146§L412; Sihler:168§167).

- Apparent cases of of *long* syllabic resonants appear to come from *RH by compensatory lengthening (Lehmann 1952:24§3.3 B)

- Certain tone-accents of various Balto-Slavic languages seem to be explicable as the reflexes of laryngeals (Lehmann 1952:31§3.6A e)

An additional reason for resistance to the Laryngeal Theory was that the resulting reconstruction of proto-Indo-European has an extremely peculiar appearance: a rudimentary vowel system (/e/, /o/, and debatably /a/) (But note that the system is less typologically offensive if the "vocalic resonants" /i/ and /u/ are treated with the vowels here), and roots overburdened with "laryngeals", which - even stranger - often vocalize as syllable nuclei.

This objection to the Laryngeal Theory becomes more serious as any particular version of the theory postulates a greater role for the laryngeals.

It is convenient to group the various versions of the Laryngeal Theory according to the scope of the claims made:

(I) The "Brugmannian" version, accepting only "ə" (the so-called *shwa primum* or *shwa Indogermanicum*) to account for root-structure phenomena such as the Sanskrit nasal presents; this view is not usually described with the label "Laryngeal Theory" at all;

(II) The "Saussurian" version, including the foregoing, and adding vowel-coloring effects;

(III) The "Modern Standard" version, including all the foregoing, and attributing to the laryngeals the phenomena enumerated above;

(IV) "Overextended" versions, adding controversial and generally rejected claims to the list above.

Chapter 3

The Sanskrit Verbs having a Long Reduplication Syllable

Below are tabulated the Sanskrit roots showing a long reduplication syllable in the perfect. Each root citation is preceded by a reference number, the root itself, the long-reduplicant perfect stem, and a gloss.

The discussion of each root includes in most cases a brief characterization of the forms collected in Whitney 1885. Pages 219ff of this work consist of an almost complete collection of perfect stems; **reference to this *locus* is implicit in all discussions of forms cited from Whitney**. In addition, references are given as necessary to Whitney's discussion of individual roots.

There is also a tabular analysis of Krisch's complete listing of the Vedic occurrences of the long-reduplicant perfects (Krisch 1996:68ff). The columns in these tables show:

1. The absolute number of long-reduplicant perfect forms found, for the period represented by the respective row;

2. The number in (1) as a percentage of the total number of perfect forms found, both long and short reduplicants;

3. The absolute number of short-reduplicant perfect forms found, for the period represented by the respective row;

4. The number in (3) as a percentage of the total number of perfect forms found, both long and short reduplicants;

5. The percentage of perfect forms with long reduplcant, for the period represented by the respective row.

The rows in these tables show:

1. Forms from the earlier books (2 - 7) of the Rig Veda;

2. Froms from the later books (1, 8 - 10) of the Rig Veda;

3. Forms from the Atharva Veda and the Atharva Veda Pratiśākhya;

4. Forms from all other Vedic sources;

5. Forms from all books of the Rig Veda, i.e. lines (1) and (2) consolidated;

6. Forms from all Vedic sources outside the Rig Veda, i.e. lines (3) and (4) consolidated.

The reference numbers assigned to each root follow Krisch, but those found only in Whitney (items 40 and above) are assigned their numbers in Sanskrit alphabetical order. Following standard practice, roots are cited in the *zero* grade; Krisch, however, uses the full grade as the citation form, and roots found only in that source have been converted to zero grade here. "Movable" nasals are parenthesized. Roots are preceded by a "$\sqrt{}$"; perfect stems are indicated by a following hyphen. English glosses are per Whitney.

The citations at Whitney 1885:219ff are divided according to date of attestation: "Earlier Language" or "Earlier and Later Language". There are *no* long-reduplicant perfects listed as belonging only to the "Later Language". These indications are preserved in the summary of roots documented in that work. In addition, Whitney's source-abbreviations are retained here:

V = Veda; RV = Rig Veda, AV = Atharva Veda
B = Brāhmaṇa; AA = Aitareya Āraṇyaka, AB = Aitareya Brāhmaṇa
E = Epic
S = Sutra
C = Classical Sanskrit

To these I add:
A = Āraṇyaka; TA = Taittirīya Āraṇyaka
G = Grammarians' artificial forms (which, as "regular" forms have a *short* reduplicant); on Whitney's notation for these, see Wh^R:vii.
-*ff* = "and later periods"

Also preserved, for ease of cross-reference, are the subscripts which Whitney sometimes appends to the perfect forms in his tabulation (to distinguish between homophonous items).

Finally, each root is ranked according to how well-attested its long-reduplicant perfects are *as archaisms*. A pattern of *increasing* frequency of a long-reduplicant form within the history of Sanskrit should be taken as a warning-sign that such a form may be a spreading innovation. Krisch 1996 argues that these long-reduplicant perfects have spread during the prehistory of Sanskrit due to 'synonymic, antonymic, implicational, and presuppositional' relationships between the prototype forms and those analogically influenced by them. *Implication* and *presupposition* refer to situations in which one word is felt to denote the result or precondition, respectively, of the other (Krisch:30*ff*, 31 n.62, 58, 110).

The following situations contribute to a *high* rank here, though I have not used any formal ranking algorithm:

1. A large total number of forms (to minimize sample-size problems).

2. A relative preponderance of forms in the earlier periods of attestation.

3. A relative preponderance of forms with long, as opposed to short, reduplicants.

The ranks assigned are: '1' (long-reduplicant forms are clearly archaic); '2' (a significant proportion of long-reduplicant forms in early periods); '3' (long-reduplicant forms present in Vedic, but seem to become *commoner* in later days); and finally, '0' (roots rejected from consideration for any reason).

1 √kan cākan- 'be pleased'

Whitney gives cǎkan- as "Early" (RV); at Wh^R:17 cites cākán (RV) and many other long-reduplicant forms; and V,B,S forms with short reduplicant.

Vedic Occurrences per Krisch:

	R̄	%(R̄)	Ř	%(Ř)	%(R̄:Ř)
RV (early)	3	13.04	0	0.00	100.00
RV (late)	19	82.61	1	100.00	95.00
AV	0	0.00	0	0.00	0.00
Other	1	4.35	0	0.00	100.00
RV (all)	22	95.65	1	100.00	95.65
non-RV	1	4.35	0	0.00	100.00
Total	23	-	1	-	95.83

Rank: 2

2 √kḷp cākḷp- 'be adapted'

Whitney lists căkḷp- as "Earlier and Later" (V, C); at Wh^R:24 are cited RV and AV forms with long reduplicant, and short-reduplicant C forms.

Vedic Occurrences per Krisch:

	R̄	%(R̄)	Ř	%(Ř)	%(R̄:Ř)
RV (early)	0	0.00	0	0.00	0.00
RV (late)	2	22.22	0	0.00	100.00
AV	7	77.78	0	0.00	100.00
Other	0	0.00	0	0.00	0.00
RV (all)	2	22.22	0	0.00	100.00
non-RV	7	77.78	0	0.00	100.00
Total	9	-	0	-	100.00

Rank: 3

3 √gr̥ jāgr̥- 'wake'

Whitney lists jāgr̥- as "Earlier and Later", but notes it as an intensive. Wh^R:39 also treats this as an intensive.

The root √gr̥ was not (originally) used in the present; its intensive jāgr̥- was recruited as such, and extended to perfect. Whitney 1889:249, 370f§676, 1020a

Vedic Occurrences per Krisch:

	R̄	%(R̄)	Ř	%(Ř)	%(R̄:Ř)
RV (early)	5	7.81	0	0.00	100.00
RV (late)	15	23.44	0	0.00	100.00
AV	23	35.94	0	0.00	100.00
Other	21	32.81	0	0.00	100.00
RV (all)	20	31.25	0	0.00	100.00
non-RV	44	68.75	0	0.00	100.00
Total	64	-	0	-	100.00

Rank: 0 - apparently not a perfect in origin, but an intensive.

4 √gr̥dh jāgr̥dh- 'be greedy'

Whitney cites jāgr̥dh- as belonging to "Earlier and Later" language. Wh^R:39 gives one

long-reduplicant RV forms; also short-reduplicant forms in B,C.

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	1	100.00	0	0.00	100.00
RV (late)	0	0.00	0	0.00	0.00
AV	0	0.00	0	0.00	0.00
Other	0	0.00	0	0.00	0.00
RV (all)	1	100.00	0	0.00	100.00
non-RV	0	0.00	0	0.00	0.00
Total	1	-	0	-	100.00

Rank: 2

5 √tr̥p tātr̥p- 'be pleased'

Whitney gives tātr̥p- as belonging to "Earlier and Later" language (V, E); at Wh^R:65 he cites long-reduplicant forms in V and short-reduplicant forms in E.

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	1	33.33	0	0.00	100.00
RV (late)	1	33.33	0	0.00	100.00
AV	1	33.33	0	0.00	100.00
Other	0	0.00	0	0.00	0.00
RV (all)	2	66.67	0	0.00	100.00
non-RV	1	33.33	0	0.00	100.00
Total	3	-	0	-	100.00

Rank: 2

6 √tr̥s̱ tātr̥s̱- 'be thirsty'

Whitney gives tăt̆r̥ṣ- as "Earlier" (V); Wh^R:66 cites both long- and short-reduplicant RV forms.

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	1	20.00	1	50.00	50.00
RV (late)	4	80.00	1	50.00	80.00
AV	0	0.00	0	0.00	0.00
Other	0	0.00	0	0.00	0.00
RV (all)	5	100.00	2	100.00	71.43
non-RV	0	0.00	0	0.00	0.00
Total	5	-	2	-	71.43

Rank: 2

7 √dr̥h dādr̥h- 'make firm'

Whitney cites dăd̥rh- as "Earlier" (V); Wh^{R}:78 cites both short- and long-reduplicant forms in RV, and G forms.

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	1	33.33	0	0.00	100.00
RV (late)	2	66.67	1	100.00	66.67
AV	0	0.00	0	0.00	0.00
Other	0	0.00	0	0.00	0.00
RV (all)	3	100.00	1	100.00	75.00
non-RV	0	0.00	0	0.00	0.00
Total	3	-	1	-	75.00

Rank: 2

8 √dhr̥ dādhr̥- 'hold'

Whitney cites dăd̥hr̥- as in "Earlier and Later" Skt; Wh^{R}:84 cites long-reduplicant forms in RV, B, TA; also short reduplicant forms in V*ff*

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	8	8.42	0	0.00	100.00
RV (late)	14	14.74	5	41.67	73.68
AV	15	15.79	3	25.00	83.33
Other	58	61.05	4	33.33	93.55
RV (all)	22	23.16	5	41.67	81.48
non-RV	73	76.84	7	58.33	91.25
Total	95	-	12	-	88.79

Rank: 3

9 √dhr̥ṣ dādhr̥ṣ- 'dare'

Whitney gives dăd̥hr̥ṣ- as "Earlier" (V, B); Wh^{R}:85 cites RV, AV, B forms with short reduplicant; one example in AV of long reduplicant.

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	2	40.00	9	39.13	18.18
RV (late)	0	0.00	9	39.13	0.00
AV	3	60.00	4	17.39	42.46
Other	0	0.00	1	4.35	0.00
RV (all)	2	40.00	18	78.26	10.00
non-RV	3	60.00	5	21.74	37.50
Total	5	-	23	-	17.86

Rank: 2

10 √nam nānam- 'bend'

Whitney gives nānam- as "Earlier and Later"; Wh^{R}:88 cites one RV example with long reduplication syllable; also short-reduplicant form in RV, and *nem-* in RV and C. This *nem* belongs to a group of perfects in which /e/ is introduced analogically from reduplicated perfects which have undergone the regular phonetic development /azd(h)/ > /ed(h)/, e.g. /sed/ < /sa&sØd-/ = [sazd] ← √sad (Burrow:342*f*).

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	2	66.67	1	50.00	66.67
RV (late)	1	33.33	1	50.00	50.00
AV	0	0.00	0	0.00	0.00
Other	0	0.00	0	0.00	0.00
RV (all)	3	100.00	2	100.00	60.00
non-RV	0	0.00	0	0.00	0.00
Total	3	-	2	-	60.00

Rank: 2

11 √ma(ṅ)h māmah- 'be great'

Whitney lists māmah- as "Earlier" (V, B); Wh^R:116 gives V, B long-reduplicant forms, and no short ones except G.

This root is cited as √*mah* at (Whitney 1889:281§786a)

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	4	30.77	0	0.00	100.00
RV (late)	7	53.85	0	0.00	100.00
AV	1	7.69	0	0.00	100.00
Other	1	7.69	0	0.00	100.00
RV (all)	11	84.62	0	0.00	100.00
non-RV	2	15.38	0	0.00	100.00
Total	13	-	0	-	100.00

Rank: 1

12 √mr̥j māmr̥j- 'wipe'

Whitney gives mă̆mr̥j- as "Earlier and Later"; Wh^R:125 cites two long-reduplicant RV forms; also short-reduplicant forms, AV*ff*, implied to be common.

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	1	14.29	0	0.00	100.00
RV (late)	5	71.43	0	0.00	100.00
AV	0	0.00	1	100.00	0.00
Other	1	14.29	0	0.00	100.00
RV (all)	6	85.71	0	0.00	100.00
non-RV	1	14.29	1	100.00	50.00
Total	7	-	1	-	87.50

Rank: 2

13 √mr̥ś māmr̥ś- 'touch'

Whitney lists māmr̥ś- as "Earlier and Later"; Wh^R:126 cites one long-reduplicant RV form; otherwise short reduplicant forms in B*ff* inc E.

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	0	0.00	0	0.00	0.00
RV (late)	1	100.00	0	0.00	100.00
AV	0	0.00	0	0.00	0.00
Other	0	0.00	0	0.00	0.00
RV (all)	1	100.00	0	0.00	100.00
non-RV	0	0.00	0	0.00	0.00
Total	1	-	0	-	100.00

Rank: 3

14 √raṅh rārah- 'hasten'

Whitney gives rārah- as "Earlier" (V, B); Wh^R:133 cites (besides G forms) only RV, B long-reduplicant forms.

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	0	0.00	0	0.00	0.00
RV (late)	3	100.00	0	0.00	100.00
AV	0	0.00	0	0.00	0.00
Other	0	0.00	0	0.00	0.00
RV (all)	3	100.00	0	0.00	100.00
non-RV	0	0.00	0	0.00	0.00
Total	3	-	0	-	100.00

Rank: 2

15 √ran rāran- 'take pleasure'

Whitney gives rāran- as "Earlier" (V, B); Wh^R:135 cites several RV, B long-reduplicant forms, none with short-reduplicant.

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	3	23.08	0	0.00	100.00
RV (late)	9	69.23	1	100.00	90.00
AV	0	0.00	0	0.00	0.00
Other	1	7.69	0	0.00	100.00
RV (all)	12	92.31	1	100.00	92.31
non-RV	1	7.69	0	0.00	100.00
Total	13	-	1	-	92.86

Rank: 1

16 √ra(n)dh rāradh- 'make/be subject'

Whitney has rāradh- as "Earlier" (V); Wh^R:135 has one RV long-reduplicant form, otherwise G forms.

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	2	100.00	0	0.00	100.00
RV (late)	0	0.00	0	0.00	0.00
AV	0	0.00	1	100.00	0.00
Other	0	0.00	0	0.00	0.00
RV (all)	2	100.00	0	0.00	100.00
non-RV	0	0.00	1	100.00	0.00
Total	2	-	1	-	66.67

Rank: 2

17 √rabh rĕrabh- 'take hold'

Whitney lists rĕrabh- as "Earlier and Later"; Wh^R:136 has both long- and short-reduplicant forms listed for RV; and also *rebh-* in V*ff*

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	0	0.00	0	0.00	0.00
RV (late)	1	50.00	2	100.00	33.33
AV	1	50.00	0	0.00	100.00
Other	0	0.00	0	0.00	0.00
RV (all)	1	50.00	2	100.00	33.33
non-RV	1	50.00	0	0.00	100.00
Total	2	-	2	-	50.00

Rank: 3

18 √va(ñ)c vāvac- 'move crookedly'

Whitney cites vāvac- as "Earlier"; Wh^R:152 lists one RV long-reduplicant form (the only one given except for G forms).

Forms with and without the nasal occur, see Wh^R:152; the chart at Wh^R:220 lists the

perfect as *vāvac-*, but Wh^R:152 prints *vāvak-*.

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	1	100.00	0	0.00	100.00
RV (late)	0	0.00	0	0.00	0.00
AV	0	0.00	0	0.00	0.00
Other	0	0.00	0	0.00	0.00
RV (all)	1	100.00	0	0.00	100.00
non-RV	0	0.00	0	0.00	0.00
Total	1	-	0	-	100.00

Rank: 3

19 √van vāvan- 'win'

Whitney has vă̆van- as "Earlier" (V); Wh^R:153 cites RV forms, half of which have long reduplicant.

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	3	37.50	2	28.57	60.00
RV (late)	3	37.50	4	57.14	42.86
AV	1	12.50	0	0.00	100.00
Other	1	12.50	1	14.29	50.00
RV (all)	6	75.00	6	85.71	50.00
non-RV	2	25.00	1	14.29	66.67
Total	8	-	7	-	53.33

Rank: 2

20 √vr̥j vāvr̥j- 'twist'

Whitney gives vāvr̥j- as "Earlier" (V); Wh^R:163 cites many V forms; only one form with /*ā*/ given (RV); many others with /*ă*/ cited from RV, AV.

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	1	100.00	1	25.00	50.00
RV (late)	0	0.00	3	75.00	0.00
AV	0	0.00	0	0.00	0.00
Other	0	0.00	0	0.00	0.00
RV (all)	1	100.00	4	100.00	20.00
non-RV	0	0.00	0	0.00	0.00
Total	1	-	4	-	20.00

Rank: 3

21 √vr̥t vāvr̥t- 'turn'

Whitney has v̆āvr̥t- as "Earlier and Later"; Wh^R:164 cites V*ff* forms with both short and long reduplicant.

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	1	7.69	10	43.48	9.09
RV (late)	10	76.92	7	30.43	58.82
AV	2	15.38	3	13.04	40.00
Other	0	0.00	3	13.04	0.00
RV (all)	11	84.62	17	73.91	39.29
non-RV	2	15.38	6	26.09	25.00
Total	13	-	23	-	36.11

Rank: 3

22 √vr̥dh vāvr̥dh- 'grow'

Whitney cites v̆āvr̥dh- as "Earlier and Later"; Wh^R:164 gives many long-reduplicant forms from RV and one from AV, beside other short reduplicant forms V*ff*

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	53	39.26	2	50.00	96.36
RV (late)	62	45.93	1	25.00	98.41
AV	17	12.59	1	25.00	94.44
Other	3	2.22	0	0.00	100.00
RV (all)	115	85.19	3	75.00	97.46
non-RV	20	14.81	1	25.00	95.24
Total	135	-	4	-	97.12

Rank: 2

23 √vr̥ṣ vāvr̥ṣ- 'rain'

Whitney lists vă̆vr̥ṣ- as "Earlier and Later"; at Wh^R:165 two long-reduplicant RV forms cited beside several short-reduplicant forms (E*ff*).

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	3	75.00	0	0.00	100.00
RV (late)	1	25.00	0	0.00	100.00
AV	0	0.00	0	0.00	0.00
Other	0	0.00	1	100.00	0.00
RV (all)	4	100.00	0	0.00	100.00
non-RV	0	0.00	1	100.00	0.00
Total	4	-	1	-	80.00

Rank: 2

24 √vaś vāvaś- 'be eager'

Whitney gives vāvaś$_1$- as "Earlier" (RV); Wh^R:155 cites three long-reduplicant RV forms, besides G forms in uv-.

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	10	58.82	0	0.00	100.00
RV (late)	7	41.18	0	0.00	100.00
AV	0	0.00	0	0.00	0.00
Other	0	0.00	0	0.00	0.00
RV (all)	17	100.00	0	0.00	100.00
non-RV	0	0.00	0	0.00	0.00
Total	17	-	0	-	100.00

Rank: 1

25 √vas vāvas- 'clothe'

Whitney lists vă̆vas- as "Earlier and Later" (V, C); Wh^R:156 cites two long-reduplicant RV forms, besides short-reduplicant C forms.

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	1	25.00	0	0.00	100.00
RV (late)	3	75.00	0	0.00	100.00
AV	0	0.00	0	0.00	0.00
Other	0	0.00	0	0.00	0.00
RV (all)	4	100.00	0	0.00	100.00
non-RV	0	0.00	0	0.00	0.00
Total	4	-	0	-	100.00

Rank: 2

26 √vāś vāvaś- 'bellow'

Whitney gives vă̆vaś- as "Earlier and Later" (V, C); Wh^R:158 cites several long-reduplicant forms from RV besides short ones V*ff*, apparently commoner.

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	4	28.57	1	100.00	80.00
RV (late)	10	71.43	0	0.00	100.00
AV	0	0.00	0	0.00	0.00
Other	0	0.00	0	0.00	0.00
RV (all)	14	100.00	1	100.00	93.33
non-RV	0	0.00	0	0.00	0.00
Total	14	-	1	-	93.33

Rank: 2

27 √śad śāśad- 'prevail'

Whitney gives śāśad- as "Earlier" (V); Wh^R:170 cites only long-reduplicant forms (RV, V).

See note under √nam above, for the -*e*- forms.

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	3	25.00	0	0.00	100.00
RV (late)	6	50.00	0	0.00	100.00
AV	2	16.67	0	0.00	100.00
Other	1	8.33	0	0.00	100.00
RV (all)	9	75.00	0	0.00	100.00
non-RV	3	25.00	0	0.00	100.00
Total	12	-	0	-	100.00

Rank: 1

28 √sah sāsah- 'prevail'

Whitney lists săsah- under "Earlier and Later"; Wh^R:184 cites several RV, V forms with long reduplicant; but short-reduplicant forms, occurring in AV (etc) seem equally common. There is also a form with *seh-*, even in RV.

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	6	14.29	5	29.41	54.55
RV (late)	12	28.57	9	52.94	57.14
AV	20	47.62	2	11.76	90.91
Other	4	9.52	1	5.88	80.00
RV (all)	18	42.86	14	82.35	56.25
non-RV	24	57.14	3	17.65	88.89
Total	42	-	17	-	71.19

Rank: 1

29 √ska(m)bh cāskambh- 'support'

Whitney, at Wh^R:219ff has only caskambh- (V, C), listed as "Earlier and Later"; but see Wh^G:281 §786a. At Wh^R:191 he gives one example of cāskambha from RV; else forms with /ă/ C, even RV; G.

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	0	0.00	0	0.00	0.00
RV (late)	1	100.00	1	100.00	50.00
AV	0	0.00	0	0.00	0.00
Other	0	0.00	0	0.00	0.00
RV (all)	1	100.00	1	100.00	50.00
non-RV	0	0.00	0	0.00	0.00
Total	1	-	1	-	50.00

Rank: 3

30 √dī dīdi- 'shine'

Whitney has dīdī- [sic] as "Earlier"; Wh^R:74 has many RV,B,S forms, all with long reduplicant.

A Vedic by-form of *dīdhī-*. Same as the present stem, which belongs to the third (reduplicating) class (Whitney 1889:249f, 281§767, 786b). Root also given as √dīdī (Wh^R:74).

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	42	39.62	9	81.82	82.35
RV (late)	31	29.25	2	18.18	93.94
AV	14	13.21	0	0.00	100.00
Other	19	17.92	0	0.00	100.00
RV (all)	73	68.87	11	100.00	86.90
non-RV	33	31.13	0	0.00	100.00
Total	106	-	11	-	90.60

Rank: 2

31 √dhī dīdhi- 'think'

Whitney gives dīdhī- [sic] under "Earlier"; Wh^R:83 reports V*ff* forms, all with long reduplicant. As with the previous root, this one is also cited with a long final vowel.

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	21	42.86	0	0.00	100.00
RV (late)	15	30.61	0	0.00	100.00
AV	8	16.33	0	0.00	100.00
Other	5	10.20	0	0.00	100.00
RV (all)	36	73.47	0	0.00	100.00
non-RV	13	26.53	0	0.00	100.00
Total	49	-	0	-	100.00

Rank: 1

32 √pi pīpi- 'swell, fatten'

Whitney lists pīpi- as "Earlier" (V); Wh^R:96f has one RV form cited, with long reduplicant; the rest, without attribution, are divided about equally between long and short reduplicant. See also Whitney 1889:249f§767, Whitney 1889:281§786b.

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	22	52.38	9	33.33	70.97
RV (late)	19	45.24	17	62.96	52.78
AV	0	0.00	0	0.00	0.00
Other	1	2.38	1	3.70	50.00
RV (all)	41	97.62	26	96.30	61.19
non-RV	1	2.38	1	3.70	50.00
Total	42	-	27	-	60.70

Rank: 2

33 √bhī bībhī- 'fear'

Whitney gives bĭbhī- as "Earlier and Later"; Wh^{R}:111 cites bībhāya from AB,AA; else short reduplicant V*ff*.

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	0	0.00	5	4.81	0.00
RV (late)	3	42.86	13	12.50	18.75
AV	0	0.00	17	16.35	0.00
Other	4	57.14	69	66.35	5.48
RV (all)	3	42.86	18	17.31	14.29
non-RV	4	57.14	86	82.69	4.44
Total	7	-	104	-	6.31

Rank: 3

34 √hīḍ jīhīḍ- 'be hostile'

Whitney cites jĭhīḍ- as "Earlier" (V, B); Wh^{R}:206 gives V, B forms: short reduplicant in RV, B, but jīhīḍa once in AV (See also Whitney 1889:281§786b).

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	0	0.00	1	12.50	0.00
RV (late)	1	100.00	4	50.00	20.00
AV	0	0.00	3	37.50	0.00
Other	0	0.00	0	0.00	0.00
RV (all)	1	100.00	5	62.50	16.67
non-RV	0	0.00	3	37.50	0.00
Total	1	-	8	-	11.11

Rank: 3

35 √jū jūju- 'be swift'

Whitney lists jūju- as "Earlier" (V); Wh^R:55 cites several RV forms all with long reduplicant.

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	5	83.33	0	0.00	100.00
RV (late)	1	16.67	0	0.00	100.00
AV	0	0.00	0	0.00	0.00
Other	0	0.00	0	0.00	0.00
RV (all)	6	100.00	0	0.00	100.00
non-RV	0	0.00	0	0.00	0.00
Total	6	-	0	-	100.00

Rank: 1

36 √tu tūtu- 'be strong'

Whitney gives tūtu- as "Earlier" (V); Wh^R:63 cites a couple of RV forms with long reduplicant, and no other examples.

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	3	75.00	0	0.00	100.00
RV (late)	1	25.00	0	0.00	100.00
AV	0	0.00	0	0.00	0.00
Other	0	0.00	0	0.00	0.00
RV (all)	4	100.00	0	0.00	100.00
non-RV	0	0.00	0	0.00	0.00
Total	4	-	0	-	100.00

Rank: 1

37 √tuj tūtuj- 'urge'

Whitney Wh^R:63 gives a few examples of long and short reduplicants, equally frequent, all apparently from RV; also G forms. (Not listed at Wh^R:219ff).

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	9	56.25	0	0.00	100.00
RV (late)	7	43.75	1	100.00	87.50
AV	0	0.00	0	0.00	0.00
Other	0	0.00	0	0.00	0.00
RV (all)	16	100.00	1	100.00	94.12
non-RV	0	0.00	0	0.00	0.00
Total	16	-	1	-	94.12

Rank: 2

38 √yudh yūyudh- 'fight'

No long-reduplicant form given Wh^R:133.

Spelled with long reduplicant only once (RV 10.149.4); else length is inferred from meter (Krisch 1996:87).

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	3	75.00	1	25.00	75.00
RV (late)	1	25.00	3	75.00	25.00
AV	0	0.00	0	0.00	0.00
Other	0	0.00	0	0.00	0.00
RV (all)	4	100.00	4	100.00	50.00
non-RV	0	0.00	0	0.00	0.00
Total	4	-	4	-	50.00

Rank: 3

39 √śū śūśū- 'swell'

Whitney gives śūśū- as "Earlier" (V); Wh^R:175 cites several long-reduplicant RV forms; otherwise G forms.

Vedic Occurrences per Krisch:

	R̄	%(R̄)	R̆	%(R̆)	%(R̄:R̆)
RV (early)	10	55.56	0	0.00	100.00
RV (late)	8	44.44	0	0.00	100.00
AV	0	0.00	0	0.00	0.00
Other	0	0.00	0	0.00	0.00
RV (all)	18	100.00	0	0.00	100.00
non-RV	0	0.00	0	0.00	0.00
Total	18	-	0	-	100.00

Rank: 1

40 √paj pāpaj- 'start?'

Whitney cites pāpaj- as "Earlier" (V); Wh^R:93 lists pā́paje, occurring only once (For Whitney's frequency notation see Wh^R:ix) in RV; this is the only perfect listed. Whitney calls the whole collection of forms collected under this root "questionable".

Werba cites the same form (RV 10.105.3a) under √pāj, and says it is apparently not a perfect but an intensive Werba:431#561.

Not listed in Krisch.

Rank: 0 - apparently an intensive instead of perfect.

41 √mī mīmi- 'damage'

Whitney lists mĭmi$_2$- as "Earlier and Later (V, C)"; Wh^R:121 gives RV*ff* short-reduplicant forms, beside only one long-reduplicant form in AV.

Not listed in Krisch.

Rank: 3

42 √rakṣ rārakṣ- 'protect'

Whitney gives rĭrakṣ- as "Earlier and Later". Wh^R:134 cites RV rārakṣāṇá[ḥ]; this occurs only once, at 4.3.14b. Also short reduplicant forms, V*ff*.

Not listed in Krisch.

Rank: 3

43 √hr̥ṣ jāhr̥ṣ- 'be excited'

Whitney lists jăhr̥ṣ- as "Earlier and Later". Wh^R:208 cites RV jāhr̥ṣāṇá; this occurs only once, as jāhr̥ṣāṇéna, at RV 1.101.2a. Also short reduplicant forms, E*ff*.

Not listed in Krisch.

Rank: 3

3.1 Synopsis of the Sanskrit Verbs with Long Reduplication in the Perfect

Item	Long-Redup. Perf.	Rank
1 kan 'be pleased'	cākan	2
2 kḷp 'be adapted'	cākḷp	3
3 gr̥ 'wake'	jāgr̥	0
4 gr̥dh 'be greedy'	jāgr̥dh	2
5 tr̥p 'be pleased'	tātr̥p	2
6 tr̥ṣ 'be thirsty'	tātr̥ṣ	2
7 dr̥h 'make firm'	dādr̥h	2
8 dhr̥ 'hold'	dādhr̥	3
9 dhr̥ṣ 'dare'	dādhr̥ṣ	2
10 nam 'bend'	nānam	2
11 ma(ṁ)h 'be great'	māmah	1
12 mr̥j 'wipe'	māmr̥j	2
13 mr̥ś 'touch'	māmr̥ś	3
14 raṁh 'hasten'	rārah	2
15 ran 'take pleasure'	rāran	1
16 ra(n)dh 'make/be subject'	rāradh	2
17 rabh 'take hold'	rārabh	3
18 va(ñ)c 'move crookedly'	vāvac	3
19 van 'win'	vāvan	2
20 vr̥j 'twist'	vāvr̥j	3
21 vr̥t 'turn'	vāvr̥t	3
22 vr̥dh 'grow'	vāvr̥dh	2
23 vr̥ṣ 'rain'	vāvr̥ṣ	2
24 vaś 'be eager'	vāvaś$_1$	1
25 vas 'clothe'	vāvas	2
26 vāś 'bellow'	vāvaś$_2$	2
27 śad 'prevail'	śāśad	1
28 sah 'prevail'	sāsah	1
29 ska(m)bh 'support'	cāskambha	3
30 dī 'shine'	dīdi	2
31 dhī 'think'	dīdhi	1
32 pi 'swell, fatten'	pīpi	2
33 bhī 'fear'	bībhī	3
34 hīḍ 'be hostile'	jīhīḍ	3
35 jū 'be swift'	jūju	1
36 tu 'be strong'	tūtu	1
37 tuj 'urge'	tūtuj-	2
38 yudh 'fight'	yūyudh-	3
39 śū 'swell'	śūśū	1
40 paj 'start?'	pāpaj	0
41 mī 'damage'	mīmi$_2$	3
42 rakṣ 'protect'	rārakṣ	3
43 hr̥ṣ 'be excited'	jāhr̥ṣ	3

Chapter 4

The Greek Verbs with Prothetic Vowel

4.1 The Greek Prothetic Vowel

For the present purpose, we will define a *prothetic vowel* as one which stands at the beginning of a proto-Greek (and sometimes Armenian) word, and which cannot be accounted for on the basis of the IE etymology (assuming, of course, a pIE etymology which has not been constructed specifically to account for the prothetic vowel), taken together with the recognized facts of the development of the Greek language. (I.e., the vowel cannot be explained as due to reduplication, prefixation, vocalization of a resonant, schwebeablaut, etc). This proto-Greek vowel is always either /a/, /e/, or /o/. (I.e., one of the three "pure" vowels of pIE, which had no non-syllabic allophones. pIE [i] and [u] are conventionally classed as "resonants" since they were in complementary distribution (or at least nearly so) with [y] and [w], just as were e.g. [r] and [r̥]).

In the most straightforward case, this involves cognate pairs in which the Greek begins with /VC/, where C is a plosive: Gk *ὀδών* :: Skt *dán*. But when the proto-Greek consonant is anything else, complexities sometimes arise.

When the initial consonant is /s/ followed by (R̥)V - where V includes [R̥] arising from /R/ upon the disappearance of the ablauting element $^{e}/_{o}$ in the zero-grade of a root - it will be lost in historic Greek, as will any */s/ in such a position. The result will be a Greek form beginning with /V(R)V/ (or some reflex of the same arising from contraction of /VV/), cognate with some form in initial /∅ s/: (pIE here is given in a non-laryngealistic form).

pIE E√		s	l	e	y	dh	-dh
pIE Z√		s	l	∅	i	dh	-dh
pGk	o	s	l	∅	i	s	-th
Gk	o	∅	l	∅	i	s	-th

So *ὀλισθάνο* vs *slide*.

When the initial consonant is one of the resonants /r, l, m, n/ there are two possible complications.

If the resonant is in a preconsonantal position, it will regularly vocalize as [r̥, l̥, m̥, n̥], which are represented in historic Greek by /a/, /R̥a/, /aR̥/,
or /aR̥a/. This will give the appearance of a prothetic vowel, but since is produced by a recognized historical process of Greek, it is excluded by our definition.

Indo-European roots containing a resonant were particularly susceptible to a process called *schwebeablaut*, the generation of an alternate full-grade form with the ablaut vowel on the "wrong" side of the resonant: E√(C)eRC → S√(C)ReC (or vice versa). (Again, a non-laryngealistic statement of the facts). This is another process which can produce what seem to be prothetic vowels: from *E√nek, Lat *nex*, but from *S√enk, *ἀναγκή* (i.e. *ank* with a prefix).

When the initial consonant is [y], this [y] is represented sometimes as /h/ and sometimes as /z/ in historic Greek: the reason for this double reflex is one of the classical controversies of Greek linguistics. Fortunately, there do not seem to be any firm examples of prothesis in this environment. (The closest approach is *αὔω*, which Beekes derives rather speculatively from $h_1$yu; *ὀίφω*, seems to be from *Z√ibh, with [i] not [y]).

Finally, **when the initial consonant is [w]**, most dialects, including classical Attic, simply drop it. In many cases the disappearance of /w/ caused contraction of the surrounding vowels, so that after the fall of /w/ the word could have a rather different appearance from before. In standard Attic, /e:/ (spelled ⟨*ει*⟩ - a so-called "spurious diphthong") frequently reflects earlier /ewe/; which form is preserved (with hiatus replacing /w/), in Homer and in later Ionic as ⟨*εε*⟩. Homer also sporadically preserves /w/ in other positions, but there is an additional complication. As text does not spell the digamma, its presence must be inferred in places where there is hiatus between vowels, or where it has made a syllable metrically heavy. Doric, however, often preserves this /w/ written with the letter *digamma* ⟨ϝ⟩.

Another cause of apparent prothetic vowels is prefixation. There are two prefixes of Indo-European origin which can both appear in Greek as /*α* / ; these are the negative (often privative) prefix < pIE */n̥/ (the "alpha-privative" of Greek school grammars), and the comitative prefix < pIE */sm̥/ (the school grammars' "alpha-copulative"). (On which see Smyth 1956:250§885.4).

It is clear that if any of these listed indications of "false prothesis" are present, the item

must be rejected, or at least be marked as doubtful according to the ranking system set out below. The same applies to cases where a cognate (except Armenian) shows an initial vowel which may be cognate with the apparent Greek prothesis.

4.2 Procedures Used in Assembling the Word List

Following is an annotated listing of Greek words often considered to show a prothetic vowel. The sources are Beekes 1969 and Wyatt 1972, supplemented by fiveitems which were discovered when assembling Greek cognates of Sanskrit verb-roots for statistical test. The one omission is ἰχθύς 'fish' (Wy:2 §1.0), which presents particular difficulties; since it is not related to any verbal root, there is really no reason to consider it here anyway. On this and similar words see Beekes:19. (For the test to be valid it is necessary to mark every Sanskrit root as having a Greek cognate with prothesis, or not; and to certify that there is no Greek cognate with prothesis it is necessary to find a cognate *without* prothesis). Beekes draws his material from Frisk 1960-72, and divides potential cases of prothesis into six categories (Beekes:32):

I "Words which are dealt with under other headwords;"

II "Words whose etymology gives no reason to speak of a prothetic vowel;"

III "Words which are of non-Indo-European origin;"

IV "Words which have no etymology at all;"

V "Words of which the proposed etyma are too unreliable to admit of further conclusions;"

VI "Words which may be of importance to the question of the prothetic vowel"; this group is defined very liberally by Beekes, and in fact contains very many words which might be assigned to groups II through V.

Only Beekes' sixth category has been used in compiling the list which follows.

Wyatt's list is divided into "Widely Accepted Cases" (§2, pp. 11-44), "Possible Additional Cases" (§3, pp. 45-56), and "Apparent Exceptions" (§4, pp. 57-64). The words in the first category are compiled from Schwyzer 1939 and Lejeune 1955. The "Apparent Exceptions" are items which seem to show prothesis, but in a pattern which does not conform to Wyatt's suggested rule for its development.

The entries in the listing below are in Greek alphabetical order (with digamma following epsilon), with the exception of the five items not found in Beekes or Frisk, which are placed last. Iota-subscript has been converted to adscript (as in many newer editions of Greek works - this causes no amiguity if the macron and diaresis are used properly). In cases where a word is found in varying forms, the one favored by LSJ is used as the head word. When two words are homophonous, they are distinguished with subscripts; an effort has been made to keep these in accord with subscripts found in the sources.

The header of each entry has the following structure: The Greek word under discussion comes first; in some cases an infinitive has been silently converted to the first-person singular indicative active, so as to conform to standard practice in citing Greek. Similarly, the nominative singular sometimes replaces other forms.

If the form is not classical Attic, then its dialectical affiliation is given in italics after the headword. This is also done for words attested in the work of the Byzantine lexicographer Hesychius. Sometimes the classical Attic form is supplied after such a headword, preceded by "*for*". In a few cases a headword is a verb form other than the present active, the standard citation form. In these cases the form is identified, and the normal citation form is given following "*of*". In some cases a reconstructed archaic form has been given after the headword, asterisked and in parentheses. This is particularly the case when the word originally contained the letter digamma (= /w/), which disappeared in archaic Attic along with the sound it represented. The disappearance of these digammas and the subsequent coalescence of surrounding vowels often produced classical Attic forms quite different from those which are necessary to understand the history of the word. In all these situations, LSJ, its 1871 abridgement, or Frisk's etymological dictionary are to be understood as the sources in the absence of an explicit citation.

Next, an English gloss is supplied. These are from those of Wyatt or Beekes, when one is furnished by those sources; else they are from LSJ or its abridgement. In these glosses, "*lit*" introduces a more literal translation. In cases where a gloss could be taken as either a noun or a verb, the ambiguity is removed by supplying "*a*" or "*to*": a bear vs. to bear.

The second line in the entry header is a reference to the principal treatment of the subject word in Beekes and Wyatt. The principal section number in Wyatt will serve as an index of his evaluation of the word - "widely accepted" or "possible" (see above). Unelaborated citations in the same entry to "Beekes" or "Wyatt" refer to these *loci*.

In many instances it is clear that items cited separately by the sources are in fact closely related etymologyically and are most conveniently discussed together. In these instances the alphabetically prior entry is given preference; it receives a multiple entry header, and a cross-reference is supplied in the place of the entry for the second form.

The main section of each entry reports and evaluates what the sources have to say about each word and its etymology. This section will usually follow a more-or-less set pattern for easy reference: it will begin with an entry on the **Form** of the word, which discusses such things as dialectical and chronological variants, and evidence for a former digamma. Then comes a listing of proposed **Cognates**. Extremely tenuous suggestions have been omitted here, and possibilities which the sources themselves treat with skepticism have a "?" prefixed. Next are general **Remarks** on the proposed etymologies, followed by a summary statement of the likely **Etymon** and a reference to the appropriate entry in **LIV** and page in Pokorny ("P"), whether or not the forms adopted here are identical to the forms in those sources. A prefixed superscript to "LIV" records details of the LIV citation:

^{a} = LIV cites the headword directly.

^{b} = LIV cites a form obviously related to the headword.

^{c} = LIV cites a form which is given as cognate by one of the other sources.

^{d} = LIV entry corresponding to a root proposed by one of the other sources.

^{e} = None of the above, but the headword nevertheless appears to reflect the root discussed by LIV.

Unelaborated references to "LIV" in the body of the entry refer to the section cited here.

It should be noted that the purpose of each entry is to determine the origin of the apparent prothetic vowel, and the identity of the original root, rather than to give a complete history of each word. Consequently, summaries from the cited etymological dictionaries are usually fairly complete, but there has been no attempt to include all of the cognates listed in LIV or Walde-Pokorny. Note also that pIE reconstructions are cited as they are found in their sources, so the presence or absence of a laryngealistic notation should not be taken as acceptance of any view regarding laryngeal reconstructions.

The final item is a **Rank**, which indicates level of confidence with which prothesis can be asserted for the subject word. The ranks, described informally, are:

'1' - A clear instance of prothesis;

'2' - Prothesis is likely, but open to significant doubt;

'3' - Prothesis is possible, but poorly supported or unlikely;

'0' - Prothesis is clearly absent.

The ranking system evaluates each case according to three criteria: (a) *Semantic* similarity between the (best) proposed cognates; (b) *Formal* similarity between those cognates (Note that this category subsumes several different situations. Most typically, the compared forms will be similar, but not derivable from a plausible protoform by completely regular operation of recognized sound laws. But this category also includes cases of *overabundance of possible protoforms* - in which one cognate *may* be from the proposed etymon, but other possibilities are unusually numerous or likely. This commonly happens where a proposed root is extracted from what is assumed to be derivational or affixal material (excluding of course the apparent prothesis itself), as in our very first case, ἀβληχρός . This *may* be from *√mlā, but other candidates such as *√blā, *√blē, *√mlāgh, *√mlēgh, etc., are equally reasonable from a purely phonological standpoint. Finally, included here are cases where some morphological oddity must be assumed to make a comparison work); and (c) the implausibility of any *alternative* classification (i.e. other than prothesis) of the apparent prothetic vowel, e.g. analogy, prefixation, or schwebeablaut. Recall that by definition a prothetic vowel is one which is in present in Greek (or perhaps also Armenian), and which cannot be explained by any recognized developmental process.

If there is a weakness in any of these categories, a debit code is assigned to that category as follows:

'-1' - a minor weakness;

'-2' - a major weakness;

'X' - a fatal weakness.

An 'X' in the "Alternatives" category is awarded when one of the (non-prothetic) explanations for the presence of the vowel is clearly correct. This is especially frequent where the vowel can be shown to be part of the root. When an 'X' is given in one of the other two categories, it will be given in both of those two categories - this represents the special case where there are no persuasive cognates at all. (Since a cognate which can be taken seriously will by definition be of reasonable quality in *both* form and meaning).

An overall rank of '1' is awarded when there are *no* debits - i.e., no significant problems with the classification of the vowel as prothetic. A rank of '2' is given when the debits total to *-1*; and a '3' when the total is *-2 or worse*. A rank of '0' is given when at least one 'X' is

assigned.

The following considerations require special comment:

1 **Whether cognates occur in many, or in few, other branches of IE:** In general, it is only the quality and not number of cognates which contribute to the ranking. But when an item is on the borderline between two ranks, consideration may be given to how widespread a root seems to be.

2 **Doublets, one of which shows prothesis and the other does not:** This is not allowed to lower the ranking of an item; to do so would imply the adoption of some theory of prothesis (See e.g. Wy:49 §3.2.6 + Wy:66 §5.1.2 re *ἀμέλδω* :: *μέλδομαι*). which disallows such a situation, thus prejudging the entire issue. But when a word has no cognates outside Greek, such doublets *do* carry some implication of prothesis. These words, in the absence of other considerations, are awarded an overall rank of '2' (with a '-1' assigned under *Form*).

3 **Cases where some, but not all, inflectional forms of a word show prothesis:** No account is taken of this, as it would again involve the prejudicial assumption of some theory of prothesis.

4 **Words where prothesis is inferred by evidence internal to Greek,** (e.g. doublets with and without vowel) but for which external cognates are lacking: the situation is noted in a comment, and points are deducted from *Form* and/or *Meaning* as seems appropriate according to the similarity in form and meaning of the two Greek words.

The overall score and the three categorial scores used to calculate it are shown as the last item in the entry, as below:

A perfect case:

Rank: 1 *Form* () *Meaning* () *Alternatives* ()

A mediocre case, some chance that the 'prothesis' may really be e.g. part of the root:

Rank: 2 *Form* () *Meaning* () *Alternatives* (-1)

A poor case, problems with *both* form and sense:

Rank: 3 *Form* (-1) *Meaning* (-1) *Alternatives* ()

A poor case, a *major* problem with form:

Rank: 3 *Form* (-2) *Meaning* () *Alternatives* () Must be rejected: prothesis is clearly e.g. part of the root:

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)

Must be rejected: no credible cognates:

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()

All the above assumes that there is clearly a best, or perhaps "least bad", cognate. Sometimes this is not the case. Where there is more than one "least bad" cognate, it would be possible to do separate caluclations for each:

Rank: 2 *Form* (-1) *Meaning* () *Alternatives* () (Skt)

Rank: 2 *Form* () *Meaning* (-1) *Alternatives* () (Lat)

Rank: 2 *Form* () *Meaning* () *Alternatives* (-2) (OCS)

but this seems unnecessary; instead, one is chosen to represent the whole lot and the situation is noted in parentheses as follows:

Rank: 2 *Form* (-1) *Meaning* () *Alternatives* () (Skt $\equiv$ Lat, OCS)

Similarly, when an 'X' is assigned in some category, it is unnecessary to take account of lesser problems in other categories. So instead of, e.g.

Rank: 0 *Form* (-1) *Meaning* () *Alternatives* (X)

I merely report:

Rank: 0 *Form* () *Meaning* () *Alternatives* (X).

4.3 List of Greek Words showing Prothesis

1 *ἀβληχρός* **'weak'**
B:49

Cognates: Chantraine («*βληχρός*») considers this possibly cognate with *βλᾱ́ξ* 'stolid, stupid' (LSJ), though with Ionic / *η* / for original / *α* /. But CEG.iv rejects this: occurrences in Pindar, Alcaeus, and Bacchylides with / *η* / establish *ē as the original sound.

Skt *mlātá* 'weich', OIr *mláith* 'sanft, weich'; so < **βλᾱ* < ** *μλᾱ* (Fr «*βλαξ*»). (But no extra-Greek cognates given in Fr «*βληχρός*».)

Remarks: Beekes *implies* that the word may have the privative prefix, on the basis of the parallel optionality of the *ἀ* in *ἀμαλδύνω*, which is semantically similar to the present word. But why add a negative prefix to a word *already* meaning 'weak'?

Note that the issue of the original vowel and the relationship of this word to *βλᾱ́ξ*, raised by Chantraine, is not a barrier to deriving the word from *z√mel.

Etymon: A member of a large family of roots meaning 'weak(en), soft(en), grind', analyzed somewhat differently by LIV and Watkins - see Appendix 4. z√melh$_2$ = m̥lh$_2$ > mlah$_2$ > mlā *or?* s√mel = mleh$_2$ > mlā. CEG.vi, however, derives from √ǧel 'piquer, faire souffrir' extended with h$_2$ (= LIV:207 1.ǧelH 'quälen, stechen').
^{e}LIV:432 «melh$_2$» = P:716-7

Rank: 2 *Form* (-1) *Meaning* () *Alternatives* ()
(Derivation from *mlā is feasible but not undeniable, and the fit in meaning is a bit better than with CEG's *√gwelh$_2$. The suggestion of prefixation is implausible.)

2 *ἀγαθός* **'good'**
B:49

Form: Hesychius reports a variant *ἀκαθόν* ; the variation here between /k/ and the normal /g/ implies to Beekes a non-Indo-European loan (B).

Cognates: The cognates outside Greek are highly uncertain; suggested are: Gothic *goþs*, German *gut*; OCS *godŭ* 'the right time', Skt *gádhya* ['attach'(Wh^R:34)] (Fr).

Remarks: On the basis of the cognates he cites, Frisk suggests that this word is from *ǧadh, plus influence of *ἀ·κυθός* .

Watkins:28 gives the etymon of the Germanic word for 'good' as *√ghedh 'unite, join, fit', as LO√ *ghōdh > pGc *gōdaz. Grassmann's Law will produce the proper Greek (and Sanskrit) consonants from this suggested pIE form, but the Greek vocalism does not match the Germanic. Conversely, Sanskrit and OCS seem fine phonetically, but the semantics are rather loose.

Rank: 3 *Form* (-1) *Meaning* () *Alternatives* () (Gc ≡ OCS, Skt)

3 *ἀγείρω* **'gather'**
B:49

Cognates: None outside Greek. (Fr; Be; LIV)

Etymon: [a]LIV:276 «h_2ĝer» (reconstructed per Greek only) = P:382

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()

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4 *ἄγνυμι* (*****ϝ*ἄγνυμι*) **'to break'**
B:56

Form: Hes *βάξον* testifies to digamma; so Common Gk ***wágnūmi*** (Snell; Kimball:245 n.16).

Cognates:
Hit ***wāki*** 'bites' (Kimball:245 n.16).
? Lat vervāctum 'Bruchacker' (Fr).

Remarks: Beekes implies long initial $\bar{\alpha} < \alpha\digamma\alpha$, i.e. prothetic α plus initial $\digamma\alpha$. But the initial alpha is given by all authorities as short (LSJ, Snell, Fr). The long forms are (1) Aorist Passive *ἐάγην* (but short in Homer, except for Il. 11.559, lengthened *metri causa* (Ch)). (2) Perfect *ἔāγα* (3) Verbal Noun *ᾰγή* (But short alpha is found in this word too (Ch); and the other related verbal nouns *ἀγμός*, *ᾰγμα*, *ᾰξος*, *ᾰγος* uniformly have short alpha (Fr)). (LS, Fr); (4) Hapax *ἀāγής* Od 11.575 (Ch). The long vowel in the perfect [and presumably the rest of these forms] is an ablaut effect of obscure (analogical?) origin; cp *πέφηνα* :: *φαίνω* (Sihler:573§516).

Etymon: z$\sqrt{\text{weh}_2\hat{\text{g}}}$ = w$\underset{\circ}{\text{h}}_2\hat{\text{g}}$ (LIV; Kimball 245)
[a]LIV:664 «weh$_2$ĝ» = P:1110.

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)

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5 *ἀγοστός* **'flat of the hand'**
B:50

Cognates: Perhaps cognate with Skt. ***hasta*** 'Faust', OCS ***grŭstĭ*** 'handful' (Fr).

Remarks: Av ***zasta***, Old Persian ***dasta*** 'Hand' (Bartholomae «zasta») together with Skt imply pIE initial *ĝ; this is not a regular match for either the Gk or OCS initials. Furthermore, the *r* of OCS is unexplained.

Rank: 3 *Form* (-2) *Meaning* () *Alternatives* ()

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6 *ἀγρεῖφνα* / *ἀγριφή* **'harrow'**
B:50

Cognates: No etymology (B).

Etymon: Hesychius reports Laconian *γριφᾶσθαι* = *γραφεῖν* (Fr), which latter form < z$\sqrt{\text{ĝerbh}}$ = ĝ$\underset{\circ}{\text{r}}$bh 'scratch' (LIV:187 «ĝerbh», Fr «*γράφω*»). So perhaps the present word is from z$\sqrt{\text{ĝreibh}}$ = ĝribh (a doublet of $\sqrt{\text{ĝerbh}}$).

Rank: 3 *Form* (-2) *Meaning* (-1) *Alternatives* ()
(Ad-hoc doublet of attested root doesn't inspire confidence.)

7 *ἄγω* **'to lead'**
B:50

Cognates:
Skt *ájati*; Av *azaiti*
Arm *acem*
Lat *ago*
OIr *-aig*
ON *aka*
Tok *āk* (Fr)

Etymon: [a]LIV:255 «1.h_2eĝ» = P:4-5; *or* $\sqrt{}h_1$aĝ, if Hieroglyphic Luvian *katta aka* 'unterwerfen' is related (LIV *loc cit* n. 10).

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Initial vowel is part of the root.)

8a *ἀείδω* **(*ἀϝείδω) 'sing'**
B:56; Wy:51 §3.4.2

8b *ἀηδών* **(*ἀϝηδών) 'nightingale'**
B:57

¶*ἀείδω*

Cognates:
Gk *αὐδή* (a schwebeablaut form) (LIV«IEa wedH»n.1)
Gk (Hes) *ϝοδόν* [ms *γοδόν* (The lexicon of Hesychius is preserved in only one extremely corrupt fifteenth-century manuscript (Tosi). Somewhere in the textual tradition behind this manuscript, the long-obsolete *digammas* were confused with *gammas*).] · *γόητα* ; *ϝοδᾶν* · *κλαίειν*
Gk *ὐδέω*
Skt *vádati*
Lith *vadinú* 'rufen, nennen'
OCS *vada* 'calumnia'
OHG *far-wânan* 'nier'
(Fr, Ch)
Hit *watar-nahh* '(an)befehlen'
Hit *uttar* 'wort'
(LIV«IEa wedH» n.1)

Remarks: The resemblences between the potential cognates and the present headword are attractive, but the iota in the latter presents a problem. It cannot be disposed of by assuming it is merely graphic: forms with different ablaut grade such as *ἀοιδός, ἀοιδάω* show that the *ει* is a genuine, not 'spurious' diphthong.

Wackernagel suggested that it results from a dissimilation of /w/ to /j/ in reduplicated forms: *ϝε*&*ϝδ* > *ϝειδ* ; a development attested in *ϝείπειν* (Ch, Fr)

Etymon: [e]LIV:286 «$h_2$wedH» = P:76-7 (assuming Wackernagel is right; else [a]LIV:288 «IEa weyd» = P:77, attested only for Greek.)

¶ἀηδών (*ἀϝηδών) 'nightingale' (B:57)

Perhaps from lengthened grade of *$h_2$wed (B; also LIV«$h_2$wedH» n.1). In any case, this quite clearly should be subsumed under ἀείδω .

Rank: 3 *Form* (-2) *Meaning* () *Alternatives* ()

9 ἀέλιοι (*ἀϝέλιοι) 'brothers-in-law'
B:57; Wy:60 §4.4.1

Cognates: OIce. *svilar* < *swe-lo 'bothers-in-law whose wives are sisters' (Fr, Wy);

Remarks: The inital alpha could be the comitative prefix. (B, Wy)

Etymon: √wel ? No relevant entry in LIV.

Rank: 2 *Form* (-1) *Meaning* () *Alternatives* ()
(Cognate attractive but must assume that Gc has prefixed an /s/ - as it often does - since pIE *swel should give Gk ×ἑλ .)

10a ἀείρω **(*αϝείρω)** *Epic/Ionic for* ἀίρω **'lift, hang'**
B:57; Wy:53 §3.4.3
10b αἰώρα **'Schwebe, Hangebett, Schankel' (Gloss per Frisk)**
B:50

¶ἀείρω

Cognates:
Alb *vjer* 'aufhangen'
Lith *virvẽ* 'Strick'; Latv véru/vērt 'reihen, sticken'
OCS *obora* 'Strick' (Fr) < **ob-vora* cp. *vorka* (Vasmer«1.obora»)

Remarks: With prefixes συν- and παρα- it means 'tie', so the alpha may be the comitative prefix (B).

Etymon: ἀείρω < *αϝέρ -j < E√ *$h_2$wer;
ἀίρω < *αϝάρ -j < Z√ *h_2w$\underset{\circ}{\text{r}}$ (CEG.i)
[a]LIV:290 «$h_2$wer» = P:1150

¶αἰώρα

Same root as ἀείρω, with intensive reduplication and in lengthened grade: *ϝαι&ϝώρᾱ (Fr).

Rank: 1 *Form* () *Meaning* () *Alternatives* ()

11a ἀέλλη **'stormy wind'(*'ἀϝέλλη)**
Wy:53 §3.4.4
11b 'ἄημι **'breathe, blow' (*'ἀϝημι)**
B:57

Form: Aeolic *αὔελλα* testifies to digamma (LSJ).

Remarks: A family of roots superficially of the form $h_2$weX, as follows (modified from B:57, but participles per Adams 1999:505, and -l- forms on the basis of Welsh; gradation labels represent the author's own conjecture):

S√$h_2$we\h_1 > Skt *vāti*; OCS *vêjǫ*; Gk *ἄημι* ; Go *waian*
S√$h_2$we\t > OHG *wetar*; OIr *feth* 'air'; Gk *ἀετμόν, ἄετμα*
E√$h_2$ew\l > Gk **ἀϝελλη*, Welsh *awel* ['breeze']
E√$h_2$ew\d > Lith áudra 'Sturm'
S (*Or*, Z√) √$h_2$we\h_1-nt 'PARTICIPLE' > Lat *ventus*; Tok *want*∼*wänt* / *yente*;
Hit *huu̯ant*; Go *winds*
(Wy; Adams 1999:505; LIV«$h_2$weh_1» n.1; Fr«*ἀέλλα*»; P:83+Fl.i:6)

Pokorny's connection with Welsh *awyð* 'heftige Windstoß' (P:82) seems erroneous; GPC.i:243 «awydd» records no such meaning for this word, only 'eager desire, aspiration, eagerness, vigor'; 'appetite, greed, gluttony, lust'.

Etymon: Perhaps originally *√$h_2$ew (but n.b. LIV:274 *√$h_2$ew 'genießen'); with related "roots" formed from schwebeablaut plus a root-extension. (I assume an original *√$h_2$ew instead of *√$h_2$we in order to satisfy the pIE constraint against roots ending in a vowel.) More directly from [a]LIV:287 «$h_2$weh_1» = P:81-84

Rank: 3 *Form* () *Meaning* () *Alternatives* (-2)
(Welsh and Lithuanian also show a forms beginning in /a/.)

---

12 *ἄεμμα* **'bow-string'**
Wy:53 §3.4.5

Etymon: "wahrscheinlich künstliche Zerdehnung aus *ἄμμα* " (Fr)

Rank: 0 *Form* () *Meaning* () *Alternatives* ()

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13 *ἀέξω* **(*** *ἀϝέξω* **)** *Ionic for* *αὔξω*, *αὐξάνω* **'make grow'**
B:57; Wy:53 §3.4.6

Cognates: Lat *augeō*. (B:128); ? Skt *vakṣáyati* 'let grow' (or else this Skt form is instead related to the *√weg seen in Lat *vegeō*, Gothic *wahsjan*).

Remarks: The IE root appears as three variants:
E√$h_2$weg(s) > Go *wahsjan*, Skt *vakṣáyati*
S√$h_2$eu̯g(s) > Go *aukan*, Lat *augeō*
Z√$h_2$ug(s) > Skt *úkṣant* (B).

Wyatt denies prothesis, believing that the form *ἀϝέξω* (which is the critical one, preserving the root /ε /, and so ruling out the schwebeablaut seen in Latin and Gothic) is a development from *αὔξω*, or is from *√weg influenced by the aforesaid. Beekes thinks that *ἀϝέξω* is from *√$h_2$weks, contaminated with *√weg.

Etymon: [a]LIV:288 «$h_2$weks» = P:84-5 (cp. LIV:660 «weĝ»)

Rank: 2 *Form* () *Meaning* () *Alternatives* (-1)
(Plausible analogical contaimination.)

14 *ἄεπτος* **(***ἄϝεπτος **) 'invincible'**
Wy:54 §3.4.7

Even the meaning is uncertain. (Wyatt)

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()

15 *ἀέσα* **aorist of** *ἀέσκω ἀϝέσκω* **'sleep'**
B:57; Wy:60 §4.4.2

Cognates:
< ***h$_2$wes**:
Skt *vásati* 'stay overnight'
Arm *aw-t'* 'place for spending the night'
Hit *huiszi* 'lives'
Go *wisan*
< ***h$_2$ew**:
Arm *aganim* 'spend the night'
(B, Wy, Ch, LIV«IEa wes»)

Remarks: Wyatt (explicitly assuming the validity of the prothesis rule which his argument attempts to establish!) prefers another derivation, from a hypothetical *$\sqrt{}$au(s) (to which *vásati* may or may not be related). Despite the possible presence of ablaut attested by Arm. *aganim*, the Greek prothesis cannot plausibly be so explained; the ϵ in *ἀέσα* is clearly the vowel of the root.

Etymon: [a]LIV:293 «2.h$_2$wes» = P:72, 1170-1
(perhaps originally 'be', contaminated with LIV:292 «1.h$_2$wes» = P:86-7 'dawn'?

Rank: 1 *Form* () *Meaning* () *Alternatives* ()

ἀηδών **(***ἀϝηδών **) 'nightingale'**
B:57

See *ἀείδω* .

16 *ἀήρ* **'air'**
B:57

Cognates: "Wurzelnomen unbekannter Herkunft". Meillet suggests a connection with *ἀείρω* (Fr); this is followed by Beekes who suggests a derivation < *eh$_2$-w-ēr ∼ h$_2$-eu-r [=LIV:290 «h$_2$wer» 'hängen']. In this case the initial vowel would be part of the root.

Remarks: Meillet's conjecture involves loose semantics; η would result from Szemerény's Law, h$_2$wer-s > h$_2$wēr, but the long alpha would remain unexplained.

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* (X)

17 ἀθέλγω **'draw off'**
B:50

Form: Also Hes ἀθέλβεται, Diocles ἀθέλδεται (Ch).

Remarks: A synonym of ἀμέλγω (LSJ); influenced by the same?

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()
(No etymology.)

18 αἰετός **(*αἰϝετός) 'eagle'**
B:57

Form: Hes αἰβετός attests digamma (Fr).

Cognates:
Lat *avis*
Arm *hav*
Av *viš*, Skt *víḥ* (B)
Hit *suwais* (pl of *owai** < *s\A$_2$woi) (Weeks:47§3.64)

Remarks: From *h$_2$ewi plus augmentative suffix *-eto- (B, Fr).

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Vowel is part of the root.)

19 αἴθω **'to light up'**
B:50

Cognates:
Lat *aestus*
Skt *édhas* 'Brennholz'
OHG *eit* (Fr)
Hit *a* 'warm sein' (Tischler 1983:3), *inu, enu* 'warm machen' (Tischler 1983:363)

Etymon: [a]LIV:259 «h$_2$eydh» = P:11-2

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Vowel is part of the root.)

20 ἆθλος **(*ἄϝεθλος) 'a contest'**
B:56; Wy:51 §3.4.1

Form: Epic ϝεθλα (Fr«ἄεθλος»), Arcadian ἄϝεθλα (B).

Cognates: "Unerklärt" (Fr); perhaps < *√wedh, 'lead, take' (Wy).

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()

21a *αἰσθάνομαι* **(***αϝἰσθάνομαι* **) 'perceive'**
B:57
21b *ἀΐω* **(***ἀϝΐω* **) 'hear'**
Wy:62 §4.4.4

¶*αἰσθάνομαι*

Cognates:
Lat *audio* < *awis-dh (Fr)
Hit *au* (The /s/ sometimes cited at the end of this root is secondary (LIV«$h_1$ew» n.3).) 'sehen' (Tischler 1983:95)

Remarks: LIV and Watkins«4.au» diverge on the reconstruction and even number of roots concerned. LIV assumes a radical /e/ and therefore requires an /h_2/ to explain the /a/ of the attested words, while Watkins just puts the /a/ in the root. But the absence of an initial /ḫ/ in Hittite forces LIV to establish a separate root for *au* (LIV:243«$h_1$ew n.1»).

LIV	Watkins	
$h_1$ew	$h_1$aw	*au*
$h_2$weys	$h_1$aw-dh	*audio*
"	$h_1$aw-is-dh	*αἰσθάνομαι*
$h_1$ew	$h_1$aw-is	*auš*; *ἀϝειω* / *ἀΐω*

CEG.iix traces to a compound, *$h_2$ew-i⸗dheh$_1$ = 'sich offenbar machen'.
Etymon: [c]LIV:288 «$h_2$weys» (as Z√ḫ$_2$wis-dh > **ἀϝισθ*) = P:78

¶22 *ἀΐω* (**ἀϝίω*)

Cognates:
OCS *(j)avê* 'kund offenbar'
Hit *aušzi* (Fr)

Remarks: Homer has short *α* ; Attic has long. No certain etymology but perhaps < *awis (Skt. *āvíṣ* 'offenbar'), or < *weis (if *ἀείω* is behind certain variants e.g. Euripides *ἐπᾴιειν*). (Wy)

Etymon: [a]LIV:288 «$h_2$weys» (as E√*$h_2$ewis) = P:78

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Vowel is clearly part of the root.)

23 *ἀΐσθω* **(***ἀϝΐσθω* **) 'breathe out'** *Epic*
Wy:54 §3.4.9

Etymology and even meaning are uncertain. (Wyatt)

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()

αἰώρα **'Schwebe, Hangebett, Schankel'**
B:50

See ἀείρω .

24 ἀκούω **'hear'**
B:50

Cognates: Go *hausjan* 'hear' (Fr) as *√$h_2$kew (B). Watkins«kous» derives from *√$h_2$kous = Walde-Pokorny *√keu.

Remarks: Initial vowel is possibly from preverb *Z√en- = n̥-, 'in' (Snell).
No need to assume *√$h_2$kew\s, with root-extension, since an integral /s/ would have disappeared in Greek in any case.

Etymon: *√$h_2$kews, not in LIV.

Rank: 3 *Form* (-1) *Meaning* () *Alternatives* (-1)
(Germanic cognate is possible, but phonetic match is not undeniable. Cognates found in only one other branch of IE.)

25 ἀλαπάζω **'to empty'**
B:39; Wy:57 §4.1.1

Form: Aeschylus has forms without ἀ (B); and medical writers have λαπάσσω (Wy).

Cognates: "Etymologisch dunkel". Suggestions:
Lith *alpstù* 'verschmachten'
Skt *álpa* 'klein' (Fr - reported but rejected)
Gk λαπαρός 'weich' (Fr, Ch), of which "sichere auswärtige Verwandte fehlen" (Fr«λαπαρός »).

Remarks: Wyatt suggests α may be negative prefix.

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()
(No cognates.)

26 ἄλαστος **'insufferable'**
Wy:56 §4.1.2

Etymology and even meaning uncertain. (Wy)

Remarks: Perhaps α is the negative prefix on the root seen in λανθάνομαι and λάω 'sehen' (Fr).

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()
(No cognates.)

27 ἀλέγω **'to care'**
B:39*f*

Cognates: ? Lat *-lego* 'sich kümmern', found only in prefixed forms (LIV).

Remarks: The ἀ might be the comitative prefix (CEG.ii).

Etymon: [a]LIV:276 «$h_2$leĝ» = P:658

Rank: 2 *Form* () *Meaning* () *Alternatives* (-1)
(Only one cognate)

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28 *ἄλεισον* **'cup'**
Wy:45 §3.1.1

Cognates: Etymology unknown; but cp. Russian *litʊ*, 'pour'; OHG *lid* 'geistiges Getrank'. Frisk calls it a 'Mediterranean' borrowing. (Wyatt)

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(No persuasive cognates.)

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29 *ἀλέομαι* **(***ἀλέϝομαι **) 'avoid',** *ἀλύσκω* **(***ἀϝαλύσκω **)'shun'**
B:39«*ἀλέα* » etc.

Form: Hesiod has *ἀλευόμενοι,* the *υ* reflecting digamma (LSJ).

Cognates:
Gk *ἀλύω*, *ἀλάομαι* 'umherirren'
Latv *alnôt* 'umherirren'
Lat *ambulo* (Fr)
TokB *ālyinträ* 'fernhalten' SUBJ (LIV«$h_2$lew»)

Etymon: [a]LIV:278 «$h_2$lew» = P:27-8 (cp LIV:264 «$h_2$elh_2», the source of *ἀλάομαι* and *ambulo*, also = P:27-8)

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Cognates imply vowel is part of the root.)

30a *ἀλείφω* **'anoint'**
B:40; Wy:12 §2.1.2
30b *ἀλίνω* **'anoint'**
B:40; Wy:13 §2.1.3

¶*ἀλείφω*

Chantraine derives this word from *√ley\bh, an otherwise unattested extended form of the root *√ley seen in *ἀλίνω*, Lat *lino*, and Skt *linā́ti* (a grammarians' form). Cp the parallel extended form *√ley\p (LIV«1.leyp») attested in *λίπα*, Skt *limpáti.* Frisk derives the word from *√leyp, with secondary aspiration.
(Ch«*ἀλείφω*», Fr«*ἀλίνω*»)

Rank: 2 *Form* (-1) *Meaning* () *Alternatives* ()
(Cognates attractive, but require unattested root extension, or "secondary" aspiration.)

¶*ἀλίνω* 'anoint'
See above.

Rank: 1 *Form* () *Meaning* () *Alternatives* ()

Etymon: *√ley (plus root-extension /bh/ in ἀλειφ́ω).
[a]LIV:277 «$h_2$leyH» (citing ἀλίνω) = P:661; cp. LIV:408 «1.leyp» = P:670-1.

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31 ἀλέξω **'ward off'**
B:40; Wy:45 §3.1.2

Cognates: A member of a schwebeablaut pair:

Theme 1 *√$h_2$elk > ἀλκ (=LIV:264 «$h_2$elk»):
Gk (reduplicated) ἀλαλκεῖν 'repousser un dangeur' (reduplicated 2d Aorist of ἀλέξω < *h_2é&h_2l̥k- (cp. the similar formation of ἀραρίσκω), (negative prefix) ἄνᾱλκις ['without strength'], ἀλκή
Lith *alkas*
Go *alhs* (Ch, LIV), OE *ealgian* 'schützen' (Fr)
Theme 2 *√$h_2$lek > ἀλεκ (=LIV:278 «$h_2$leks»):
Gk (desiderative /s/) ἀλέξω
Skt *rakṣati*
(Ch, LIV)

Remarks: Beekes derives from *√h_1(el∼le)k. Wyatt, in view of what he considers the unclear relationship of this word to ἀλκή 'strength' - and following his own unorthodox ideas about pIE */a/ - opts instead for a pIE *√alek. Consequently he rejects prothesis here. Even so, he mentions an alternative derivation of ἀλκή which requires no unusual assumptions: *√lek as zero-grade l̥k-ā > ἀλκή .

Etymon: [c]LIV:264 «$h_2$elk» ∼ [a]LIV:278 «$h_2$leks» (of which the /s/ can be taken as a root extension *vel sim.*); both = P:32

Rank: 1 *Form* () *Meaning* () *Alternatives* ()
(Although the cognates of this word constitute a schewbeablauting group, the initial vowel of ἀλέξω is *not* due to schwebeablaut, as the root vowel is preserved as ε, cp. *rakṣati*; nor would the initial /l/ have any reason to vocalize.)

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32 ἀλέω **'grind'**, ἀλέσσω
B:40

Cognates:
Arm *ałam* 'mahlen', *alewr* 'Mahl'
Av *aša* < *arta 'gemahlen'; Hindi, Bengali *ātā* 'Mehl' (Fr)

Etymon: [a]LIV:277 «$h_2$leh$_1$» = P:28-9

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Cognates show initial vowel; may be schwebeablaut *S√$h_2$elh$_1$.

33 ἁ̄λής, ἀλής (*(*h*)αϝλής) **'thronged, in a mass'** *Epic/Ionic*
B:56

Form: Aeolic ἀολλής ; Hes ϝάλι (ms. γάλι) · ἱκανόν .

Cognates: Frisk gives no cognates outside Greek. Suggested: comitative prefix ἀ plus *z√wel = wl̥ (B). This would yield pGk *awla- .

Etymon: [d]LIV:674 «1.wel» 'einschließen, verhüllen' = P:1138

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* (X)
(No cognates; and if suggested etymology is right, then the vowel is a prefix.)

34 ἀλίγκιος **'resembling'**
Wy:45 §3.1.3

Form: Poetic variant, ἐναλίγκιος (Fr).

Cognates: "Unerklärt" (Fr)

Remarks: It has been suggested by Andrew Sihler that the α- is a prepositional prefix, < n̥ < en (Beekes:25*f*).

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()
(No cognates.)

35 ἀλινδέω **'roll** CAUSATIVE'
Wy:46 §3.1.4

Cognates: Connected somehow with κυλινδέω, εἰλέω (Fr); perhaps cognate with εἰλέω as a reflex of *√wel, but with a root extension /d/, as in OE *wealtan*, OHG *walzan* ['roll'] (Ch). Wyatt rejects as a late form, *√wal influenced by κυλινδέω .

Etymon: [e]LIV:677 «welH» (*walzan*, n. 3) = P:1140-3; cp. LIV:675 «2.wel» = P:1140-2, LIV:676 «1.welg» = P:1144

Rank: 3 *Form* (-1) *Meaning* () *Alternatives* (-2)
(Structure of the word is uncertain, connection with proposed cognates is open to doubt. Gc forms imply that the vowel may be part of the root, with initial /w/ lost regularly in Gk. Schwebeablaut seems unlikely: this would involve *s√wel\d = *ewl\d ... why should the initial /ew/ appear in Gk as ἀ ?)

ἀλίνω **'anoint'**
B:40; Wy:13 §2.1.3

See ἀλεφω .

36 ἀλιταίνω **'sin'**
B:40 «ἀλείτης »; Wy:11 §2.1.1

Cognates: OHG *lîdan, leid* (B, Wy) 'fahren' (Schützeichel), which < *√leyt (LIV:410 «1.leyt» = P:672). Beekes suggests *√$h_2$leit.

Rank: 0 *Form* () *Meaning* (X) *Alternatives* ()

37 ἄλκη **'elk'**
B:40

Cognates: A loanword from Germanic, as is Lat *alcē(s)* (Fr, Ch).

pIE *olk̂is, > :
pGc *alʒí ~*álχ > OE *eolh*, OHG *elho*
Russian *losĭ*
Skt *ṛ̥śiya* (Fr)

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Loanword; even if not, the "cognates" show that the initial vowel is part of the root.)

38a ἄλοξ **'furrow'**
B:40
38b ὤλκα **'furrow'**
B:58

Cognates: Members of an ablaut series:

E√$h_2$welk:
Lith *velkù*
OCS *vlěkǫ* 'ziehen, schleppen'
Av *varək* (Fr)
O√$h_2$wolk:
Gk (Aeolic) ἄϝολκα (LSJ); Hom ὤλξ (Usually as accusative ὤλκα (LS)) < *ἀϝολκα (LIV)
Z√$h_2$wl̥k:
Gk (Attic) ἄλοξ < *ἀολξ < **αὔλαξ (Schindler:34)

Etymon: [a]LIV:289 «$h_2$welk» = P:1145

Rank: 2 *Form* () *Meaning* (-1) *Alternatives* ()
(Aeolic, especially beside non-Gk forms, shows that initial ἀ is not schewbeablaut. Semantic match could be better.)

39 ἀλφός **'dull white leprosy'**
B:40

Cognates:
Lat *albus*
OHG *albiz*
OCS *lebedĭ* 'swan' (Fr)

Hit *alpa* 'Wolke' (Tischler 1983:18)

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Vowel is part of the root.)

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40 *ἀλώπηξ* **'fox'**
B:40; Wy:56 §4.1.3

Cognates:

'fox':	'wolf':
Gk *ἀλώπηξ*	*λύκος*
Arm *ałuēs*	
Lith *lãpe*; Latv *lapsa*	Lith *vilkas*
Skt *lopāśá* 'jackal'	*vr̥ka*
Lat *vulpēs*	*lupus* (a "rural" form, note /p/ < */k̑/)
OCS *lisŭ*	*vlŭkŭ*
Breton *louarn*	
	Go *wulfs* (note /f/ < */k̑/)

(Fr; Buck:185*f* §3.71, §3.74)

Remarks: The divergence in forms may be due to taboo deformation (Ch). Notice the similarity between the words for 'fox' and 'wolf', the latter from pIE *wl̥k̑os ~ *luk̑os. This suggests the possibility of interference between the two words. In fact, the reqular Greek reflex of the variant *wl̥k̑os would be *ϝαλπος > *αλπος (Author).

Rank: 3 *Form* () *Meaning* () *Alternatives* (-2)
(Tabooistic deformation and interference from 'wolf' seem possible.)

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41 *ἀμαλδύνω* **'soften'**
B:42; Wy:20-22 §2.2.5

See Appendix 4.

Cognates: Proably a factitive denominative from *ἀμαλδύς
(cp Hes *βλαδεῖι*), cognate with:

E√meld:
Arm *mełk*
Z√ml̥d:
Gk *λαδαρός* < **βλαδ-*, *βλαδέα*
Lat *mollis* < *moldu̯is
Skt *mr̥dú*

Remarks: The *α* may be the privative prefix. (Fr)

Etymon: [e]LIV:431 «meld» = P:718 as Z√ml̥d > **μαλδ*

Rank: 1 *Form* () *Meaning* () *Alternatives* ()
(No schwebeablaut - word is already in zero-grade; nor is there any cause for initial /m/ to vocalize.)

42 'Αμάλθεια (proper name)
Wy:48 §3.2.1

Etymology uncertain. (Wyatt)

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()
(No cognates.)

43 ἀμαλός 'soft' [LS]
B:42

See Appendix 4.

Form: ἀμβλύς 'blunt, dulled', 'stumpf, schwach', is apparently a variant of this (Wy:20; Fr:89).

Cognates: Cognate with βλάπτω ; and "indirekt verwandt" with ἀμαλδύνω (Fr).

Etymon: [c]LIV:434 «melk» = P:737

Rank: 1 *Form* () *Meaning* () *Alternatives* ()

44 ἁμαρτάνω 'miss the mark'
B:42; Wy:48 §3.2.2

Cognates: "Bildung und Herleitun unklar" (Fr), "inconnue" (Ch)

Etymon: [a]LIV:281 «$h_2$mert» (giving no cognates outside Gk) = P:970

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()
(No cognates.)

45 ἀμαρύσσω 'sparkle'
Wy:59 §4.2.1

Cognates: "Sichere erklärung fehlt"; but proposed cognate: Lith *mérkt* 'die Augen schliessen, blinzen'. Maybe connected with μαρμαίρω 'sparkle'. (Fr, Wy)

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()
(No etymology.)

46 ἀμαυρός 'dark'
B:42; Wy:48 §3.2.3

Form: μαυρύομαι, μαυρός / μαῦρος, μαυρόω (Fr).

Cognates: "... ne possède pas d'étymologie" (Ch).

Remarks: May have the privative prefix ἀ - (B, Wy).

Rank: 2 *Form* (-1) *Meaning* () *Alternatives* ()
(Forms without ἀ - imply prothesis; and make privative prefix unlikely.)

---

47 *αμάω* **'reap'**
B:43; Wy:59 §4.2.2

Cognates:
OHG *mâen* (With w > ∅ /V̄_ (Braune:107§110.1); but see LIV for another explanation.);
OE *māwan* 'mow'.
Lat *meto*
Hit *ḫamešḫ* 'frühjahr' (Fr)

Remarks: Attic *ἀμάω* 'draw, gather' may be a different word; if not, then perhaps the original meaning was 'gather', and the alpha may be the comitative prefix (Wy).

Etymon: [a]LIV:279 «$h_2$meh$_1$» = P:703

Rank: 2 *Form* () *Meaning* () *Alternatives* (-1)
(Possibility of schewbeablaut)

ἀμβλύς **'blunt, dulled'**
B:83; Wy:20 §2.2.5

See *ἀμαλός*

---

48 *ἀμείβω* **'to change'**
B:43; Wy:19 §2.2.1

Cognates: Lat *migrō* < *mei-g-r [< **mei-ǵ-r] (with adjective suffix); cp. *meō, mūnis, mūto* (Ernout). Chantraine likewise isolates *√mei from Skt *ni-máyate* 'exchange' (Gloss per Wy) and *migrō*, inferring an extended root *√$h_2$mei\ǵ. CEG.iix, on the basis of Corinthian *ἀμοιϝάν* and Cretan *ἀμαϝύσασθαι* 'exchange', infers *am$^e/_o$iw (presumably = √am$^e/_o$y\w), with Ionic substitution of *β* for *ϝ*.

Etymon: [a]LIV:279 «$h_2$meyǵ» = P:713; cp. LIV«2.mey» 'wechseln, tauschen, ändern'; ibid. n.1 cites $h_2$meyǵ as an extended form.

Rank: 2 *Form* () *Meaning* (-1) *Alternatives* ()
(On account of /ei/ ∼/i/, schwebeablaut does not seem possible.)

---

49 *ἀμείνων* **'better'**
Wy:48 §3.2.4

Cognates: None outside Greek (Wy).

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()

ἀμείρω **'bereave'**
Wy:48 §3.2.5

See ἀμέρδω .

---

50 ἀμέλγω **'to milk'**
B:43; Wy:19 §2.2.2

See Appendix 4.

Cognates:
OHG *melchan*, OE *melcan*
Lith *mélžu*
OCS *mlŭzǫ* (< zero-grade)
MIr *bligim*
Lat *mulgeo*
Alb *mjel*
TokA *mālkant*
(Fr)

Etymon: [a]LIV:279 «$h_2$melĝ» = P:722-3

Rank: 1 *Form* () *Meaning* () *Alternatives* ()
(No vocalization of /m/, no schwebeablaut: /e/ preserves the root vowel.)

---

51 ἀμέλδω *Hes* **'melt'**
Wy:49 §3.2.6

See Appendix 4.

Cognates:
Skt *mṛu* 'soft' (Wy), Skt *mradate* 'wird weich'
OE *meltan*; OHG *smelzan* 'schmeltzen' (LIV); ON *smelta* (B:85)

Remarks: ἀμέλδω < *√meld; but μέλδομαι 'make liquid' < *√smeld, with prothesis disfavored by initial /s/. (Wy *loc cit* + Wy:66 §5.1.2).

Etymon: [a]LIV:431 «meld» = P:718

Rank: 1 *Form* () *Meaning* () *Alternatives* ()
Wy:49 §3.2.6 + Wy:66 §5.1.2

52a ἀμέρδω **'deprive'**
B:43; Wy:49 §3.2.8
52b ἀμείρω **'bereave'**
Wy:48 §3.2.5

¶ἀμέρδω
See Appendix 4.

Form: Hes *μέρδει, μερθιῖσα* .

Cognates: "Sichere verwandte fehlen"; but:
Skt *márdati, mr̥dnā́ti* 'zerreiben' (Fr)
OE *smeortan* 'schmerzen'
Lat *mordeo* 'beißen' (LIV)

Etymon: [a]LIV:280 «$h_2$merd» = P:736-7
¶*ἀμείρω*

Chantraine considers this a variant of *αμέρδω*; Wyatt derives it from the aorist of the same.

Rank: 2 *Form* () *Meaning* (-1) *Alternatives* ()

---

53 *ἀμέργω* **'pluck, pull'**
B:43; Wy:49 §3.2.7

Form: Apparent nominal relatives: *ἀμόργη* ; *ἀμοργός* ; *μοργός* (Wy)

Cognates: "Pas d'étymologie assurée" (Ch); but:
Gk *ὀμόργνυμι* 'wipe'
Skt *mā́rjmi* 'wipe' (Fr)

Remarks: Wyatt suggests *√mer\d

Etymon: [a]LIV:280 «$h_2$merǧ» = P:738

Rank: 3 *Form* () *Meaning* (-2) *Alternatives* ()
(LIV accepts both *ὀμόργνυμι* and Skt *mā́rṣti* 'wischt ab' as cognate.)

---

54 *ἀμεύομαι* **'surpass'**
Wy:49 §3.2.9

Cognates: "nur unsichere Anknüpfungen"; but:
Gk *ἀμύνω* ['ward off' (LS)]
Lat *moneo*
Lith *máuju* 'abstreifen, abreißen'
Skt *mī́vati* 'schieben'
Hit *maušzi* 'fallen'
(Fr«*αμεύσασθαι* »)

Remarks: LSJ thinks this is a Doric form of *ἀμείβομαι* (qv *supra*).
Generally assumed (Fr.i:97,ii:271; Ch.i:79*f*,ii:722) to belong somehow with *ἀμύνω* is *μύνομαι,* 'makes excuses, puts off' (LS).

Etymon: *mew(\n) ?

Rank: 3 *Form* () *Meaning* (-2) *Alternatives* (-1)
(No persuasive cognates, but the apparent presence of doublets in Greek variable prothesis.

The semantic match is rather loose, and there is some possibility of prepositional prefixation, considering the semantic element of *opposition*.)

---

55 *ἀμολγός Homer* **'night'(?)**
B:43

See Appendix 4.

Remarks: LSJ and Fr suggest a relationship with *ἀμέλδω supra*, thus "milking-time".

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()
(No firm cognates.)

---

56 *ἀμύσσω* **'scratch'**
Wy:60 §4.2.3

Cognates: "Ohne genaue Entsprechung", but:
Lat *mucro* ['sharp point']
Lith *mùšti* 'schlagen'
OE *gemyscan* 'betrüben' (Fr)

Etymon: A root *E√mewk̂~*Z√muk̂ would work for everything (except the /s/ of OE); but there is nothing resembling such a root in LIV.

Rank: 2 *Form* () *Meaning* (-1) *Alternatives* ()

---

57 *ἀνάγκη* **'force, necessity'**
Wy:49 §3.3.1

Cognates: *Two* pairs of Celtic cognates have been put forward:

- OIr *écen*, Welsh *angen* (Fr; Ch:83)
- OIr *éc*, Welsh *angeu* (Benveniste 1935 I:155)

Regarding which:

écen > NIr *eigean*: "In the earliest recorded examples the meaning is usually 'necessity, compulsion' " (DIL«éicen»; Dinneen)
éc > NIr *éag*: 'death' (DIL; Dinneen)
angen (↔ Cornish *anken*, Irish *écen*) < *ank 'necessity' (GPC I:50)
angeu (↔ Cornish *ankow*, Irish *éc*, Lat *nex*) < *nek 'death' (GPC I:49«angau»)

To these can be added:

German *Acht* (Fr)
Hit *ḫenkan* 'tod' (Fr, Benveniste 1935 I:155)
Skt *naś* ['death, disappearance'] (Ch, citing Benveniste)
Lat *nex* 'death', *noxa* 'injury' (Ch, citing Benveniste)

Remarks: Benveniste reconciles these disparate forms as schwebeablaut variants (Ch; GPC):
pIE *$h_2$enk > Hit *ḫenkan*; Welsh *angen*; OIr *écen*; Gk *ἀναγκή*
pIE *$h_2$nek > Skt *naś*; Lat *nex, noxa*; Welsh *angeu*; OIr *éc*
Schwyzer analyzes *ἀναγκή* as *ἀνα·αγκ* (Ch)

Etymon: [a]LIV:268 «$h_2$enk̂» = P:45, 318

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Vowel is clearly part of the root.)

---

58 *ἄνεμος* **'a wind'**
B:45

Cognates:
Lat *animus*
Skt *anila, ániti* 'atmet'
Arm *hołm* (with dissimilation)
Welsh *anadl* (with suffix *tlo)
Go *us·au-an* 'ausatmen' (Fr)

Etymon: [a]LIV:267 «$h_2$enh$_1$» = P:38-9

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Vowel is part of the root.)

---

59 *ἄνευ* **'without'**
Wy:49*f* §3.3.2

Cognates: "Ohne genaue Entsprechung"; but:
Go *inu* 'ohne'< *enu; OHG *ânu* < *ēnu
Skt ánu 'entlang'
also:
Lat *sine*
Skt *sanu-tár* 'abseits' (Fr)

Remarks: Wyatt presents a possible, though complex, derivation from negative *ne + PARTICLE u(d), the combination then undergoing prothesis. But he prefers the traditional derivation from pIE *eneu ∼*enu.

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Vowel is part of the root.)

---

60 *ἀνεψιός* **'first cousin'**
B:45; Wy:28 §2.3.2

Cognates:
< ***nept-tiio̯:**
Av *naptya* 'Abkömmling'
OCS *netĭjĭ* 'Neffe'
< ***nepōt:**
Lat *nepōs*

(Fr)

Remarks: The initial *ἀ* has sometimes been analyzed as the comitative prefix (Wy).

Etymon: *$\sqrt{}$nep-$^{e}/_{o}$t

Rank: 2 *Form* () *Meaning* () *Alternatives* (-1)
(Possibility of comitative prefix.)

---

61 *ἀνήρ* **'man'**
B:45; Wy:29*f* §2.3.4

Cognates:
Arm *ayr*
Ved *nar*
Sabellic *ner* 'man of rank'
Hit *in(n)arawant* 'strong'; Luvian *anarummi*
Alb *njer*
OIr *nert* 'strength'
(Weeks:78§4.81)

Remarks: Revising Wyatt slightly, the initial alpha can be explained by the analogical reformation of the Nominative by the weak Oblique stem:

	Nom Sg		Gen Sg	
Stage 1:	ner		n̥ros	
Stage 2:	ner		anros > an^{d}ros	(/n̥/ becomes /an/, then epenthesis)
Stage 3:	aner	(analogical /a/-)	andros	

H.C. Melchert analyzes the Hittite form as pIE *en-A_2nr-o (A_2 = standard h_2) 'having strength inside' (Weeks *loc cit*).

Rank: 2 *Form* () *Meaning* () *Alternatives* (-1)
(Possibly due to intraparadigmatic analogy.)

---

62 *ἀννίς* **'grandmother'**
B:45

Form: Attested as Boeotian by Hesychius; also found in inscription (Larisa).

Cognates:
Hit *annaš* 'mutter', *hannas* 'Großmutter'; Lycian *χñna* 'Mutter'
Arm *han* 'Großmutter'
Lat *anna*
OHG *ana* 'Ahne, Großmutter' (Fr)

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Vowel is part of the root; also, a nursery-word.)

63 *'ἄντα Epic* **'over against'**
B:45

Cognates:
Got *and(a)* 'entgegen'(Fr); OHG *andi* 'forehead' (Weeks:58§4.205)
Lith (Old/dialectical) *añt, antà* 'nach, um, auf, über'
(Fr)
Hit *hant* 'forehead'
Gk *ἀντί*
Lat *ante*
OIr *étan*
Skt *ánta* 'limit, end'
(Weeks *loc cit*)

Rank: 0 *Form* () *Meaning* () *Alternatives* (X) (Vowel is part of the root.)

64 *ἀπειλή* **'boast'**
B:50

Cognates:
Latv *pel̃t* 'schmähen, verkunden'
Got *spill* 'Sage, Fabel'
Arm *aṙa-spel* 'Sage, Sprichwort' (Fr)
Tok *pällāntar* 'preisen' / *pällātar* 'preist' (LIV)

Remarks: These imply *$\sqrt{}$(s)pel, with Greek adding prothesis to the form without s-mobile; the Greek may be formed from prefix *h_2 plus *pel (B).

Etymon: [a]LIV:576 «(s)pelH» = P:985

Rank: 2 *Form* () *Meaning* (-1) *Alternatives* ()

65 *'ἄρα* **'then** PARTICLE'
B:33*f*

Apparently *$\underset{\circ}{\mathrm{r}}$ > *ἀρ* ~ *ṕα*, then conflation of forms (B), cp.:

F*$\sqrt{}$ar > Lit *ar̃*, Latv *ar* 'INTERROGATIVE'
Z*$\sqrt{}\underset{\circ}{\mathrm{r}}$ > Lit *ir̃*, Latv *ìr* 'und, auch, sogar' (Fr, Ch)

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Vowel is part of the root.)

ἀράζουσι

See #204.

66 *ἀραρίσκω* **'join'**
B:35

Cognates:
Arm *arari* 'ich machte' (aorist), *aṙnem* 'id' (preterite) (Fr, Ch)
Hit *ara* 'Wohl, Recht' (noun) 'passend' (adjective) (Tischler 1983:50)

Etymon: √ar
[a]LIV:269 «1.$h_2$er» (see esp. n.0 [sic]) = P:55-6

Remarks: The present stem is considered a reduplicated formation *h_2é&h_2r- ← *√1.$h_2$er by LIV:270 esp. notes 7 and 8. Cp. the similar formation of *ἀλέξω*
Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Vowel is part of the root.)

67 *ἀράσσω* **'strike'**
B:34

Etymology unclear; perhaps onomatopoetic (Fr).

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()
(No etymology.)

68 *ἀράχνη* **'spider's web'**
B:34

Cognates: Etymology uncertain; perhaps Lat. *araneus* < earlier *araksn-*; maybe also OE *rynge* (B).

Remarks: Clark-Hall«renge» considers the OE word to be a loan from Latin; Ernout«araneus» considers the Latin to be a possible loan from Greek.
ἀράχνη and *araksneus point to something like *aragh\s-new-s, not a likely pIE form. The /s/ would be a stem-extension absent in Greek, as /gh-s/ should give Gk *ξ* (Sihler:204§214).

Rank: 3 *Form* (-2) *Meaning* () *Alternatives* (-2)
(The apparent protoform is phonologically odd; borrowing is suspected.)

69 *ἀργός* **'shining'**
B:34

Cognates:
< uncertain pIE grade:
Gaulish *arganto-*; Ir *airget*; Welsh *ariant*
Arm *arcat'* 'argent'
< pIE *Z√h_2r̥ĝ-:
Gk *ἀργός*, *ἄργυρος*
Ved *ṛjrá* 'glänzend, schnell'; Av *ərəzatəm*
<pIE *E√$h_2$erĝ-:
Hit *harkis* 'weiß, hell'

Skt *árjuna* 'weiß, licht'
Lat *argentum*
Tok *ārki* / *ārkwi* 'white'
(B; Fr; Ernout«argentum»; Tischler 1983:177«ḫarki»; Adams 1999:49 (inc. for Lat, Ir.))

Remarks: The initial *ἀ* is not prothetic, but from vocalization of the root */r̥/ (B).

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)

---

70 *ἄρδω* **(** ***ἀϝάρδω* **) 'to water'**
B:34; Wy:54 §3.4.8

Cognates: "Etymologie unbekannt" (Fr); suggestions are:
Lith *versmẽ* 'Quelle' (Fr)
Lith *vérdu* 'gush, cook' (Wy)
Latv *werdīt* 'spordeln' (Fr)
Skt *varṣati* 'rains' (Wy)
Hit *warsiyezzi* 'scheidet flußigkeit aus, trieft' (LIV«$h_2$wers»)

Etymon: Apparently < pIE *√$h_2$wers. Two Baltic forms seem to have a root-extension /d/ (Wy).
[e]LIV:291 «$h_2$wers» (citing *varṣati*, *οὐρέω*) = P:80-1; Watkins«wers». (cp. the perhaps related root of *ἀρσήν*, *vr̥ṣan*, LIV:691 «2.wers» = P:1150-1; Watkins«2.ers».)

Rank: 2 *Form* () *Meaning* (-1) *Alternatives* ()

---

71 **'Ἀρέθυσα** 'PROPER NAME OF FOUNTAIN'
B:34

Cognates: Etymology unknown (B).

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()

---

72 *ἀρέσκω* **'to make good; to please'**
B:34

Cognates: None listed (Fr, Ch).

Etymon: Beekes derives from *√$h_2$erh$_1$; neither this nor anything similar is in LIV.

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()
(No cognates.)

---

73 *ἀρήγω* **'to aid'**
B:34

Cognates: "Nicht sicher erklärt", but OHG *geruohhen*; OS *rôkjan*; ON *rækja* 'Sorge tragen, Rücksicht nehmen' (Fr)

Etymon: [a]LIV:284 «$h_2reh_1(\hat{g})$» (listing only Gk and Gc) = P:857

Rank: 2 *Form* (-1) *Meaning* () *Alternatives* ()
(Only in two branches of IE, no single branch displaying both attested ablaut grades.)

---

74 *ἀρι* **-** 'INTENSIVE'
B:34

Form: Variant with a different vowel, *ἐρι* - (B).

Cognates: Has been compared to the Vedic prefix *ari-* (RV 1.98, 2.19), but the meaning of this is doubtful (Fr, Ch). Chantraine connects Gk *αρι* with *ἀρείων* and *ἄριστος*, but these are themselves without good cognates (Ch«*ἀρι*», «*ἀρείων*», «*ἄρος*»; Fr«*ἄριστος*», «*ἀρετή*», «*ἀρείων*»).

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()
(No etymology)

---

75 *ἀριθμός* **'number'**
B:34

Cognates:
OIr *rím* 'counting, number' (DIL)
OHG *rīm* 'Zahl, Berechnung' (Schützeichel); ON *rím* 'computation' (Zoega); OE *rīman* 'to count, number, reckon' (Clark-Hall)

Remarks: The Celtic and Germanic words seem to be in the zero-grade ($z\sqrt{h_2ery} = h_2ri$), Greek in the full grade.

Etymon: Beekes proposes < $*h_2(er{\sim}\underset{\circ}{r})i$. But unless Beekes intends the /i/ to be a stem-extension or suffix, this has a very odd shape, CVR_1R_2, where R_2 is more sonorous than R_1. Cp *bherw (LIV:81).

Rank: 0 *Form* (-2) *Meaning* () *Alternatives* (X)
(Vowel is part of the root.)

---

76 *ἄριστον* **'breakfast'**
B:34

Cognates:
Gk *ἦρι* 'early'
Got *air*; ON *ár*
Av *ayarə* < *ayer-i (Fr; Ch)

Remarks: The word is composed as follows:
ἀίερῑ (↔*ἦρι* 'early')-*δ* (= $z\sqrt{ed}$ 'eat')-*το*-*ν* (Fr, Ch).

Etymon: $*h_2eyer$-$z\sqrt{ed}$ (B, Fr, Ch).

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(The initial vowel is a part of the root.)

77 *ἀρκέω* **'ward off'**
B:34*f*

Cognates:
Hit *ḫark* 'halten, schützen'
Lat *arceo*
OHG *rigi* 'Riegel'
Lith *rakìnti* 'schließen'
Arm *argel* 'Hindernis' (Tischler 1983:173*f*)

Etymon: [a]LIV:273 «$h_2$rk̂» = P:65-6

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Vowel is part of the root.)

78 *ἄρκτος* **'a bear'**
B:35

Cognates:
Hit *hartagga* (Tischler 1983)
Skt *ṛ́kṣa*, Av *arša*
Arm *arǰ*
Lat *ursus*
Ir *art* (Ch)

Etymon: pIE *h_2r̥tk- (Sihler:94§96)

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Despite the unclarity of many details, the initial vowel is part of the root; n.b. pIE *r̥ > /ar/ (*vel sim*) in many languages.)

79 *ἀρνέομαι* **'deny'**
B:35

Cognates: "Nicht sicher erklärt" (Fr); but:
Arm *uranam* 'nier' (Ch)
Av *rah-* 'abtrunnig sein' (intensive *rārašyeiti*, causitive *rā̊ŋhayeiti*) (Fr)

Etymon: [a]LIV:284 «$h_2$res» (accepting Gk and Av cognates only) = P:62

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(The Gk shows Z√h_2r̥s vocalizing > *ἀρ*, so vowel is part of the root.)

80 *ἄρνυμαι* **'to gain'**
B:35

Cognates:
Arm *aṙnum* (aorist *aṙi*) 'nehmen'
Av *ərənav* 'gewähen, zuweisen'
Hit *arnunzi* 'hin/her-bringen' (Fr)

Etymon: [a]LIV:270 «2.$h_2$er» = P:61

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Vowel is part of the root)

---

81 *ἀρόω* **'to plough'**
B:35

Cognates:
Lat *arāre* 'pflügen'
MIr *airim* 'pflügen'
Got *arjan* 'pflügen'
Lith *arin/árti* 'pflügen'
OCS *orjǫ/orati* 'pflügen' (Fr)
Hit *haraszi/harasta* 'bricht/bracht die Erde auf' (LIV)

Etymon: [a]LIV:272 «$h_2$erh_1» = P:62

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Vowel is part of the root)

---

82 '´Αρπυια 'Harpies MYTHOLOGICAL CREATURES, *lit* **snatchers'**
B:35

Form: Also documented as *ἄρεπ* - / *ἄρειπ* -; many other related forms, with quality of initial vowel uncertain due to prefixing (B).

Cognates: Etymology unclear (B); *ἁρπάζω* has no cognates outside Greek (Fr«*ἁρπάζω* »)

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()
(No etymology.)

---

83 *'ἄρσην* **'masculine'**
B:35

Cognates: Av, Old Persian *aršan* 'Mann'; Skt *ṛ̥ṣa-bhá* ['steer']. (Skt *vṛ̥ṣan* is a rhyme-formation beside *várṣati.*) (Fr)

Etymon: [a]LIV:691 «2.wers» 'sich erheben, hochkommen' = P:1150-1

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Vowel is part of the root.)

---

84 *ἀσκαρίζω dialectical Attic for ὀκαίρω* **'to jump'**
B:50

Cognates:
Gk *ἀσκαρίς* 'Springwurm' (Fr)
M/NHG *scheren* (but OHG *scerôn* 'mutwillig, ausgelassig sein'!); OE *secge-scēre* 'Heuschrecke'

Lith *skėrys* 'id'
OCS *skorĭ* 'schnell'
Welsh *cerdd-af* '[ich] wandle' (LIV)

Remarks: OCS, GK imply *skar(-jo, -izo); Lith, OE imply *skēr.

Etymon: [a]LIV:556 «1.(s)k̂er» = P:933-5

Rank: 3 *Form* () *Meaning* (-2) *Alternatives* ()

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85 ἀσπαίρω **'to struggle',** ἀσπαρίζω
B:50

Form: Variant without initial vowel: σπαίρω (B), cp. σφυρόν 'ankle', σφύρα 'hammer'.

Cognates:
Lith *spiriù / spìrti* 'trotzen, sich wiedersetzen, sperren ... nieder-/an-drücken, Fuß hineinpressen' (B, Fl)
Skt *sphuráti* 'spurn' (AV, RV 6.61.14), 'dart, bound' (RV), 'thrash, throb', 'hurt' (Monier-Williams«√sphur»), 'jerk' (10.34.9) (Suryakanta); Av *sparoi̯t* 'stoßen', *sparana* 'mit der Füßen ausschlagend' etc. (Mayrhofer«sphuráti»)
ON *sperna* 'spurn, kick with foot' (Zoega); OE *sporettan* 'kick', *spornettan* 'spurn, kick', *sporning* 'stumbling-block', *spure* 'heel', *spura* 'spur', *spor* 'spoor', *spurnan* 'strike against, kick, reject, stumble', *spurnere* 'fuller' (Clark-Hall); OHG *(bi-/fir)-spurnan* 'ausstoßen' (Schützeichel)
Lat *spernō* 'separate from, spurn, disdain, disregard' (B, OLD)
Hit *isparranzi* 'treten nieder, breiten hin' (LIV«spherH»)

Remarks: LSJ defines as 'pant, gasp, struggle'; most of the *loci* cited therein are ambiguous as to 'pant/gasp' vs. 'struggle', but Od. 19.231
[νεβρόν] ... ἤσπαιρε πόδεσσι implies only 'struggle', while Dionysius of Halicarnassus *Roman Antiquities* 7.25 and Herodotus 8.5 seem to mean 'be in conflict'.

Etymon: *√sper as Z√sp̥r̥ (Gk (/ar/ > /aîr/ by influence of present-suffix *jo), Lith, Skt (/ur/ as reflex of *r̥ by influence of preceding labial), Av, Gc (most));
as E√sper (ON, Lat) (LIV)
[e]LIV:585 «spherH» = P:992-3. N.b. LIV's */ph/, and rejection of ἀσπαίρω as cognate due to its unaspirated π . *sper(H) is preferred here, with Indo-Iranian /ph/ due to the preceding /s/.

Rank: 1 *Form* () *Meaning* () *Alternatives* ()
(Skt and Gc both preserve polysemous 'kick ... reject')

ἄσπαλον

See #205.

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86 ἀσταφίς **'raisin'**
B:50

Form: Also *ὀταφίς* (Fr), *ὀσταφίς* (B)

Cognates: Presumably related to *χταφυλή* 'Weintraube' (Fr), which though "nicht sicher erklärt" is possibly cognate with Gk *στέμβω* and OHG *stampfôn* 'stamp' < *stomb (Fr«*σταφυλή*»)

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()
(No satisfactory etymology)

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87 *ἀσταχύς* **'ear of grain'**
B:50

Form: Also *σταχύς* (Fr), which is "ohne sichere Etymologie", but ...

Cognates:
ON *stinga*; OE *stingan*, OHG *stanga* 'Stock, Pfahl' (Fr)
Lith *stangùs* 'steif, starr', *stangà* 'Austrennung', *stiñgti* 'steif/fest werden' (Fr), *stegerỹs* 'withered plant stem' (B)

Remarks: Gk appears to be from the zero-grade of the nasal-infixed version of the root: *st̥ngh- > *σταχ-* .

Etymon: *stengh (Fr«*σταχύς*», B)
[c]LIV:589 «stegh» (citing only ON) = P:1014-5

Rank: 2 *Form* () *Meaning* (-1) *Alternatives* ()

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88 *ἀστεμφής* **'unmoved'**
B:50

Cognates:
? Gk *στέμφυλα* 'ausgepresste Oliven' (Fr)
? Gk *στέμβω* ↔*στοβάζειν* ↔*ἀτέμβω* all 'abuse' (B)

Remarks: Proposed Gk cognates suggest that the apparent prothesis may be the negative prefix, so literally = "unpressable" (Fr).

Etymon: Seems to be from *√(s)te(m)b (not in LIV), or something similar: LIV:595 «stembh» 'sich stútzen' n.1 denies, on account of the meaning, that *ἀστεμφής* and *στέμβω* belong with that root. LIV:144 «3.dhembh» '(zer)schlagen' n.1 calls connection with *ἀτέμβομαι* "zumindest unsicher". LIV:624 «temH» 'ermatten, ohnmächtig werden' is also possible, but requires the presence of an otherwise unattested /b/ root-extension.

The best possibility is LIV:144 «3.dhembh» '(zer)schlagen', > Ved *dambháyati*. This by Grassmann's Law > /dembh/, then by prefixation with /s/ > /stembh/ > **στεμφ-* .

Perhaps the *ἀ-* in *ἀτέμβω* is z√en = *n̥ 'in', cp'*ἐγ·κειμαι* 'attack'.

Rank: 0 *Form* (-1) *Meaning* (-1) *Alternatives* (X)
(Acceptance of the proposed etymologies requires, on semantic grounds, the analysis of the vowel as the negative prefix. But without an etymology there is no firm reason for assuming prothesis.)

89a *ἀστήρ* **'star'**
B:51; Wy:2 §1.0
89b *ἀστεροπή* **'lightning'**
B:51; Wy:2 §1.0

¶*ἀστήρ*
Cognates:
Arm *astł* 'Stern'
Breton *sternen*
Go *stairno*
TokB *scirye*
Av *stār-əm* (AccSg); Skt *tā́raḥ* (Nom Pl), *str̥bhiḥ* (Ins Pl)
Lat *stella*, also *sternō* 'I strew'
OCS *steljǫ* (Fr)
Hit *ḫaster* (Tischler 1983:204)

Etymon: [e]LIV:599 «sterh$_3$» (Lat *sternō* only) = P:1029-30
¶*ἀστεροπή*
Form: Many variants (B:52), including *στεροπή* But n.b. no variants of *ἀστήρ* without prothesis are listed. (Fr«*ἀστεροπή*»,«*ἀστήρ*»).

Remarks: Analyzed as 'STAR'+'EYE, cp. Arm *p'ayl-akn* 'Blitz' *lit* 'Glanz-Auge'; *areg-akn lit* 'Sonne-Auge' (Fr, Ch).

Rank: 2 *Form* () *Meaning* () *Alternatives* (-1)
(Hittite shows a vowel - at least in writing - corresponding to the "prothesis" of Gk and Arm.)

90 *ἀστράγαλος* **'vertebra, ankle bone'**
B:51

Cognates:
Hit *hasta* 'bone' (Weeks:54§4.16)
Gk *ὀστέον* 'bone'
Lat *os* 'bone', *costa* 'rib'
OCS *kostĭ* 'bone' (Buck:207§4.16)

Remarks: An r/n stem, structure as follows:

	ἀστ *1	*ρα*	*γ*	*αλ*	*ος*
Gk 'tile' Nom Sg	*ὄστ*	*ρα*	*κ*		*ον*
Skt 'bone' Gk Sg	ast	n			áḥ

1 **ος* has assimilated to the *α* of the following syllable.

Rank: 0 *Form* (-2) *Meaning* () *Alternatives* (X)
(Etymology requires complex and non-obvious structural analysis. Worse, the vowel is part of the root, despite the questions raised by the OCS and Hittite initials.)

91 *ἀστραλός Thessalian (Hesychius)* **'starling'**
B:51

Cognates:
Lat *sturnus* < *st̥r-n-os
OE *stær*; OHG *stara* < *star-∅-os
Gk *ἀστραλός* < *(a)st̥r-l-os

Remarks: Note that this word resembles the word for 'star' (qv *supra*), *ἀστήρ* - as do its cognates in Latin (sturnus :: stella) and Germanic (OE stær :: steorra, OHG stara :: sterno). (Fr; LSJ + Clark-Hall; Schützeichel)

Etymon: *storo (Watkins:87) = P:1036; perhaps = o√sterh$_3$

Rank: 3 *Form* () *Meaning* () *Alternatives* (-2)
(Looks like influence of 'star' due to folk-etymology; else could be same root, or an independent one with prothesis.)

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92 *ἀσφάραγος* **'throat'**
B:51

Cognates:
(1) Gk *σφαραγέομαι* 'prasseln' (Fr«1.*ἀσφάραγος*»)
(2) Gk *φάραγξ* 'mountain cleft, deep chasm' (LS)
(3) Lith *springstù / spriñgti* 'beim Schlucken würgen, schwer schlucken, würgend schlucken ... im Halse bleiben ... gierig essen oder trinken' (Fl«spriñgti»; Fr«2.*ἀσφάραγος*»)
(4) Gk *φάρυγξ* ['throat'] < *bh̥ruĝ
(5) Lat *frūmen* 'Schlund, Kehle' < *bhrūĝ
(6) Arm *erbuc* 'Brust' < *bhrūĝ (Fr«*φάρυγξ*» (with "g" replaced by "ĝ" per Armenian).)
or ...
(7) Gk 2.*ἀσφάραγος* 'Sparsel, junger Trieb'
(8) Skt *sphūrjati* 'hervorbrechen'
(9) Lith *spùrgas* 'Sproß' (Fr«2.*ἀσφάραγος*»)

Remarks: The present headword and the first two Greek forms seem easily relatable phonologically:

	pIE		*Z√sp$\underset{\circ}{\text{r}}$	($\frac{\text{n}}{\Lambda}$)	g	
	Gk	ἀ	σφάρα	∅	γ	-ος
(1)	Gk		σφαρα	∅	γ	-έομαι, -ος
(2)	Gk		σφαρα	$\frac{\nu}{\Lambda}$	γ	-ς

But the semantic relationship ('throat' > 'chasm' *and* 'sputter'), while conceivable, is hardly persuasive. (And note, for the origin of (1), LIV:586«spherh$_2$g» 'zischen, prasseln' = P:996-7, and LIV:582«spreg» 'prasseln, knacken'.)

The suggested Lithuanian cognate (3) is superficially similar to this set, but the order of its /ri/ sequence is wrong for a reflex of pIE *$\underset{\circ}{\text{r}}$. Fraenkel considers it an ablaut variant of *spreñgti*, '(mit Austrngung, gewaltsam) in einem engen Zwischenraum pressen, drängen ... (eine Saite an)spannen ...' (N.b. LIV:583 lists 'spannen' as one meaning of *spreñgti*), cognate with Latv. *sprañgât* 'einschnürren' and Russian *prjatčĭ*, 'vorspannen' (Fr«spriñgti, spreñgti»). Further, LIV:583«sprengh 'springen'» gives OCS *-pręgǫ / -pręšti; prǫžiti* 'anspannen' as cognate with Lithuanian *spreñgti*; the proto-Slavic forms are *pręgǫ / prękti* (Vasmer «prjagú»). So this Lithuanian form might be derived from an ablaut variant as follows:

pIE	*E√spre	($\frac{\text{n}}{\Lambda}$)	g	
Lith	spre ~spri	$\frac{\text{n}}{\Lambda}$	g	ti

But a serious formal problem is OCS *-pręže*, the aorist of *-pręšti*. The /ę/ suggests

that the nasal is part of the root, not an infix; it is hard to see how to get our headword ἀσφάραγος from a form with /n/ such as *√(s)pr̥n-.

LIV lists two groups of cognates for their root *sprengh 'springen': the Balto-Slavic 'strangle/harness' words just cited - all marked with a "?" - and some Germanic words for 'jump/spring' such as OE *springan*. Fraenkel also suggests this OE word as a cognate of the Lithuanian. But there does not seem to be any overlap in the semantics of the Balto-Slavic 'strangle/harness/squeeze' group, and the Germanic 'jump' group; the identity in form is apparently the only motivation for grouping them together. (But there is a possible OCS member of the 'jump' group, *prǫgŭ*, 'Heuschrecke' (LIV *loc cit* n.1).) Perhaps this situation is best treated as a case of homonymy.

Items (4) through (6) imply a related (?) form with initial /bh/ instead of /sp/, and "infixed" /w/ instead of /n/: but LIV:96 «bhrewHĝ» means 'genießen, gebrauchen'. Note also that the Armenian implies pIE *ĝ, while Lith implies plain *g - not an unparalleled situation, however. But though these *may* be related to our headword, the relationship is so hypothetical that they have no real value for our present purpose.

(8) and - obviously - (7) can be harmonized phonologically with (1) and (2), but the shift in meaning implied by the hypothesis of cognacy here ('throat' > 'break out') is so distant as to be merely ad-hoc. This last consideration also affects (9).

So we are left without any really persuasive cognates. (3) is not bad, but there is still some semantic distance between 'throat' and 'harness/strangle', and even without the complication of the Germanic 'jump/spring' words, it is possible that the original meaning of the Balto-Slavic forms was something like 'squeeze' (cf. Latv., and Fraenkel's definitions of *spreñgti*). There is also the formal question of the difference in grade, and, much worse, the status of the nasal in Balto-Slavic.

Rank: 3 *Form* (-2) *Meaning* (-1) *Alternatives* ()

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93 ἄτρακτος **'spindle; arrow'**
B:51

Cognates:
Skt *tarku* 'Spindel'
Lat *torqueō* ['I twist']
Alb *tjerr* 'spinnen'
Hit *tarukzi, tarkuanzi* 'tanzen' (LIV)

Remarks: All these proposed cognates are entered under
LIV:635 «terḱ» - but n. 1 rejects ἄτρακτος as a reflex of this root. Note also the irregular representation of the root-final *ḱ as κ here, for expected π ; cp πεπτός . Perhaps from a pIE variant form ending in /k/? Or a Greek dialect form? Otherwise, the Gk form looks like a reflex of Z√tr̥ḱ.

Rank: 3 *Form* (-2) *Meaning* () *Alternatives* ()
(Similarity in the forms of the cognates is persuasive, in spite of serious but not fatal phonological problem with the *ḱ.)

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94 αὔω **'to shout'**
B:51

Cognates: "Dunkel" (Fr)

Remarks: N.b. ≠ *√h₂ews 'schöpfen' (LIV)

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()

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95 *ἄφενος* **'wealth'**
B:51

Form: Also *ἄφνος* (Fr), *ἀφνειός* (Ch)

Cognates:
Skt *ápnas* 'Besitz, Reichtum' (Fr; Ernout«ops»)
Lith *ãpstas* (This cognate generally abandoned.)
Hit *ḫappin* 'riche' (Ch; Ernout«ops»)
Lat *ops, opus, &c* < *$h_1$ep (Ernout«ops»; Watkins«1.ops»;B)
OIr *imbed* 'riches' (B)

Remarks: Phonetic details are a problem (An Anatolian loan? (Ch)): (1) aspiration in Gk (Frisk suggests < *apsnos, with aspiration due to preceding /s/); (2) Quality of the vowel (pIE */o/ or */h_3/ plus */e/ ?); (3) The Irish nasal. Most likely:

Lat	*$h_3$ep-s
Hit, Skt	*$h_3$ep-en
OIr	*$h_3\emptyset \underset{\wedge}{\overset{m}{}}$p-ed = */m̥b-ed/
Gk	*$h_3\emptyset \underset{\wedge}{\overset{m}{}}$p-s-no- = */m̥p-s-no-/

Etymon: ^{d}LIV:298 «1.$h_3$ep» = P:780, so Watkins:60«1.ops»; (also proposed: ^{d}LIV:237 «$h_1$ep» = P:50-1; and (B) *m̥bh-en-; *$h_2$bh-en-)

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(In spite of all the uncertainties, it is clear that the vowel is part of the root.)

96a *ἄωρος* **'sleep** NOUN**'**
B:58
96b *ἀωτέω* **'to sleep'**
B:58, under 'conclusion'

¶*ἄωρος*
Meaning not certain. (B; Ch; Fr«2.*ἄωρος, ἀωτέω*»)

¶*ἀωτέω*
Unclear, no extra-Greek cognates (Fr).

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()
(No etymology)

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97 *ἐάω* **(*** *ἐϝάω* **) 'allow'**
B:53

Form: Hesychius *ἐΰα* ·*ἔα* ;*ἔβασον* ·*ἔασον* testify to digamma.

Cognates:
(1) Skt *savi-tar* 'Antreiber' < *sewa
(2) Lat *sinō* (Fr, Ch)
(3) Ved *vā́yati* 'schwindet dahin, wird leer', *úd·avāsit* (Aor) 'ist erloschen'
(4) Latv *vâjêt* 'schwach werden, kränkeln' (LIV)

Remarks: (1) and (2) would predict Gk ˣέαω .

Etymon: [a]LIV:254 «$h_1$weh$_2$» = P:915; 345, 1111

Rank: 3 *Form* () *Meaning* (-2) *Alternatives* (-2)
(Poor semantic match; possibility of schwebeablaut as S√$h_1$ewh_2)

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98 ἐγείρω **'awaken'**
B:53

Cognates:
Skt *jāḗgāra*; Av *ǰaēgāra* 'Ich wache'
Alb *ngrë* 'Ich hebe auf' (Fr)

Remarks: Regarding the forms sometimes cited as the perfect of the Sanskrit cognate, see Chapter 2 #3.

Etymon: [a]LIV:245 «$h_1$ger» = P:390

Rank: 1 *Form* () *Meaning* () *Alternatives* ()

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99 ἔγχος **'a spear'**
B:53

Cognates: "Nomen actionis ohne Etymologie" (Fr); but OCS *pro·noiti* 'pierce' so perhaps Gk < *$h_1$engh, OCH < *$h_1$nogh; or both < *h_1n̥gh (B, LIV)

Etymon: [a]LIV:250 «$h_1$neĝ» = P:760

Rank: 3 *Form* () *Meaning* () *Alternatives* (-2)
(Looks like schwebeablaut, or perhaps vocalization of the /n/.)

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100 ἔεδνα (*****ἔϝεδνα) *Homer, for* ἕδνα **'wedding gifts'**
B:58; Wy:37 §2.4.1

Form: Also ἀνάεδνος 'without bridal gifts' (LS)

Cognates: (Grades per LIV:659«wedh»; Frisk; Pfeifer«Wittum»; Köbler«widamo»; Sihler:327*f*§317*f*)
< e√-no:
Gk ἕδνα
< le√-no:
ORussian *věno* 'Kaufpreis der Braut'
< e√:
OCS *vedǫ* 'führen, *selten* heiraten'
Lith *vedù* 'eilen, führen, heiraten'

OIr *fedid* 'heimführen'; Welsh *cyweddu* 'führen, wohinbringen', *dy·weddïo* 'heiraten'
< e√-mon, -mno:
OE *weotuma*; OHG *widomo* ['dowry'] (Fr; Pokorny:1115*ff*)
< f√-ū:
Skt *vadhū́* 'Braut' (Fr; LIV:659«wedh»)
< o√:
Hit *u·watemi* 'schaffe herbei' (LIV:659«wedh»; Weeks:157§10.62«bring», pg.139§9.44«build»)

Remarks: Most of these proposed cognates could have either pIE */d/ or */dh/; the exceptions are the Greek headword itself, Sanskrit *vadhū*, and the Germanic forms. *Vadhū* does not match the Greek in aspiration, so it should be eliminated from the list of good cognates (as does Frisk; but LIV:659«wedh» n.1 conversely rejects the Greek and Germanic forms, while reconstructing a pIE */dh/ in their headword on the basis of the Skt.) The loss of this cognate is not particularly important, since the really significant forms are those with a closer semantic match with the Greek: Old Russian and Germanic (and, more remote, Baltic and Celtic). Germanic is critical here, as it should reveal whether the pIE form had /d/ or /dh/, and consequently whether the whole Balto-Slavic, Celtic, and Germanic group should be accepted or rejected (assuming of course that they are cognate with each other). Unfortunately, the Germanic data are confusing precisely in regard to the consonant we are interested in. Here are the facts:

	/þ/	/t/	/d/
OE	weoðuma*1	wituma, wetma*2; weotoma*3	
OFr	withume, wethem, wathem*4, withum: all 'consecrated ground'*5	wetma, witma 'dowry'*7	
OS	withum*6		
MLG			wedeme 'Wittum'; 'Donation der Kirche, bes. mit Grundeigentum, Kirchl. Grund u. Boden'*15
MDu			wedeme*9
OHG		witamo, witimo*8	widum, widamo*10, widomo*11, widimo*12, widemo*13
MHG			widem(e) 'Wittum'; 'dotierung einer Kirche'*14

The Germanic Word for 'Bridal Gift'

***1** Holthausen 1985:132 ***2** Holthausen 1963:401; Sweet 1896:209; Clark-Hall 1960:406, 414 ***3** Sweet 1896:209; Boutkan 2005:453*f* ***4** Holthausen 1985:132; Boutkan 2005:453*f* ***5** Boutkan 2005:453*f* ***6** Holthausen 1985:89; Boutkan 2005:453*f* ***7** Holthausen 1985:129; Boutkan 2005:453*f* ***8** Lex Burgundionum; Holthausen 1963:401 ***9** Holthausen 1963:401 ***10** Holthausen 1985:132; Boutkan 2005:453*f*; Köbler 1993 «widamo» ***11** LIV:659 «wedh» ***12** Holthausen 1963:401 ***13** Schützeichel 1989 «widemo» ***14** Holthausen 1963:401; Lexer 1976:316 ***15** Lübben 1885:566

The issue is: which of /þ/, /t/, or /d/ is the original sound? If we assume /þ/, then only the /t/ forms are troublesome, since /þ/ would, in the course of its normal evolution, become /d/ in all of the languages in which /d/ is in fact found. (It is not necessary to appeal to Verner's Law here.)

Campbell:171§419 offers a way to derive /t/ from /þ/ here. According to him, pOE /þ/ > West Saxon /t/ /V̆_m; at pg.172§423 he appears to be open to the possibility that this change might not be restricted to West Saxon. The forms with /t/ before a vowel could then be analogical extensions from the forms with /tm/. The distribution of the /t/ and /þ/ variants supports this last conjecture. Both /t/ and /þ/ occur before a vowel, but only /t/ before /m/; this is the expected pattern of analogical drift if we consider the sound change /þ/ > /t/ from the point of view of Optimalitiy Theory, as the surface expression of a new constraint against a sequence /þm/.

This explanation requires preexisting doublets, with and without a vowel separating the /þ/ from the /m/. To appeal to syncope, with the continued existence of the original unsyncopated form, is not very convincing. Boutkan:453*f* derives Old Frisian *wetma/witma*, as against *withume,* etc., from the weak stem of a noun in *-men*, but without providing any details. One would expect the weak stem, with the accent shifted off to the right, to undergo Verner's Law - thus producing an alternating pair of stems, strong in -/þ/, weak in -/ð/. But this is not what we seem to have here. In any case, note the differentiation in the meanings of the two Frisian variants (as against the combined meanings shown by Middle Low German and Middle High German.

Pokorny's explanation of the problem (pg. 1115*ff* «2.wedh»; accepted and repeated by Lehmann 1986:152§G75 «ga·wadjon» (n.b. Lehmann's headword here is said explicitly by him *not* to be related to Gk'*ἑδνα* ; instead it is from pIE *wadh 'pledge', the etymon of English *wed.*) , Köbler «widamo», and Pfeifer «Wittum») is that an original /dh/ deaspirates to /d/ before a nasal; this last would give the pGc */t/ seen in the English and Frisian words. Streitberg:206§161.2 contains what seems to be a reference to this process, citing pIE *bhudhmn̥ > OE *botm* ['bottom'], OS *bodem.* (This is the same word that Campbell uses in setting out his /þ/ > /t/ change, and it seems to be a problem in its own right. Like *wetma* and its variants, it forms with /þ/, /t/, and /d/, but the pattern of distribution is different: OE *byþme; bytme* (Holthausen 1963:42); *botm; bodan* (*ibid*:31); note also Icelandic *botn, bytna* (*ibid*:31, 42). Watkins:113«bhudh» derives *bottom* from OE *botm* < pGc *butmaz*; but Middle Dutch *bodem* from pGc *buþmaz*; he says, "the precise preforms of the words ... are obscure".) But all this assumes that the Germanic /d/ forms (< pIE */dh/) are original; it successfully derives the /t/ variants, but leaves the /þ/ forms unexplained. Further, it does not explain why the languages which show no /d/ variants (Old Frisian, English, Old Saxon) are precisely those which do not participate in the widespread West Germanic shift of /þ/ to /d/.

The New High German form of this word, *Wittum*, constitutes a further oddity, with its /t/. Apparently the original (MHG) *widem* has been falsely analyzed as containing the suffix *-tum* (on which see Priebsch & Collinson:246*f*), and both the /d/ and the following /ə/ adjusted accordingly.

So the "least bad" explanation of the apparent Germanic cognates of'*ἑδνα* implies not the expected pIE *wedh or *wed, but *wet; and n.b. LIV:694«wet» 'vertraut sein mit'. The entire issue is obscure.

(Afterword) Also suggested as cognate are reflexes of pIE *wes: Lat *venum* 'dowry'; Skt *vasná*; Hit *wāsi* 'verkauft' (B; Fr; LIV«2.wes». But these must be rejected, as they lack the /d/ which characterizes the present forms. N.b. ORussian *věno* may be from this *wes, or cognate with the forms given above (Vasmer«véno»).

Etymon: Apparently ᶜLIV:659 «wedh» = P:1115 or something similar, but the details are very confusing.

Rank: 3 *Form* (-2) *Meaning* () *Alternatives* ()

(No schwebeablaut as the full-grade vowel is present in its normal position in Gc and Skt.)

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101 *ἐείκοσι Homer, for ἐίκοσι* **'twenty'**
B:60*ff*; Wy:38 §2.4.2

Form: Boeotian *ϝικατός*, Doric *ϝίκατι* indicate digamma.

Cognates:
Lat *vīgintī*
Skt *viṁśati*; Av *vīsaiti* (Fr)

Remarks: "*ἐείκοσι* " is **ἐϝίκοσι* graphically contaminated by *ἐίκοσι* (Fr)

Etymon: *wīk̂m̥ti (Fr)

Rank: 1 *Form* () *Meaning* () *Alternatives* ()
(Assuming the existence of **ἐϝίκοσι* or some such form.)

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102 *ἐεισάμενος* **(*** *ἐϝεισάμενος* **)** *Epic* **middle ppl. 'seeming'** *of ἐίδω* **'see'**
B:59*f*; Wy:41 §2.4.12

Form: Also *εἰσάμενος* (B)
ϝισάμην (Doric, Gortynian Law), *ϝειζώς* (Elea) attest to digamma (LSJ).

Cognates:
< pIE Aorist:
Gk *εἶδον* (2Aor) (1Aor *ἐίσατο* is a new formation.) '(er)schien'
Lat *vīdī* 'sah'
Ved *á-vidat* 'hat gefunden'
Arm *egit* 'fand'
< pIE Perfect:
Ved *véda* 'weiß'
Arm *gitem* 'ich weiß'
Gk *οἶδα* 'weiß'
Go *wait* 'weiß'
OCS *vĕmĭ* 'ich weiß' (LIV)

Remarks: The original form of the word was *weyd ∼ *woyd ∼ *wid (Sihler:572§515). Its 1Aorist stem is *εἰσα-*, *ἐεισα-* (Smyth:700«*ἰδ*»), showing regular $/\delta/ \rightarrow \emptyset \,/\, \_/\sigma/$ (Smyth:28§98, Smyth:173§545), yielding 1Aor Mid Ppl Masc Sg Nom *ἐεισάμενος* (Smyth:117§383), < **ϵϝει-σά-μεν-ος* .

Etymon: [a]LIV:665 «weyd» = P:1125-7

Rank: 1 *Form* () *Meaning* () *Alternatives* ()
(No schwebeablaut, *-ει-* displays root vowel in normal position.)

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103 *ἐέλδομαι* **(*** *ἐϝέλδομαι* **)** *for'ἔλδομαι* **'wish for'**
B:63*f*; Wy:39 §2.4.4

See Appendix 4.

Form: Homer has both initial ἐέ and'έ (B).

Cognates: None convincing (Fr).

Remarks: Seemingly related to LIV:680 «welp» = P:1138 'Hoffnung schöpfen' (cf *'έλπομαι infra*), and LIV:677 «welh$_1$» = P:1137 '(aus)wählen', which latter > Lat *volō*, OCS *veljǫ*, Ved *vr̥ṇité*, Go *waljan, wili.*

Etymon: Not in LIV; but Wyatt proposes *weld, which would be related, as *wel\d, to *wel\p and *wel\h$_1$. But Schwyzer proposes that the δ is a present-stem formant, cf. LIV:19#1t (Chantraine 1973 v.I:133, 182).

Rank: 2 *Form* (-1) *Meaning* () *Alternatives* ()
(No extra-Greek cognates; but similarity in form and meaning to $\sqrt{\digamma\epsilon\lambda\pi}$ is quite persuasive.)

---

104 ἐέλπομαι (*$\epsilon\digamma$'έλπομαι) (Homer) *for*'έλπομαι **'hope'**
B:64; Wy:40 §2.4.7

See Appendix 4.

Form: Homer also has forms without prothesis but with digamma inferred from meter in Homer, e.g. Od. 2.91 *πάντας μεν ϝέλπει* (Ch, Fr).

Cognates:
Theme I:
Skt *vr̥ta* 'il a souhaite' (Fused with another root in Skt *vr̥ṇite* (Ernout«volo») (Ernout«volo».)
Lat *volō, velle* ['to want'] (Ch, Fr, Ernout«volo»)
Lith *pa-velt* 'il vent' (Ernout«volo»)
Slavic *velěti* 'commander', *voliti* 'vouloir' (Ernout«volo»)
NHG *wollen*; Go *wili* 'il veut' (Ch, Fr, Ernout«volo»)
Theme I plus extension /p/:
Lat *volup* (Benveniste:155, Ernout«volup», Ch)
Theme I plus extension /d/:
Gk *ϝέλδομαι* (Ch) (cf *supra*
Theme II (*wle) plus extension /h$_1$/:
Gk (Doric) *λῆν* (Ch, Benveniste:155)

Etymon: [a]LIV:680 «welp» = P:1138

Rank: 1 *Form* () *Meaning* () *Alternatives* ()

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105 ἐέλσαι (*'$\epsilon\digamma$'έλσαι) (Homer) *for ἑιλέω* $_1$ **'shut in, press'**
Wy:40 §2.4.8

See Appendix 4.

Form: Prothesis assumed from apparent contraction of *$\epsilon\digamma\epsilon$ to long vowel ("spurious diphthong") ⟨$\epsilon\iota$⟩. Homer also has form with simple vowel, *'έλσαι* . Doric *ϝηλέω* shows digamma directly.

Cognates:
Russian *válom* (< *wōlos) 'in Menge'

Lith *veliù / vélti* 'walken', *su-valýti* '(Getreide) zusammenbringen, einernten' (Ch, Fr«1.*εἰλέω* »)

Remarks: Cp. *ἑίλέω* 'roll'.

Etymon: [a]LIV:674 «1.wel» 'einschießen, verhüllen' = P:1138
perhaps ultimately the same as LIV:675 «2.wel» 'drehen, rollen' = P:1140-2.

Rank: 1 *Form* () *Meaning* () *Alternatives* ()

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106 *ἑέργω Homer*, *ἑίργω Attic* (*****ἑϝέργω) **'bar the way'**
B:62*f*; Wy:38*f* §2.4.3

Beekes lists its aorist *'έρξαν*, its Perfect *'έρχαται*, and the Perfect Ppl *ἑεργμένος* (Il. 5.89) separately.

Form: Prothesis assumed from apparent contraction of *ϝε to long vowel ("spurious diphthong") ⟨ει⟩.
Homeric *'έργω* displays the word without prothesis. (Fr«*ἑίργω*»).
Cypriot *ka.te.wo.ro.ko* = *κατ'έϝοργον* displays original digamma (LIV:686«1.werĝ»).

Relevant inflected forms are:
Present *ἑίργω* (Attic); *ἑέργω* (Epic); *'έργω* (Ionic)
1Aorist *ἑῖρξαι*, *'έρξαι*
Perfect Middle *ἑῖργμαι*, *'εργμαι* ; (Epic 3Pl) *'έρχαται*

Remarks: There is disagreement over whether one or two roots are represented here. Fr«*ἑίργω*» lists as cognates:

Av *vərəz-yąn* 'sie sollen absperren' (Optative), *vərəzāna* 'Gemeinschaft'; Old Persian *vardana* 'Stadt'; Skt *vr̥jána* 'Umhegung, Einfriedigung', *vrajá* 'Hürde, Umhegung'
Lith *veržiù / veržti* 'einengen, schnüren, pressen'
OIr *fraig* = NIr *fraigh* 'Wand aus Flachtwerk, Dach, Hürde'

LIV adds to these, and disposes the whole group as follows:

< *$h_2$werg 'sich umdrehen, sich wenden' (p.290) = P:1154, 1168: (The index entry for *ἑίργω* (pg. 764) lists this as *$h_2$werĝ*. But the headword must be right as it stands. Skt *vr̥ṇákti* and its verbal adjective *vr̥ktá* ← √vr̥j 'twist' (Wh^R:163) show pIE *g, not *ĝ (Burrow:78))
Skt *vr̥ṇákti* (Present), *várk, avr̥jan* (Aorist 3Sg, 3Pl), *vāvr̥je* (Perfect)
Gk *ἑῖργω* / *ἑέργω* (Present), *ἑῖρξαι* (Aorist) (LIV«$h_2$werg» n.5)
Lat *vergo* 'sich neigen'
Hit *ḫurki* 'Rad' (LIV«$h_2$werg» n.1)

< 1.*werĝ 'einschließen, absperren' (p.686) = P:1168:
Gk *κατ'έϝοργον* (Cypriot), *'έργω* (Present), *'έρξαν* (1Aorist), *'εργμαι* / *'έρχαται* (Perfect 1Sg / 3Pl) (LIV«1.werĝ» n.5)

< 1.*werĝ *as* S√wreĝ:
Skt *vrajá* (LIV«1.werĝ» n.1)
OIr *fraig*

< 2.*werĝ 'wirken, machen' (p.686) = P:1168-9:
Av *vərəziiąn* (LIV«1.werĝn.2)

< *werĝh '(zu)binden' (p.688) = P:1154-5:
Lith *veržiù*
Alb *z·vjerdh* 'entwöhnt'

Of these, *$h_2$werg and 1.*werĝ share a resemblance of both form and meaning, which leads Frisk to group them together. The difference in the Skt velars - *vṛ̥ṇákti* with *g as against *vrajá* (a *τομός* formation) with *ĝ- argues in favor of LIV in separating these groups; but this difference in velars can be analogical as well as etymological (Burrow:78-80). The assignment by LIV of Av *vərəziiąn* and Lith *veržiù* to yet other roots is a detail of no importance here.

LIV splits these Greek forms into two groups, one (*ἐέργω* / *ἐίργω*) < *$h_2$werg, and the other (all the rest) < 1.*werĝ. These two roots are said to have become confused and suffered contamination in Greek (LIV«$h_2$werg» n. 5; «1.werĝ» n. 1). (Homer has forms of *ἔρχαται* with both initial *ἔ* and *ἐέ*, but Beekes believes there are problems with assuming the latter is from *ἐϝέ . So he takes it as not cognate with *ἐϝέργω* and believes the presence of a prothetic vowel is uncertain. Likewise with *ἐεργμένος* (**ϝεϝεργμένος*): it is a perfect participle but cannot represent ×*ϝεϝεργμένος* .)

Etymon: LIV:290 «$h_2$werg»

Rank: 2 *Form* () *Meaning* () *Alternatives* (-1)
(Regardless of how these words are dealt with, a derivation from *either* or *both* *$h_2$werg» or 1.*werĝ suggests prothesis, *ἐ+ϝε > εὶ or ἐε . But a transfer from a reduplicated Perfect, *ϝε&ϝεργ-, is also possible.)

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107 *ἐέρση* **(*** *ἐϝέρση* **)** *Homer, for* *ἔρση* **'dew'**
B:64; Wy:39 §2.4.5

Form: Prothesis assumed from apparent contraction of *ϵϝϵ to long vowel ("spurious diphthong") ⟨ϵι⟩. Alcman (Doric) *ἔρσ-* (B) shows the word with the simple vowel.

Cognates:
Skt *varṣam* 'Regen', *várṣati* ['regnet']
MIr *frass* 'Regen' (Fr)
Hit *warša* 'mist, steam' (CEG.i)

Remarks: N.b. rhyme-formation with Skt *vṛ̥ṣan* 'mannlich, Stier';
cp *ἀρσήν supra.*

Etymon: [a]LIV:291 «$h_2$wers» = P:80-1

Rank: 1 *Form* () *Meaning* () *Alternatives* ()

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108 *ἔθειραι* **'horses manes'**
B:53

Cognates: None outside Greek cogantes (Fr); possibly < *$h_1$dher
(or *h_1ǧer). (Beekes)

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()
(No etymology)

109 *ἐθείρω* **'to tend [to something]'**
B:53

Hapax at Il. 21.347, meaning uncertain (Fr)

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()
(No etymology)

110 *ἐθέλω* **'to will, to wish'**
B:53

Form: Also *θέλω* (Frisk ascribes this to aphaeresis). Hes *φαλίζει* · *θέλει* implies *ǵhel, the /ǵh/ of which would regularly palatalize to /th/ before /e/ (Fr).

Cognates:
Gk *βούλομαι* (originally Aorist of the same verb, with *ǵh regularly > /b/) ['to wish']
OCS *želějǫ, -ěti* 'wünschen'
Arm *gelǰ* 'Wunsch' (with /ǰ/- dissmilated to /g/ (Or < *√wel ? (author); cp Appendix 4))
(Fr«*ἐθέλω*»)

Etymon: [a]LIV:246 «h_1ǵhel» = P:489
(Doubts OCS cognate, arguing its probable original meaning is 'Leid, Trauer, Schmerz' from *ǵel; gives nothing else outside Gk.)

Rank: 2 *Form* () *Meaning* () *Alternatives* ()
(Good cognate (OCS) in only one other branch (see author's footnote on Arm) - so a "2". Frisk on aphaeresis and LIV on an alternate origin for OCS are not persuasive.)

111 *ἕιλη* (*****$\epsilon h_F \epsilon \lambda \eta$) **'warmth of sun'**
B:62; Wy:40 §2.4.9

Form: Variant *ἕλη* displays original form, without contraction of *$\epsilon_F \epsilon$ to long vowel ("spurious diphthong") ⟨*ει*⟩. Digamma is also indicated by Hesychius: Lacedaemonian *βέλα* · *ἥλιος* ; also *φελοδυτία* (ms. *γελοδυτία*) · *ἑλιοδυς*ία (Fr).

Cognates:
OHG *swelzan* 'brennen'; OE *swelan* 'hunger'
Lith *svìlti* 'sengen' (Fr)

Etymon: [c]LIV:609 «1.swel» = P:1045 (> pGk *$h_F \epsilon \lambda$)

Rank: 1 *Form* () *Meaning* () *Alternatives* ()

112 *εἰλίσσω*, *εἰλίσσω* (*****$\epsilon_F \epsilon \lambda \breve{\iota} \breve{\sigma} \breve{\sigma} \omega$) *Ionic for* *ἑλίττω* **'turn around'**
Wy:41 §2.4.10

See Appendix 4.

Form: Prothesis assumed from apparent contraction of *$\epsilon_F \epsilon$ to long vowel ("spurious diphthong") ⟨*ει*⟩. Homeric *ἑλίσσω*, as well as Attic, shows the simple vowel.

Cognates:
OHG *walzan* 'to roll'
Lat *volvere* 'to roll'
Gk'ἕλιξ 'helix' < *wel-ik;'ἕλμις 'worm' < *wel-mi-nth-s
(Watkins«3.wel»)

Remarks: Homer has ἑλισσω ; only Ionic (in its post-Epic phase) shows traces of /w/ (graphic ει representing phonemic ē < *ewe), so Wyatt considers prothesis in this word to be a secondary development - influence by εἰλέω (q.v.) ?

Etymon: [a]LIV:575 «2.wel» = P:1140-2, as *wel-ik-jō > ϝελίσσω .

Rank: 2 *Form* () *Meaning* () *Alternatives* (-1)
(Demoted from Rank 1 per Wyatt's proposal.)

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113 εἴρερον (*ἐϝερϝερον)
B:63

Hapax at Od. 8.529, apparently = 'Gefangenschaft, Knechtschaft' (Fr), 'esclavage' (Ch).

Form: Prothesis assumed from apparent contraction of *ϵϝϵ to long vowel ("spurious diphthong") ⟨ϵι⟩.

Cognates:
Gk εὗρον 'fand' (LIV)
Lat *servus* (Fr - but rejected per Ch)
Arm *gerem* 'gefangen nehmen' (Fr)

Etymon: [c]LIV:698 «wreh$_1$» = P:1160

Rank: 2 *Form* (-1) *Meaning* () *Alternatives* ()
(Etymology is hardly airtight)

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114 εἰρύομαι (*ἐϝέρύομαι) Ionic *for* ἐρύω (Middle) 'drag'
B:37; Wy:41 §2.4.11

Beekes lists Perfect Middle ('ἔρυμαι) separately. N.b. not to be confused with ἐρύω < *seru 'protect' (LSJ)

Form: Digamma preserved in Doric (Delphi) ϝερυσάτω ; Epic (Aeolic component) αὐερύω < *ἀν-ϝερύω (Fr«)er'uw»). Prothesis assumed from apparent contraction of *ϵϝϵ to long vowel ("spurious diphthong") ⟨ϵι⟩.

Cognates: ? Lat *rudens* 'Schiffseil' (Fr«)er'uw)»

Remarks: Frisk«ἐρύω » takes the Present εἰρύομαι < *ἐ+ϝερύομαι, and the Perfect εἴρῡμαι < *ϝέ&ϝρῡμαι .
Wyatt claims traces of /w/ only in (post-Epic) Ionic (Homer has ἐρύω, but Hesiod once shows εἰρύω), and so considers prothesis in this word to be a secondary development - exactly as in *ἐϝέλισσω (εἰλισσω) *supra*. Beekes follows Frisk in believing that ϵ arose before the old initial ϝ due to metrical reasons, or was imported from the perfect.

Etymon: Not in LIV. Something like *√werw seems to be indicated (*Z√wru > *ru\d-ens* ?)

Rank: 2 *Form* () *Meaning* () *Alternatives* (-1)
(*ει* may be taken from Perfect.)

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115 *εἰκῆι* **(*ἐϝεκηι) 'without plan; in vain'**
B:53

Form: Digamma assumed on the basis of the proposed etymological connection with *ἑκών*,*ἕνεκα* (B, LSJ).
Prothesis assumed from apparent contraction of **ϝε* to long vowel ("spurious diphthong") ⟨*ει*⟩.

Cognates: Etymology unclear, no extra-Greek parallels given (Fr).

Rank: 3 *Form* (-2) *Meaning* (-2) *Alternatives* ()
(Etymology is speculative and relies entirely on Greek forms.)

---

116 *εἰλέω* **(*ϝελέω) *Homer, for εἰλέω* $_2$ 'roll, twist'**
B:62

Form: Also *ἕλω* (LSJ). Homer has (once, not certain) *ἑέλσαι*; Cretan has *καταϝελμένος* (B).
Prothesis assumed from apparent contraction of **ϝε* to long vowel ("spurious diphthong") ⟨*ει*⟩.

Cognates:
Skt √val 'turn' (Whitney 1885:155)
Skt √vṛj 'twist' (Whitney 1885:163)
Skt √vṛt 'turn' (Whitney 1885:163)
Lat *volvo* (Frisk, *εἰλέω* $_2$; Wyatt:40§2.4.8)

Remarks: Perhaps originally the same as *εἰλέω* 'shut in', q.v.: both include the idea of 'circle'.

Etymon: [a]LIV:675 «2.wel» 'drehen, rollen' = P:1140-2

Rank: 1 *Form* () *Meaning* () *Alternatives* ()

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117 *ἕϊση* **(*ἐϝίση) *Homeric for ἴσος* 'equal, fair'**
B:65 Wy:39 §2.4.6 (also p.42 n.36)

Form: Cretan, Arcadian, Boeotian *ϝισϝος* preserve digamma; also Hes *ϝισϝον* (ms. *γισγον*) (LSJ, B)
Prothesis assumed from apparent contraction of **ϝε* to long vowel ("spurious diphthong") ⟨*ει*⟩.

Cognates: Perhaps Skt. *viṣu* 'nach verschiedenen Seiten' (Fr)

Remarks: Beekes argues this an artificial poetic form, on the basis of its pattern of distribution in the texts.

Rank: 2 *Form* () *Meaning* (-1) *Alternatives* ()
(Despite Beekes. The only reason to doubt is that there is no *certainty* that the word reflects *ϵϝίση .)

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118 ἑκατόν **'hundred'**
B:53

Cognates:
Skt *śatám*; Av *satəm*
TokB *känte*
Lat *centum*
OIr *cét*
Go *hund*
Lith *šimtas*
OCS *sŭto* (Fr)

Etymon: *k̂m̥tóm; the vowel represents prefixed'ἑν 'one'. (Fr; Sihler:93§95.4)

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(And n.b. initial /h/-)

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119 ἐλαία **(*ϵλαίϝα) 'olive tree'**
Wy:46 §3.1.6

Form: Lat *olīva* is a Gk loan implying *ϵλαίϝα .

Cognates: Arm *ewł* 'öl'

Remarks: Connected with ἀλείφω 'anoint' q.v. (Wy) ?

Rank: 3 *Form* (-2) *Meaning* (-2) *Alternatives* ()
(The case for prothesis depends almost entirely on the similarity to ἀλείφω . And note the difference in their root-vowels.)

120a ἐλαφρός **'light in weight'**
B:41; Wy:13 §2.1.4
120b ἐλαχύς **'small, short'**
B:41; Wy:13 §2.1.5

These both seem to be members of a single series of forms diverging from *√le(n)ǵh 'lightweight, small, quick'. There is general but not unanimous agreement about the history of these words. Some set up a separate root for the words with an "infixed" nasal (see Watkins«anǵhi, ko(n)kho, nebh, 1.wed» for other nouns with a similarly oscillating nasal); there does not seem to be any difference in meaning associated with the /n/:

	-/n/	+/n/
'light'	Lat, OCS	Gc, Lith, Gk
'small'	Ir, Skt	Gk
'quick'		Skt, Gc

(Plus: one Skt word with /n/ with all three meanings.)

The various forms can be analyzed as follows:

< ***leǵh:**
Lat *levis* (CEG.ii, Fl, Fr)
+/**u**/ OCS *lĭgŭ-kŭ* 'leicht' (CEG.ii, Fl, Fr, Holthausen 1934)

< ***l̥ǵh:**
Ved *r̥h-ant* 'small' (RV 10.28.9, in the same line as *br̥had*, so at least a pun and possibly an iconic invention) (Fr)

< ***laǵh:**
OIr *lū* 'small' (Watkins«leǵh»), *lagat* 'smallness', *laugu / lugu / laigiu* 'smaller'; n.b. all from a form with prCeltic /a/ which "remains unexplained" (CEG.ii, Fl, Rf, Thurneysen:50f§80); Schrijver 1995:305f§5.1.1(2) (re the /a/)).

< ***lenǵh:**
Av *rəǰ* (Fr, Fl, LIV); Skt *raṁhate* 'hasten' (LIV, Fr, Fl) ← √raṁgh (Apte) = √ranh (Lanman)
Go *leiht-s* < pGC *liŋχ* (Holthausen 1934; Watkins«leǵh»); OE *leoht* (Fr); OHG *gi-lingan* 'succeed' (Fl)

< ***lenǵh:**
Lith *lẽng-vas* 'leicht' (Fl, Schrijver 1995 *loc cit*)

< ***ln̥ǵh:**
English *lung* (they're light) (Watkins«leǵh»); OHG *lungar* 'quick' (Ch, Fl)
+/**u**/ Skt laghú ∼ raghú (But Ch takes from *leǵh) 'swift, light, small' (Lanman, Fr, Schrijver 1995 *loc cit*, CEG.ii); Gk λαχύς (Or < l̥ǵh (Author) n.b. *k̑(h) > kh / _u (Sihler:156§154.1); Or < leǵh [sic] (Schrijver 1995 *loc cit*) (CEG.ii, Fr)
+ /**ro**/ Gk λαφ-ρός (Or < l̥ǵh ? (Author)) (CEG.ii, LIV, Fr)

Homer has forms of ἐλαχύς both with and without this vowel, and even the correct reading of these forms is disputed. ἐλαχύς itself may be an Alexandrianism! (Wy)

Etymon: *le(n)ǵh: [a]LIV:247 «$h_1$lenǵh» = P:660-1

Rank: 1 *Form* () *Meaning* () *Alternatives* ()

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121 ἐλαύνω 'drive'
B:41; Wy:46 §3.1.5

Form: Variant ελάω (Wy)

Cognates: "L'étymologie n'est pas établié"; but perhaps from a root *√el as seen in:
Lat *amb-ul-āre*
Gk ἤλθον
Arm *eli / elanem* (Ch)

Etymon: [a]LIV:235 «$h_1$elh_2» (accepting only Gk and Arm cognates) = P:306-7

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Vowel is part of the root)

122 ἐλέγχω 'disgrace'
B:41; Wy:46 §3.1.7

Cognates:
Av *rənǰaiti* 'make light, strong' (B)
Gk ἐλαχύς (Ch)
Latv *langãt* 'curse' (B)
Hit *linkzi* 'swear' (B; LIV)

Remarks: ἐλαχύς (qv) is apparently < *lṇ̥ǵh, and the /ǰ/ of Avestan likewise implies a pIE *ǵh in this word, which is incompatible with the /χ /. This leaves Latvian and Hittite as the best cognates.

Etymon: [a]LIV:247 «$h_1$lenĝh» = P:676

Rank: 2 *Form* () *Meaning* (-1) *Alternatives* ()
(Imperfect semantic match.)

123 ἐλελίζω 'shake' (Gloss per Leaf)
B:41; Wy:58 §4.1.4

This word was apparently confused early with ἐλίσσω (Snell«ἐλελίζω»; Chantraine 1973 I:132).

"It appears that in almost every case in H[omer], sense requires and metre permits some form of ϝελίσσω . The three exceptions are this line [A 530], Θ 199, X 448, where the sense needed is "shook", which can hardly be got out of ϝελίσσειν . It seems necessary, therefore, to postulate for these cases, and for ἐλελχίθων (Pind. P.ii.4, vi.50; also Ol. IX:14 (Chantraine 1973 *loc cit*); Soph. Ant. 153) a verb ἐλελίζειν = 'shake'" (Leaf I:40 on 1.530).

Of the citations of ἐλελίζω in LSJ, Il. 11.39 and 13.558 seem to require an initial digamma for metrical reasons. Leaf (I:471 on 11.39) prefers to read ϝεϝελίκτο ← ϝελίσσω "roll": "twined" dragons on a shield are, after all, more plausible than "shaken" ones. On 13.558 (Leaf II:41) he says "ἐλελίκτο in the sense 'shook' may be right here ... though Bentley would read ἐέλικτο
(ϝεϝέλ-) 'was brandished'. The ictus is sufficient to account for the lengthening of the -ον without the need of a ϝ ".

So neither of the two lines which seem to imply an initial digamma must be read with this word as 'shake' - in fact, the first can't be - and all of the lines requiring the meaning 'shake' can be scanned without initial digamma. Consequently there does not seem to be any reason to believe that ἐλελίζω (when not confused, or replaced in the Homeric text with ϝελίσσω) had an initial digamma. The particular significance of this is that ἐλελίζω need not be connected to the *√wel 'turn' family of roots, despite the superficial attractiveness of an iconically reduplicated *welə̆wel "whirl" plus *íz-ō*.

Cognates:
Skt *réjati* 'brandish' / *réjate* 'tremble (Ch; CEG.iix)
Go *laikan* 'bondir, sauter'
Lith *láigyti* 'couvrir' (Ch)

Remarks: All the extra-Greek cognates point to *loyg, with a -y- present on the zero-grade of the root in Greek: *lig-y-o > *λίζω . But this leaves the initial ελε- to be explained.

Chantraine (1973 I:132) suggests a corruption or assimilation of original
ἐϝελ- to ἐλελ- ; presumably this would be transferred to *λίζω when this word became

confused with *ϝελίσσω .

Alternatively, it could represent prothesis upon reduplication: ἐ+λε&λιγ- j-ω . LIV (n. 5) takes this reduplication from the perfect. CEG.iix assumes a reduplicant effectively in an e-grade: √h$_1$ley → h$_1$el&h$_1$li-g-y$^e/_o$. Another possibility, not very attractive, is to assume a hybrid form, a -y$^e/_o$- present (LIV:19 #1q) and simultaneous reduplicated present (LIV:16 #1g).

Etymon: [a]LIV:246 «h$_1$leyĝ» = P:667-8

Rank: 2 *Form* (-1) *Meaning* () *Alternatives* ()
(Possibility of contamination with prothetized ἐ+ϝελίσσω as per Chantraine.)

124'ἔλεος **'pity'**
B:41

Cognates: None outside Greek. (Frisk)

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()

125a ἐλεύσομαι **'come, go'**
B:41; Wy:47 §3.1.9
125b ἐλεύθερος **'free'**
B:41; Wy:15 §2.1.6

¶ἐλεύσομαι

Form: The root seems to be *eleudh-, with stems:
Aorist Z√ἤλυθ-ον
Perfect O√ἐλ&ήλουθ-α
Future E√ἐλευ ∅-σ-ομαι (LS, Fr), containing an originally desiderative -s- (LIV) before which the root-final θ drops regularly (Sihler:204§215).

Cognates: A connection has been proposed with Arm *eli* and thence with ἐλαύνω qv *supra* (Ch, Fr); this will explain the ἐλ- but the θ is a problem. Perhaps originally a -dh$^e/_o$- present (LIV:20 #1u) with spread of the /dh/ through the paradigm?

Better cognates are:
OIr *lod / luid* 'ich / er ging' < *ludhom, ludhet, *lotar* < *ludhontr̥
Skt *ró(d)hati* ← √ ruh ['grow']
Go *liudan* 'wachsen' (Fr, LIV)

¶ἐλεύθερος

Cognates:
< *leudh-o:
OLat *loebertātem* (Acc); Lat *liber*; Venetic *Louzera*; Paelignian *loufir*; Oscan *lúvfreis* (Gen); Faliscan *loferta*(= Lat *liberta*)
OHG *liut* 'Volk'; OE *léod* 'Volk'
Lith *liáudis* 'niederes, gewohnliches Volk'
OCS *ljúĭje* 'Leute'
< *leudh-ero:
Gk ἐλεύθερος (Fr)

Remarks: LIV (n. 2) derives the meaning 'folk' from '[those who] grow'

Etymon: [a]LIV:248 «$h_1$lewdh» = P:306-7, 684-5

Rank: 1 *Form* () *Meaning* () *Alternatives* ()

126 'Ελευσίς (place-name)
Wy:46 §3.1.8

Etymology uncertain (Wy); perhaps connected with ἐλεύθερος (Fr), or ἐλεύσομαι (one *goes* to a pilgrimage site) (Author).

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()

127 ἐλεφαίρομαι 'to cheat'
B:41

Cognates: "Spärlicher belegter epischer Ausdruck mit schwankenden Bedeutung, unklarer Bildung und unsicher Etymologie"; but:
? Lith *vilbinti* 'locken, äffen, zum Besten haben'
Ved valhāmasi 'geben asl Rätsel auf' (Fr)

Etymon: [a]LIV:678 «$welh_1bh$» (not in P)

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Accepting cognates, vowel is part of the root; else, no cognates at all.)

128 ἐλινύω 'keep holiday, rest'
Wy:47 §3.1.10

Cognates: "Unerklärt; zahlreiche Vorschläge, alle ganz hypothetisch":
Lat *lētum* ['death']
Lith *ilsė́tis / ilsti* 'sich ausruhen'
Skt *iláyati* 'still sehen, zum Ruhe kommen' (Fr) ← $\sqrt{}$il (Wh^R:9)

Remarks: The cognates are all bad. Lithuanian and Sanskrit both show an initial vowel, but it is /i/, which ought to be /ι/ in Greek if these words are cognate. And the Latin has a /t/ which ought to be present in Greek ... assuming it is part of the root. Ernout says of *lētum*, "aucun rapprochement sûr".
Etymon: Not in LIV.

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()
(No convincing cognates.)

129 ἐμέ 'me' ACC
B:43; Wy:60 §4.2.4

Form: The non-enclitic form of the more common enclitic με ; all of the 2Sg non-enclitic pronouns have this initial ἐ- : ἐμοῦ GEN, ἐμοί DAT (Smyth:90§325). Also Homeric 3Sg ἑέ (*ἑϝέ) beside enclitic ἑ etc (Sihler:378§367.4).
Cognates:
Arm *is* < *ins < **em-ke (The initial vowel is found also in other cases in Armenian. The

double-starred form is the author's own interpretation of Ajello's "una partícula parecida al gr. *ge*". Note that Beekes gives as cognate with Gk the form *im*, which according to Ajello is the genitive, while the present form is "accusative-locative".) (Ajello:295§6.2.4)
Hit *ammuk*
Ved *mā́m*
OCS *mene*
Lith *manè*
Go *mik*
Lat *mē*
(Szemerény:212§8.4.1; Fortson:127§7.3)

Remarks: Usually explained as paradigmatic analogy starting from 1 Sg Nom *ἐγώ* (Sihler:376§367.2).

Rank: 3 *Form* () *Meaning* () *Alternatives* (-2)
(Whatever the history of these forms, Hittite as well as Greek/Armenian shows an initial vowel. In addition, a whole series of case-forms, both within Greek and also in Armenian, strongly imply paradigm levelling.)

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130 *ἐνεγκεῖν* (second) aorist *of φέρω* 'to bear'
B:45; Wy:50 §3.3.3; 3.3.5

Form: A reduplicated aorist en&enk- (LIV:21 type #2c) ← *$\sqrt{}^{e}/_{o}$nk. (Fr, Ch) The Ionic counterpart of this, *ἐνεῖκαι*, may be a different formation:
(*ἐν* - *εἶκαι* ←'*ἵκω* (Wy)

Cognates:
< *F$\sqrt{}^{e}/_{o}$nk̂:
Gk *ἐνεγκεῖν*
Skt *ān&ámś-a* (Perfect) 'ich habe erreicht'
OIr *t-ān&ac* 'ich kam'
Toch *ents/eṅk* 'nehmen'
? Hit *ḫink* 'überreichen, zuteilen'
< *S$\sqrt{}$n$^{e}/_{o}$k̂:
Lith *neš-ù* 'ich trage'
OCS *nes-ǫ* 'ich trage' Skt *nā́śati* 'erreicht'
Go *ga·nah* 'es reicht, genügt'
Lat *na$\frac{n}{\wedge}$c-īsc-or, nactus* 'erreichen'
? Hit *ninink* 'heben, hochnehmen'
< *Z$\sqrt{}$n̥k̂:
Skt *aś$\frac{n\acute{o}}{\wedge}$-ti* 'erreicht'
Arm *has-anem* (Fr, Ch)

Remarks: Per LIV:451, Hit *ninink* is from *$\sqrt{}$neyk, and so unrelated to the present word.

Etymon: [a]LIV:250 «$h_1$nek̂» = P:316-318
LIV takes *ἐνεγκεῖν* < *h_1e&h_1n̥k̂-e; OCS *nesǫ*, Lith *nešù* < *$h_1$nek̂; Toch *eṅk* < *h_1n̥k̂ (n. 3); but Hit *ninink* < *$\sqrt{}$neyk (LIV:451); Hit *ḫink (hikzi)*, Skt *ānámśa (ámśa)* < *$\sqrt{}h_2$enk̂, which root often subsumed under the present one (LIV:268).

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Vowel is part of reduplicant)

131 *'ένερθε* **'beneath, lower'**
B:45; Wy:29 §2.3.3

Form: Also *νέρθε* (Be), *νέρθεν* (Wy), *νέρτερος* (Fr)

Cognates:
Umbrian *nertru* 'sinistro'; Oscan *nertra-k* 'a sinistra'
Arm *nerk'in* 'der untere'
Skt *naraka* 'Hölle'
Toch *ñare/nray* 'Hölle', TochB *ñor* 'unter'
Lith *neriù / neřti* 'untertauchen, hineinschlüpfen'
Gc *Nerthus* 'NAME OF A DEITY' (Tacitus, *Germania* 40); ON *norðr* (< *n̥rtro) 'Gegend, wo die Sonne unten ist; Linke Seite des gegen Osten sich wendenden Beters' (Fr)

Remarks: The superficial resemblance between the Greek /θ / and the dentals in the Osco-Umbrian words is apparently accidental; the pIE */t/ implied by these last should not be cognate with a Greek /θ /. Perhaps the Greek -θε is connected with the adverbial suffixes -θι and -θεν 'at' (Smyth:99§342), -θε 'whence' (Smyth:100§342a).

There may be an original identity between the pIE words for 'in' and 'down', with schwebeablaut variants *$^{e}/_{0}$n(i) and *n$^{e}/_{0}$i developing different meanings; e.g. Skt. *ni-* 'down' but *ni-já* 'eingeboren' (Pokorny:311*ff*). So there is some possibility that *'ένερθε* reflects an original *en-, though the ε -less forms argue against this.

It has also been suggested (Beekes:24) that the ε- is a deictic element.

Etymon: [c]LIV:454 «nerH» (citing Lith only) = P:766, 975-6

Rank: 2 *Form* () *Meaning* () *Alternatives* (-1)

132 *ἐνθεῖν* **'come, go'**
B:45

Cognates:
Arm *ənt'anam* 'run'
Pali *andhati* 'geht' (Fr)
Ved *ádhvan* 'Weg'; GAv *aduuan* 'Weg'
ON *ǫndurr* 'Schneeschuh' (LIV)

Remarks: Perhaps represents a Doricism for *ἐλθεῖν*, with λτ > ντ . Pali cognate condidered doubtful (Fr).

Etymon: [a]LIV:249 «$h_1$nedh» = P:40-1

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Apparent schwebeablaut of E*√$h_1$nedh:
ενθεῖν, *andhati* < S*√$h_1$endh, *ǫndurr*, *adhvan* < Z*√h_1n̥dh.

133 *ἐνίπτω* **'reprove'**
Wy:50 §3.3.4

Form: also *ἐνιπίω* (a new formation), *ἐνῖπή*, *ἐνίσσω* .

Cognates:
Gk *ὀπ-ῑπτεύω* ['stare']
Skt *ī́ kṣate* 'sehen' (Fr, Ch)
Lat *in·quit*
OIr *in-cho-ssig* 'bedeutet, bezeichnet' < *ind-kom-sek̑-e-t
Gk *ἐνίσσω* < *enhik̑je < **ensisk̑je, Fut *ἐνίψω* < *enhisk̑-se (LIV)

Etymon: [a]LIV:526 «2.sek̑» = P:827-8

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Vowel is a preverb)

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134 *ἐννέα* **'nine'**
B:45; Wy:33 §2.3.6

Form: < *ἐννέϝα (Fr)

Cognates:
Skt *nava*
Lat *novem*
Go *niun*
Lith *devynì*
OCS *devętĭ*
Arm *inn* = [inən] < *eneu̯n (Fr)

Etymon: *newn̥ (Fr)

Rank: 1 *Form* () *Meaning* () *Alternatives* ()

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135 *ἔνοσις* **'a shaking'**
B:46

Cognates: No extra-Greek cognates; formation obscure (Fr).

Etymon: Possibly < *(h_1)enh$_3$ (B) (a root not in LIV).

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()
(No etymology)

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136 *ἐρέβινθος* **'vetch'**
B:36

Cognates:
Lat. *ervum*
OHG *ar(a)weiz* 'Erbse'
Gk *ὄροβος* 'Kichererbse'
MIr *orbaind* 'Körner' (Fr)

Etymon: A "Mediterranean" loan (Fr; B)

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Even if not a loan, the vowel seems to be part of the root.)

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137 *'ἔρεβος* **'nether darkness** MYTHOLOGICAL PLACE'
B:36

Cognates:
Skt *rajas-* 'dunkler (niederer) Luftkreis, Dunst, Staub'
Arm *erek* 'Abend'
Go *riqiz*; ON *røkkr* 'Dunkel, Dämmerung' (Fr)

Etymon: *reg̑os- (Fr)

Rank: 1 *Form* () *Meaning* () *Alternatives* ()

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138 *ἐρέθω* **'stir to anger; raise'**
B:36

Cognates: No extra-Greek cognates (Fr).

Etymon: Possibly (doubts expressed, p. 37) < *√$h_1$redh (B) (a root not in LIV; nor does LIV contain an etymology for the present headword.)

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()
(No etymology)

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139 *ἐρείδω* **'lean, support, hurl'**
B:36

Cognates: No secure cognates beyond Greek, but Lat *ridica* 'Weinpfahl' has been proposed (Fr).

Etymon: [a]LIV:502 «$h_1$reyd» = P:860

Rank: 3 *Form* () *Meaning* (-2) *Alternatives* ()
(Only one cognate beyond Greek, and the semantic match there is loose - 'vine support' :: 'lean'.)

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140 *ἐρείκω* **'to break'**
B:36

Cognates:
Skt *riśáti* ∼ *liśáti* 'rupfen, abreißen', *rikháti* ∼ *likháti* 'ritzen'
Lith *riekiù / riẽkti* 'Brot schneiden'
OHG *rīga* 'Reihe'
Lat *rixa* (Fr)

Etymon: [a]LIV:504 «$h_1$reyk̂» = P:858 (LIV enters Lith *riekiù / riẽkti* and Skt *rikháti* ∼*likháti* under √reykʷh_2 pg. 504, = (also) P:858)

Rank: 1 *Form* () *Meaning* () *Alternatives* ()

141 ἐρείπω 'dash down'
B:36

Cognates:
ON *rífa* 'zerreisen', *ríp* 'Oberkante eines Bootes'; East Frisian *rip(e)* 'ufer'; MHG *rîf* 'ufer'
Lat *rīpa* 'steiler Rand, ufer' (Fr)

Etymon: [a]LIV:504 «$h_1$reyp» = P:858

Rank: 3 *Form* () *Meaning* (-2) *Alternatives* ()

142 ἐρέπτομαι 'to feed on'
B:36

Cognates:
Lat *rapio*
Alb *rjep* 'abziehen, berauben'
Lith *ap·rĕ́pti* 'fassen, ergreifen' (Fr)

Remarks: Usually used of animals and their food (LSJ).

Etymon: [a]LIV:507 «$h_1$rep» = P:865

Rank: 3 *Form* () *Meaning* (-2) *Alternatives* ()

143 ἐρέτης 'rower'
B:36

Form: Also ἐρέσσω ['to row'], τρι·ήρης ['trireme'], and many other forms, all with initial ἐ- (Fr).

Cognates:
Skt *ari-tár*
Lith *iriù / ìrti*
ON *róa; róðr*
Lat *rēmus*
OIr *imb-rā* 'rudern, zu Schiffe fahren' (Fr; Mayrhofer«aritra»), *rām* 'oar, rowing' (DIL)

Remarks: Anttila:127§9.24 (also Table 9 pg. 175*f*) considers this one of the best cases of schwebeablaut. The "State I" form *erH-t(r)- (or *erə-, in non-laryngealistic notation) would yield Skt *aritár* and Gk ἐρέτης; the "State II" *reH-tr (= *reə-) produces ON *róðr* and Lat *rēmus*. But note that this depends on an internal */ə/ yielding (either directly, or by some sort of assimilation or analogy) /e/ in Greek.

Etymon: [c]LIV:251 «2.$h_1$reh_1» = P:338
(Skt is a schwebeablaut form)

Rank: 2 *Form* (-1) *Meaning* () *Alternatives* ()
(Possible schwebeablaut, but the second ἐ makes this seem unlikely.)

144 *ἐρεύγομαι* **'spit out'**
B:36

Form: Also *ἐρυγγάνω*, perhaps also *ἐρυγόντα* 'mugissant' (Ernout«rūgō»); *ὀργμαδες, -ος* (Fr.ii:1152)

Cognates:
Lat *ē·rūgō* ['disgorge noisily' (OLD)], ? *rūgiō* ['bellow, roar' (OLD)]
Russ *rygát'* 'aufstossen haben'; ? OCS *rŭžati* 'henir', *rykati* 'brüllen'
OHG *ita-ruchjan* 'niederkäuen', ? *rohôn* < pGc *ruhōn; OE *racettan* <pGc *rukatjan, ? *rýn* < pGc *rūhjan
Arm *orcam* < *o-rūc-am
Persian *ā-rōγ* 'rülpsen'
? MIr *rucht* 'cri, hurlement'
(Fr«1.*ἐρεύγομαι* », Fr«2.*ἐρεύγομαι* », Ernout«rūgō»)

Remarks: Cp. #207. Also suggested as cognate is Lith *riáugmi / riáugėti, raugėti*; but there is no semantic connection: 'sauer machen' (Fl:705«ráugas»)

Etymon: [a]LIV:509 «$h_1$rewg» = P:871

Rank: 1 *Form* () *Meaning* () *Alternatives* ()

145 *ἐρεύθω* **'make red'**
B:36

Form: Also *ἐρυθρός* (LIV n.1);*'ἔρευθος* 'Röte'

Cognates:
ON *rjóða* 'blutig machen', *róðra* 'blut', *rauðr*; OE *rēodan* 'rot farben', *rēod*; Go *raups*
Lat *rōbur* 'Kernholz', *rūber*; Lat (dialectical) rūfus
Russian Church Slavic *rĭdĭrŭ*
Tok *rtär / rätre*
Skt *rudhira*, *róha* 'rötlich'
Lith *raũdas*
OIr *rúad*

Etymon: [a]LIV:508 «$h_1$rewdh» = P:872-3

Rank: 1 *Form* () *Meaning* () *Alternatives* ()
(Schwebeablaut possible with *ἐρυθρός* but not with*'ἔρευθος, ἐρεύθω* .

146 *ἐρευνάω* **'search, attempt' (Gloss per LS)**
B:36

Frisk connects this word with the word(s?) for 'say' (Middle = 'ask'):

Present Active: (no Attic) Ionic *ἐίρω* 'say', Epic *ἐρέω* 'ask'
Present Middle:*'ἔρομαι* 'ask' = Ionic *ἐρέομαι, ἐίρομαι*
Future Active: *ἐρῶ* 'say' = Ionic *ἐρέω, ἐιρέω*
Future Middle: *ἐρήσομαι* 'ask'

2Aorist Middle: *ἠρόμην* 'ask'
Aorist Passive: *ἐρρηθην* 'say'
Perfect Active: *εἰρήκα* 'say'
Perfect Passive: *εἰρήμαι* 'say'
(n.b. original digamma here: Argive *ϝεϝρημενος*, Elean *ϝρᾱτρα*)

to which are related inter alia:

Lat *verbum* (/b/ is root extension)
Goth *waurd* (/d/ is root extension)
Skt *vrātra* 'Bestimmung'
(Fr«*ἐρευνάω*», Fr«*ἐίρω*», Fr«*ἐίρομαι*»; LS)

LIV:689,251 takes these from two roots: *$\sqrt{\text{werh}_1}$ = P:1162-3 (with Hit *weriyezzi* 'ruft', -wa(r) 'Redepartikel'; Palaic *wērti* 'spricht') and *$\sqrt{\text{h}_1\text{reh}_1}$ = P:337 (with Hit *ariyezzi* 'untersucht durch Wahrsagerei').

Frisk also proposes a connection with ON *raun* 'Versuch' < pIE *rou\n- . Neither of the two LIV entries includes either *ἐρυνάω* or ON *raun*. Regardless of the disposition of the Greek for 'say/ask', and the other words for speaking, it seems best on semantic grounds to separate them from the words for 'seek' and 'attempt'. This leaves only ON *raun* as a good cognate:

ἐρευνάω < E*$\sqrt{\text{rew}}$\n
raun < O*$\sqrt{\text{row}}$\n

Note that the similarity between this *$\sqrt{\text{rew}}$ and *$\sqrt{\text{wer}}$ 'say' is that they are *inverses*.

Rank: 2 *Form* (-1) *Meaning* () *Alternatives* ()
(Good semantic and formal match, but cognates in only one language; and possibility that connection with the 'say' words is in fact correct - in which case the vowel would be part of the root.)

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147 *ἐρέχθω* 'rend'
B:36

Cognates: Skt *rákṣas*, Av *rašah* 'Zerstörung, Beschädigung', *rašayaeiti* 'schädigen' (Fr)

Etymon: [a]LIV:505 «$\text{h}_1\text{rek}\hat{\text{s}}$» = P:864

Rank: 1 *Form* () *Meaning* () *Alternatives* ()

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148 *ἐρέφω* 'to cover'
B:36

Cognates:
OHG *hirni-reba* 'Schädel', *rippe* 'Rippe'; OE *ribb*; ON *rif*
Russian *rebró* 'Rippe' (Fr)

Etymon: [a]LIV:496 «$\text{h}_1$rebh» = P:853; 'Rib' < *rebh-yo (Fr)

Rank: 3 *Form* (-2) *Meaning* () *Alternatives* ()
(Semantics quite loose: 'rib/skull' :: 'cover')

149 *ἐρῆμος* **'lone(ly)'**
B:36

Cognates: "Rien de clair" (Ch); but the following have been suggested:
Lat *rārus* ['dispersed']
Skt *r̥-té* 'mit Ausschluss von, ohne' (Fr)
Lith *irù / irti* 'se dissoudre, tomber en ruines', *érdėti* 'se séparer', *ardýti* 'séparer'
Slavic *oriti* 'dissoudre, détruire', *rědŭkĭ* 'rare' (Ernout«rarus»
Go *arms* (B)

Etymon: Possibly (doubts expressed, p. 37) < *h_1reh_1 (B)
The various forms point to something like *er∼r̥∼re, plus a suffix or extension (Author).

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(The semantic matches are good (*érdėti*) to mediocre, and the formal correspondences are generally plausible though not compelling. But many of these forms suggest either vocalization of an initial syllabic /r̥/ (Skt, Lith, ?Slavic), or schwebeablaut (Go).)

150 **'E***ρῑνύς* **'Fury** MYTHOLOGICAL CREATURE'
B:36

Etymology unclear (B).

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()

151'*ἔρνος* **'a shoot'**
B:36

Cognates:
Norwegian *run(n)a* 'Zweig' [cp. English *runner*]
Skt *árṇas* 'Flut, Strom'

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Cognates are not compelling, and in any case the *ern∼r̥n which they imply makes schwebeablaut as *ern seem likely.)

'*ἔρξαν*
B:63

See *ἐέργω* .

'*ἔρχαται*
B:63

See *ἐέργω* .

152 ἐρωή **'quick motion'**
B:37

Cognates:
OE *rǣs* 'Lauf, Auffall'; ON *rás* 'id', *rasa* 'einstürzen'; Middle Low German *râs* 'heftige Strömung'
Lat *rōrāriī* (Lat vowel length per Smith & Lockwood.) 'leicht bewaffene Plänkler' (Fr«1.ἐρώη»)

Etymon: [a]LIV:501 «$h_1$reh$_1$s» = P:336, *rōs-ā ~ *rēs-o ~ rəs (Fr)

Rank: 2 *Form* (-1) *Meaning* () *Alternatives* ()
("Overabundance of possible protoforms": ρωη could represent *rōs or *rōw or just *rō.)

153 ἑστία **'hearth'**
B:64

Form: Ionic ἱστίη, Doric ἱστία .
Dialect evidence for initial digamma is uncertain: ϝιστίαν (Mantineia) and Hes γιστία · ἐσχάτη (ms, corrected to ϝιστία · ἐσχάρη), against examples lacking digamma.

Cognates: The following have been proposed:
Lat *Vesta* ['Hearth goddess'] (controversial)
Gk ἐσχάρα ['hearth'], ἑζομαι ['to seat']
Slavic *jestěja* 'Herd'

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(The cognates, such as they are, imply that the initial ἑ is part of the stem, not prothetic. Note also ἑ, not ἐ .)

154 εὐληρα **Epic 'reins'**
B:64

Form: Hes ἀβληρά implies an analysis *ἐ+ϝληρ-, or at least shows that the word begins with a diphthong instead of *ἐϝυ (B).

Cognates:
Lat *lōrum* 'Riemen, Zügel'
Arm *lar* 'Strick, Seil, Band'

Etymon: *l√wler = LE√*wlēr ~ LO√*wlōr (Fr)

Rank: 2 *Form* (-1) *Meaning* () *Alternatives* ()
(The initial ε cannot be schwebeablaut as it is the stem-vowel. The only drawback is that the cognates give no evidence for - or against - an initial *w. See also Appendix 4.)

155 εὑρίσκω **'find'**
B:65

Form: Originates in a reduplicated aorist ϝε&ϝρ- ← √ϝερ- (Fr). The word begins with a diphthong, not *εϝυ (LSJ).

Cognates:
OIr *-fuar* (Preterite) < *we&wr̥ 'ich fand', *-frith* (Passive) < *wre-to
OCS *ob-rĕtŭ* < *wrē-t 'ich fand'
Arm *gerem* < *wer 'gefangen nehmen'
Hit *urki* 'Spur' (Fr, Ch)

Remarks: z√wer = wr̥ (LIV:19 #1p; Sihler:505*ff*§456), plus the -ισκω variant of *-sk̂$^{é}/_{o}$ (Sihler *loc cit* end) would give would give *wr̥iskw ; this with prothesis > εὑρίσκω . But note the smooth breathing, for which a derivation from reduplicated *ϝε&ϝρ- is more suitable (Author). An alternative view proposes a variant of the same root with initial /s/: √σϝερ, reduplicating as *σε&σϝρε-, > εὑρε- (Ch).

Etymon: [a]LIV:698 «wreh$_1$» = P:1160 (N.b. LIV lists the present as *werh$_1$ per Arm; for the citation form notice the OIr and OCS.)

Rank: 0 *Form* () *Meaning* () *Alternatives* (X) (Initial vowel is not prothesis, but part of reduplication syllable; the Gk stem originated from a reduplicated aorist.)

---

156 εὐρύς **'wide'**
B:65

Form: Word begins with a diphthong, not *εϝυ (LSJ).

Cognates:
< *wr̥ús:
Skt *urú*; Av *vouru* 'breit'
< *wéros:
Skt *váras* 'Breite'
< *wru̯:
Av *urv̯āp* 'mit weitem Wasser'

Remarks: Beekes suggests that the Greek form results from *weru, with metathesis to *ewru ; but most adjectives in *-ú have zero-grade of the root (Sihler:132*f*§128), so prothesis on *wr̥-ú-s seems preferable.

Rank: 2 *Form* () *Meaning* () *Alternatives* (-1)
(Possibility of metathesis; schwebeablaut also possible.)

---

157 ἐΰς *Epic* **'good'**
B:53

Cognates: Two similar roots, perhaps confused in Greek:
(1a) √*es as Z√*s-u:
Gk ὑγιής ['healthy'] (Fr, Ch)
Skt su- ['good'] (B)
(1b) √*es as E√*es-u:
Hit *aššuš* 'gut'

(2) √*wes:
Hieroglyphic Luvian *wa-su*
Skt *vásu*, Av *vohu*
Ir *feb* < *wes-wā 'Vortrefflichkeit' (Fr, Ch); Gaulish *vesu* (CEG.iv)

Remarks: If the etymon is taken as (1a) *su then it is reasonable to speak of prothesis: *e+s-u-s > *ehus > ἐΰς . But ἐΰς can be gotten directly out of both (1b): *es-u-s > *ehus > ἐΰς and (2): *wes-u-s > *wehus > *ϝεΰς > ἐΰς . But regarding (2), "Fehlen sichere Spuren des Digamma" (Fr).

Etymon: *Either* [d]LIV:241 «1.$h_1$es» 'dasein, sein' = P:340-1
Or [d]LIV:293 «2.$h_2$wes» '(ver)weilen, die Nacht verbringen' = P:72, 1170-1

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(No need to assume prothesis at all; two out of the three possible derivations will produce the attested form automatically.)

---

158 ἐχθές 'yesterday'
B:53; Wy:2 §1.0

Form: Also: χθές, χθιζός, etc.

Cognates:
Lat *heri, hesternus*
Alb *dje* < *ĝhes
ON *gær* < *ĝhēs; OHG *gestaron*; OE *ġeostra* (Sihler's "éo" is a misprint, the diphthong is short per Clark Hall.)
Skt *hyas* = [hiyas]; Av *zyō* < *ĝhyes
OIr *in-dē*; Welsh *doe* < pCeltic *gd(i)i̯es
(Fr; Sihler:225§235.1.a)

Remarks: The ἐ- may be a deictic, as in ἐκείνος (Fr; Beekes:24). N.b. this is a 'thorn-cluster' word, as is the highly uncertain ἰχθύς .

Etymon: *ĝhdhiyes, perhaps = *ĝh DEICTIC plus *diyes 'day' (Sihler *loc cit*)

Rank: 2 *Form* () *Meaning* () *Alternatives* (-1)
(Vowel is possibly prefixed deictic element.)

159'ἕως 'morn'
B:65

Form: Ionic ἠώς, Doric ἀϝώς (B)

Cognates:
< SF√*āus-ōs:
pGk *ᾱϝώς < **ᾱϑhώς
Lat *aurōra* ['dawn']
< SF√*āus-r:
Lith *aušra*
OHG *Ôst(a)ra*
< Z√*us-ṓs:
Skt *uṣás*
< Z√*us-ra:
OCS *ustra*
Skt *usrá* 'morgendlich'
< E√*wes-r:

Skt *vāsar-ā* 'morgendlich'
< OL√*wōs-ri:
OIr *fāir* 'Sonnenaufgang' (Fr)

Remarks: If taken from *wōs (as Old Irish), then prothesis as *ἀ+ϝώς (cp Doric) is conceivable. But Lithuanian and especially Latin display the stem in a form from which the Greek is immediately derivable, so there is no need to assume prothesis here.

Etymon: *āws-ōs ← [a]LIV:292 «1.$h_2$wes» '(morgens) hell werden' = P:86-7. (Cp. LIV:245 «$h_1$ews» 'verbrennen, sengen' = P:347-8

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)

ἠ(ϝ)'ἴθεος

See #206.

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160 *ἠμεκτέω* **'be grieved'**
B:66*f*

Form: Usually with prefix *περι* -; but Hesychius cites the unprefixed form (B).

Cognates: None outside Greek (Fr).

Remarks: The initial vowel is perhaps from the privative prefix *ἀ* (B).

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()
(No etymology)

ἠρέμα

See #207.

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161 *'ὅαρ* **'a consort'**
B:54

Cognates:
Av *hāiriši* 'femme'
Lat *soror, uxor* (Ch)
Hit *ašraḫiyas* (Gen Sg); Cuneiform Luvian *ašraḫit* 'femininity' ← *$ašr\frac{a}{i}$ 'woman' (Melchert«ašraḫit» *ff*)

Remarks: Perhaps contains the comitative prefix (Ch). CEG.vi derives from pIE *swósr
$_\circ$.

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Other languages show initial vowel; so no prothesis, *ὁ* is part of the stem.)

162 *ὀβελός* **'a spit'**
B:54

Form: Also *ὀδελός*; showing regular Cretan *ǧe > *δε* so the ancestral form will be *oǧelos (Fr; Sihler:89§91).

Cognates: Gk *βέλος* ['projectile']

Etymon: [b]LIV:208 «ǧelh$_1$» 'treffen, werfen' = P:471-2
(Cp LIV:207 «1.ǧelH» 'quälen, stechen' = P:471-2, LIV:207 «2.ǧelH» 'träufeln, quellen' = P:470-1.

Rank: 2 *Form* () *Meaning* (-1) *Alternatives* ()
(Hypothesis of prothesis supported only by a possible unprothetized doublet in Greek - formally good, semantically mediocre.)

163 *ὀδάξ / ὀδάξω* **'grasp, scratch'** *later* **'to bite, feel biting pain'**
B:54

Form: Variants: *ἀδάξω*, *ἀδαχάω* .

Cognates: "No convincing etymology"; but *ὀδών* and *δάκνω* involved in some sort of interference with each other and/or some third item, producing the shift in meaning to 'bite' etc. (B, Fr).

Remarks: Per *ἀδαχάω* the stem appears to be (a/o)dakh-. This is not easily reconciled with a derivation from pIE *√denk̂, the etymon of *δάκνω* (LIV:117 «denk̂»); Gk *χ* remains unchanged before a following nasal (Sihler:207§220).

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()

164a *ὀδύνη* **'pain'**
B:54
164b *ὀδών* **'tooth'** *Ionic for ὀδούς*
B:55

¶*ὀδύνη* 'pain'
Form: Aeolic *ἐδύνας* preserves the original formation, *ed-un-, where -un- is the zero-grade of the suffix of appurtenance *wen. So the word originally meant 'gnawing [pain]'.

Cognates:
Arm *erkn* 'scheren / geburtsschmerz'
Lit *edžiótis* 'sich quälen'
Skt *ad-van* 'eating' (Fr, B)
Hit *ēdmi, adanzi* 'essen' (LIV)

¶*ὀδών* 'tooth'
Cognates:
< *d-ont:
Skt *dán* ← underlying *dant*

Lith *dantis*
OHG *zan(d)*
< *d-n̥t:
Go *tunþus*
Lat *dens*
Arm *atamn* (Fr)

Remarks: Aeolic '*ἔδοντες* suggests a relation with √*ed 'eat'. If so, then Greek and Armenian have full grade in the root - *ὀδ*- could represent either o-grade or assimilation to the suffix - and the other languages would show zero-grade *∅ d-.

But it is still significant that Greek and Armenian, the two languages in which the phenomenon of prothesis is found, are the two languages which show an apparent full-grade here. Moreover, Armenian typically preserves pIE /*e/ and /*o/ as such, but here we have /a/.

Etymon: ^{d}LIV:230 «$h_1$ed» = P:287-9

Rank: 2 *Form* () *Meaning* () *Alternatives* (-1)
(There is a possibility that the vowel belongs to the stem, especially in the case of *ὀδύνη*; but Armenian *atamn* strongly implies prothesis.)

---

165 *ὀίγνυμι* **(*ὀϝίγνυμι) 'to open'**
B:58; Wy:42 §2.4.13

Form: Root is in zero-grade; but forms with root in full grade
(Aeolic *ὀϝείγω*) occur (Fr, B).

Cognates: Frisk cites formal correspondence with Skt *víjate, vejate* 'züruckweichen, sich flüchten, vor etw. zurückfahren', Av vaēγa 'heftige Bewegung, Andrang, Anprall, Schlag'; which LIV:667 assigns to *√weyg = P:1130-1, along with *inter alia* *ἐίκω*. On the basis of the mismatch of the initials of *ὀίγνυμι* and this latter form *under laryngeal theory*, LIV (*loc cit* n.1; 308) rejects this equation and proposes instead a root *$h_1$weyg = P:73, for which no cognates outside Greek are given.

Rank: 3 *Form* () *Meaning* (-2) *Alternatives* ()
(Even putting aside LIV's laryngealistic objections, the existence of extra-Greek cognates is dubious on account of the poor semantic match between 'strike' and 'open'.)

---

166 'Οἰλεύς (proper name)
B:55

Remarks: Speculatively from *φιλεύς* (B).

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()
(No firm etymology.)

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167 *ὀίομαι* **(*ὀϝίσομαι) 'think'**
B:58; Wy:62 §4.4.5

Form: Homeric *ὀΐομαι,* Aorist *ὀϊσθῆναι,* and verbal adjective *ἀν·ώϊστος* show that the

stem is *ὀϝισ- (Fr).

Cognates: Suggested:
OLat *osmen* > Lat *ōmen* (presents phonetic difficulties)
Skt *íṣ-yati* 'in eilige Bewegung setzen' (Fr)
Skt. *āviḥ* 'clearly' (per Szemerény) (B)

Remarks: Wh^R:9, 11 considers Skt √iṣ 'seek, desire', √iṣ 'send', and √iṣ 'move' to be originally identical.

Etymon: Something like *√oweis as *Z√owis seems indicated. LIV has no entry for the word; the closest thing is *h$_2$weys 'hören' pg. 288 = P:78, with a Gk reflex *ἀϝείω.

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()
(No reliable cognates; of those that have been proposed, two begin with a vowel, suggesting that the "prothesis" might be part of the root.)

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168 ὀϊστός (*oϝιστός) *Homer, for* οἰστός 'arrow'
Wy:55 §3.4.10

Form: Also ἰός (Fr)

Cognates: 'Keine ganz überzeugende Et."; suggestions:
Skt *íṣ-yati* 'in eilige Bewegung setzen' [again! cp. οἴομαι]
Skt *véti 'pursues'*
Lith *veju, výti* 'hunt, pursue'
Hit *u̯iia̯ = wĕya / wiyazzi* 'drive, send'
(Wy; Sturtevant:183«wĕya»)

Remarks: Hittite "u̯iia̯" / "wĕya" 'send' is actually /u·ya/, formed from the preverb *u* 'hither' and (perhaps) the reflex of pIE *yē 'throw', possibly cognate with ἵημι (Weeks:158§10.63 «send»; see also pg. 157§10.62). So the Hittite initial /u/ is not cognate with the Greek initial ὀ .

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()
(No convincing cognates.)

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169 Οἴτυλον (place name)
B:55

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()
(Etymology uncertain.)

---

170 ὀίφω 'copulate' (Gloss per Frisk.)
B:55

Cognates:
Skt *yábhati*
OCS *jebǫ* (Fr)
Tok *yowäs / yopsa* 'trat ein' (LIV)

Etymon: [a]LIV:309 «yebh» = P:298

Remarks: *ὀ-* may be preverb (LIV) or root present with o-grade schwebeablaut *oibh-mi (LIV; B)

Rank: 3 *Form* () *Meaning* () *Alternatives* (-2)
(Schwebeablaut or preverb possible)

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171 *ὀκιμβάζω* **['spend time']**
B:50«*ἀστεμφής* »

Form: Reported by Hesychius: *ὀκιμβάζω · διατρίβειν*. Possibly related items in Greek are:
Hes *σκιμβός* 'halt' (noun)
Hes *σκιμβάζει · χωλεύει* ['is lame, halt, limp']
Hes *κιμβάζει · στραγγεύεται* ['wavers, loiters']; but also *κίμβιξ* 'stingy person' (Xenophon, Plutarch), *κιμβεία* 'stinginess' (Aristotle) (LSJ; Fr,«*σκιμβός* »)

Cognates:
ON *skeifr* 'schief'
Latv *šk'ībs* 'id' (Fr,«*σκιμβός* »)
Gk *σκαμβός* 'krumm, brummbeinig'
OIr *comm* 'krumm' (Fr)
Etymon: Nothing promising listed in LIV; the Greek looks like a denominative, anyway.

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()
(The proposed cognates are semantically unconvincing; moreover, the hypothesis of cognacy necessitates setting up an otherwise unattested variant with a nasal "infix" for Greek.)

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172 Hes *ὀλιβρός* **'slippery' (Gloss per LSJ«***ὀλιβάζω, ὀλίσθανος***»)**
B:42

See Appendix 4.

Cognates:
OE *slipor*; OHG *sleffar* 'schlüpfig, glatt' (Fr)

Etymon: [a]LIV:566 «sleyb» = P:663

Rank: 1 *Form* () *Meaning* () *Alternatives* ()

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173 *ὀλίγος* **'little, few'**
B:42; Wy:15 §2.1.7

Form: Variant *λοίγος* (B).

Cognates:
Lith *ligá* 'maladie' (Ch)
Alb *ligë* 'bad' (Huld:146)
Arm *ałk'at* 'poor' (B; Wy:16 n.15)

Etymon: Root Appears to be from z√leyg *vel sim*; nothing similar in LIV (Author).

Rank: 3 *Form* () *Meaning* (-2) *Alternatives* ()

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174 *ὀλισθάνω* **'to slip'**
B:42; Wy:47 §3.1.11

Form: Also *ὀλίσθειν, ὀλισθράζο,* (late) *ὀλισθαίνω.*

Cognates:
OE *slīdan*
Lith *slýsti* (pret. *slýdau*)
OCS *slědŭ* 'Spur'
NIr *slaod* 'gleitenden Masse' (Fr)

Remarks: The Greek root may be *ὀλιθ*; the sequence /*σθ*/ would be from *dh-dh (Fr, Ch); a -dh- present (LIV:20 type #1u; Sihler:510§458.2) infecting all the other stems? (Author) But LIV«$h_3$sleydh n. 1» considers pre-Greek *$h_3$leysdh to be metathesized from *$h_3$sleydh.

Etymon: pIE *sleydh (Ch); [a]LIV:307 «$h_3$sleydh» = P:960-1

Rank: 2 *Form* (-1) *Meaning* () *Alternatives* ()
(The Greek /s/ is a problem.)

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175 *'ὄλλυμι* **'destroy'**
B:42

Cognates:
Lat *aboleo, dēleō, volnus* ("verfehlte Hypothesen") (Fr)
Hit *hallanniye* 'verwüsten, zerstören, erhalten' (LIV)

Etymon: [a]LIV:298 «$h_3$elh_1» = P:777

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Vowel is part of the root.)

---

176 *ὀλοφύρομαι* **'to lament'**
B:42

Form: Also *ὀλόφυς* (Ch).

Cognates:
Arm *ołb* 'Wehklage'
Lith *ulbúoti* 'rufen, singen' (Fr)

Remarks: N.b. synonyms *ὀδύρομαι, μύρομαι, κινύρομαι, μινύρομαι* (Fr).

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* (-2)
(No good cognates so no reason to assume prothesis; and the cognates, such as they are, both begin in vowels (though the Armenian could have prothesis).

177 *ὀλόπτω* **'pluck, tear out'**
B:42; Wy:17 §2.1.8

Cognates: None outside Greek (Fr); but possibly related to *λέπω* (B, Wy); maybe an Alexandrianism (Wy).

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()

178 *'ὄμβριμος* **'strong'**
B:54

Form: Variants:
Hes *βριμός · μέγας, χαλεπός*
βριμάζω 'roar'
βρῑμή 'strength'
βρῑμάομαι, βρῑμόομαι 'snort with anger, be wrathful'
βρίμωσις 'indignation' (Ch, B, LSJ, LS).

Cognates: Polish *olbrzym* 'Riese' (Fr)

Rank: 2 *Form* () *Meaning* (-1) *Alternatives* ()
(The only evidence for prothesis is from other Greek forms, whose semantic connection with the present word is good but not perfect. The Polish form is interesting but not compelling.)

179 *ὀμείχω* **'make water'**
B:43*f*; Wy:19 §2.2.3

Form: The form *ὀμιχεῖν* is a mistake in the manuscript tradition (LSJ«*ὀμείχμα*; CEG.i). Hesychius records a variant *ἀμῖξαι* (Wy).

Cognates:
Skt *méhati*; Av *maēzaiti*
ON *míga* 'harnen'
Lat *mingo/mixī*
OLith *minžu*, Lith *mỹžti*
Arm *mizem* (Fr)

Etymon: [a]LIV:301 «$h_3$meyĝh» = P:713

Rank: 1 *Form* () *Meaning* () *Alternatives* ()

180 *ὀμίχλη* **'mist'**
B:44; Wy:19 §2.2.4

Form: Also found as verb *ὀμιχλαίνω* 'become dark' (LSJ).

Cognates:
Skt *mih-* 'Nebel' *meghá-* 'Wolke'
Lith *miglà*
OCS *mĭgla* (Fr)

Remarks: Note that the pIE velar *gh in this word apparently differs from that in *ὀμείχω* qv *supra*, *ĝh, with which this word is sometimes connected (Wy).

Etymon: *mighlā (Fr)

Rank: 1 *Form* () *Meaning* () *Alternatives* ()

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181 *ὄμνυμι* **'swear'**
B:44

Cognates: Skt *ámī-ti* 'andringen, bedrängen, quälen' (Fr; Wh^R:3).

Etymon: ^{a}LIV:2 «6»5»$h_2$emh_3 = P:778

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Vowel is part of the root)

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182 *ὀμόργνυμι* **'wipe'**
B:44; Wy:23-26 §2.2.6

Form: Also *ὀμοργάζω* (LSJ). Late forms without prothesis are found (*μόρξαντο*) and there is some evidence that these could have existed as early as Homer (Wy). Hesychius' *ὄμαρξον* is a zero-grade form, with /ar/ < *r̥ (Wy:23; Fr:389; B:44)

Cognates:
Gk *ἀμέργω*
Skt *mr̥ṇákti*, Subjunctive *mr̥ṇajāni*, Aorist *amārk-ṣīt* 'er wischte ab' (Fr, Ch)

Etymon: ^{a}LIV:280 «$h_2$merĝ» = P:738

Rank: 1 *Form* () *Meaning* () *Alternatives* ()

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183 *ὀμφαλός* **'navel'**
B:44

Cognates:
< *embh *or* *m̥bh:
Lat *umbo/-nis* 'Schildbuckel', *umbil-īcus*
OIr *imbliu*
< *ombh-on:
OHG *amban* 'Wanst, Abdomen'; OS *ambon*
< *nă̆bh:
Skt *nā́bhi* 'navel'
Old Prussian *nabis* 'navel'; Latv *naba* 'id'
OHG *naba* 'Radnabe', *nabalo* 'navel' (Fr)

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(The o-grade attested in OHG, plus an extension *l̥, will give the Greek form directly; no need to assume prothesis.)

184 *'ὄνειδος* **'report of character** *esp* **reproach'**
B:46; Wy:27 §2.3.1

Form: Also verb *ὀνειδίζω*.

Cognates:
Skt *ní$\frac{n}{\Lambda}$d-ati, nid-ānā* 'getadelt'
Latv it nîdu / nîdêt 'scheel aussehen, nicht leiden, hassen'
Go *ga·naitjan* 'schmähen'
Arm *anicanem* (Fr)

Rank: 1 *Form* () *Meaning* () *Alternatives* ()
(The ϵ is the root vowel, so the initial vowel does not result from schwebeablaut.)

185 *'ὄνειρος / 'ὄναρ* **'dream'**
B:46; Wy:50 §3.3.6

Cognates:
Gk *'ὄναρ* < *Z$\sqrt{\text{on}\underset{\circ}{\text{r}}}$
Gk *'ὄνειρος* < *E$\sqrt{\text{oner}}$-yos (with metathesis of /ry/)
Arm *anurǰ* < LO$\sqrt{\text{anōr}}$
Albanian Geg *âdërrë* (Albanian ⟨V̂⟩ indicates nasalization.) Tosk *ëndërrë* (with regular Tosk /ën/ < /an/.) (Fr)

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Initial vowel is part of the root.)

186 *ὀνίνημι* **(middle:** *ὀνίναμαι* **) 'to profit'**
B:47; Wy:60 §4.3.1

Form: Derivative noun *'ὄνησις*; Aorist *ὀνήσαι* (Fr); Future *ὀνήσω*;
2Aor *ὠνήμην* (LS).

Cognates: "Ohne überzeugende Etymologie"; but:
Skt *nāthá* 'Zuflucht, Hilfe' (Fr)
ON *unnum* 'wir lieben, gönnen' (LIV); OE *unnan* (Clark Hall); OHG *unnan* (Schützeichel)

Remarks: The Greek stem looks like an i-reduplicated athematic present parallel in formation to*'ἵστημι* (= LIV:16 #1h). The middle *ὀνίναμαι* seems to show the short version of the root vowel, while the Aorist, Future, etc. imply that the *-νίν-* is not part of the root but some sort of stem-formant. If this is the proper analysis, the root would be *$\sqrt{\text{nā}}$ (or naə). The initial *ὀ* could not be analyzed as part of the root, but must be prothesis or perhaps a preverb (comitative, i.e., to "profit *with*" something?).

But LIV:302 (see esp. n1) analyzes this word as a nasal-infix present *$\text{h}_3\underset{\circ}{\text{n}}\frac{\text{né}}{\Lambda}\text{h}_2$ ← *$\sqrt{\text{h}_3\text{neh}_2}$ (or, unlaryngealistically, *$\sqrt{\text{oneə}}$).

Skt *nāthá* is from $\sqrt{\text{nāth}}$~$\sqrt{\text{nādh}}$, Wh^R:89, so its /th/ is *not* a derivative suffix on *nā, and it must be discounted from consideration.

The Gc forms are Preterite-Presents of Class III, whose infinitives (from the old General Preterite stem) have zero-grade of the root. The Present Singular Indicative, from the old Preterite Singular Indicative, has /a/ here: ON *ann*; OE and OHG *an*, from pIE o-grade. The old Present, lost in the Preterite-Presents, had pIE e-grade (Prokosch:190§65d; p.167*f*

§58c; p.164§58). This implies a root something like $*^{e}/_{o}$n.

This pre-Germanic $*\sqrt{}^{e}/_{o}$n is a conceivable cognate of whatever lies behind the Greek form, either $*\sqrt{}$nā or $*\sqrt{}$oneə; but the details are obscure and neither match is really compelling. The semantic correspondence, similarly, is acceptable but less than cogent. Wyatt considers the Greek word without etymology.

Etymon: Perhaps [a]LIV:302 «h_3neh_2» (Rejecting the proposed Skt cognate) = P:754, 47

Rank: 3 *Form* (-2) *Meaning* (-1) *Alternatives* (-2)
(Etymology obscure; semantic match with the only reasonable extra-Greek cognate is only average, and even there prefixation or schwebeablaut are feasible.)

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187 *'ὄνομα* **'name'**
B:47; Wy:31*f* §2.3.5

Form: Lacedaemonian *ἐνυμα (inferred on the basis of the proper names 'Ενυμακρατίδας and 'Ενυμαντιάδας), Doric/Aeolic *'ὄνυμα* (LSJ).

Cognates: The issue is controversial; here is a synopsis of the more popular and straightforward views, omitting laryngealistically-based proposals and considerations:
< *nom̥n̥ (Sihler:87§90, 97§100; Fr):
Arm *anun*[A]
Gk *'ὄνομα* [B]
Hit *laman*[C]
Ved *nā́ma*[D]
< *n̥men (Huld:61*f*; Hamp:138):
Alb Geg *êmën*, Tosk *emër*[E]
< *nṓm̥n̥ (Fr; Sihler:97§100):
Lat *nōmen*
< *nomōn (Fr):
Go *namo*
< *n̥m̥n̥ (Wy; Sihler:97; Hamp:138 for OIr):
OCS *imę*
(?) OPr *emmens*
OIr *ainm* < *anmen < pCeltic **anman[F]
< *nēm̥n̥ (Ringe:108§46):
Tok *ñom̥ / ñem*[G]
< *enom̥n̥ (Sihler:87§90):
? Gk Lacedaemonian *ἐνυμα

A. *anmon < **n̥mon (Huld:61*f*)

B. *onoma > Doric/Aeolic *'ὄνυμα* by Cowgill's Law (o>u / between [labial] and R); this *υ* was returned to *o* by assimilation to the previous syllable (Sihler:42§44; 89§91.2).

C. /l/ by dissimilation (Wy).

D. Nom Sg; /ā/ is by Brugmann's Law (Sihler:97§100).

E. Dialect attributions mistakenly reversed in Frisk and Pokorny:231 (Huld:62); note Huld's /h_1/ in the protoform!

F. Or perhaps < pIE *nom̥n̥, with first syllable levelled to the /an/ of the rest of the paradigm (Sihler:97).

G. Adams (1988:28§3.18 + p. 17§3.113) derives this instead from pTok *nem with */e/ < pIE */o/. But I do not understand how this can explain the /ñ/, since */e/ < pIE *o seems not to have palatalized a following consonant: *plewe* 'boat' < *plówos (Adams 1988:17§3.113) vs. *kälyp* 'steal' < *k̂lep (Adams 1988:42§3.44).

The diversity of these forms is apparently due to the spread through the paradigm of "weak" (reduced pretonic oblique) case forms having /n̥/ which eventually vocalizes (Wy, CEG.ii).

Can the Greek *ὀ-* (and *ἐ-*) be derived from this */n̥/? A vocalized /n̥/ will yield Gk /a/ before a consonant, or /an/ before a vowel; this can assimilate to an /o/ in the following syllable (Sihler:89§91; LIV:282«h_2neh_1» n. 1). But there are no Greek forms of this word with initial /a/, though there *is* an initial *ἐ-*. And for this suggestion to work at all we require an o-grade in the next syllable to trigger the assimilation; this implies a starting form *n̥ mon-, the protoform suggested by Huld for Greek and Armenian. But this will not explain the initial vowel of Lacedaemonian **ἐνυμα*.

Schwebeablaut, in either e- or o-grade, is not an attractive explanation for either the Lacedaemonian or general Greek initial vowels: this ought to produce Vnm(V)n, yielding something like ×*ἐνμεν* or ×*ἐνμα*. Trying to save this proposal by devising ways of getting the necessary /o/ into the second syllable is probably not worth the trouble.

Prothesis of /e/ onto *nomn̥ is entirely feasible, and will explain the Lacedemonian form, as well as the general Greek form if assimilation to the second-syllable /o/ is invoked. Vocalization is a possibility, but the Lacedaemonian form remains a problem.

Rank: 2 *Form* () *Meaning* () *Alternatives* (-1)

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188 *ὄνομαι* **'blame'**
B:47; Wy:60 §4.3.2

Cognates:
"Ohne sichere außergriechische Entsprechungen"; suggestions:
OIr *ana* 'blamer' (CEG.ii), MIr *on* 'Schande', *anim* 'Makel, Fehler' (Fr)
Gk *ὄνομα qv supra* (CEG.ii)
Hit *hannari* 'rechetet, streitet, richtet'
TokB *nāk* (Konjunktiv) 'tadeln' (LIV)
Skt *níndati* ['blames'] (phonologically unattractive) (Fr, B)

Remarks: A connection with *ὄνομα* extending beyond folk-etymology seems implausible. A verb from *ὄνομα* should be *ὀνομάζω* (which indeed exists). Adding /ι/ to *ὄνομα* to get a middle *ὄνομαι* is as unnatural as it is clever. Instead, *ὄνομαι* and its aorist *ὤνατο* (LIV) imply a root √*ὀν*.

The remaining cognates are acceptable, but their predominant form /an-/ suggests that the vowel is part of the root.

Etymon: [a]LIV:282 «h_2neh_1» = P:779

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Vowel is part of the root.)

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189 *ὄνυξ* **'claw, nail, hoof'**
B:47; Wy:32 (esp. n.28) §2.3.5

Form: Genitive *ὄνυχος* (LS).

Cognates:
Lat *unguis* < *n̥ǵh
Arm *ełung-n* (with /ł/ dissimilated from /n/)
OIr *ingen*
OHG *nagul* < *noǵh
Lith *nãgas*
Skt *nakhá* (Fr)
Russian *noga* ['leg/foot'] (Wy)

Remarks: Attested root variants are: Z*√n̥ǵh (Lat, OIr); O*√noǵh (OHG, Lith, Skt, Russian); ? OL*√nō$\frac{\text{n}}{\text{Λ}}$ǵh (Arm). The Greek form is from *o+noǵh-s, with the (second) /o/ > /u/ per Cowgill's Law, and delabialization of the ǵh, then deaspiration before NomSg -s. (Sihler:42§44).

The resulting prehistoric Greek *onugh- is strikingly similar to the u-stem *ongh-u- which seems to lie behind the Latin; this led Pokorny to assume *ὄνυξ* as metathesis for *onghus, both being schwebeablaut forms of *noǵh. But the apparent "State I" forms of Latin (and Celtic) are actually from the zero-grade *n̥ǵh. (Anttila:124§9.20).

Wyatt suggests that paradigmatic root gradation comparable to the case of *ὄνομα* is at work here too, with pIE weak stem **n̥ghos > *akhos, producing a contaminated Nom Sg *anok-s.

Rank: 2 *Form* () *Meaning* () *Alternatives* (-1)
(Armenian shows prothesis, too; the Latin and Old Irish initial vowels are not cognate with the Greek *ὀ-*. Root gradation may be at work, though this seems speculative.)

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190 *ὀπῑπεύω* **'stare'**
B:55

Etymon: Perhaps a denominative, *ὀπωπη* plus *-ευ-*(Fr); but this leaves the the *-ῑ-* unexplained. Or *ὀπι-* plus *οπ-*, i.e. *√h$_3$ḱreduplicated (Fr; B:129 and loc cit).

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Regardless of the details, the vowel seems to be part of the root, connected somehow with *√oḱ).

---

191 *ὀπυίω* **'marry'**
B:55

Form: Also *ὀπύω*; Future *ὀπύσω*.

Cognates: Suggested:
Etruscan (!) *puia* 'Gattin' (Fr)
Ved *púṣyati* 'gedeiht, mehrt sich, läßt gedeihen' (LIV)
Hit *ḫapušaš* 'penis'

Remarks: The *ὀ-* may be a preverb (LIV n. 1). If the Etruscan is a loan from Greek, then it might testify to an unprothetized form. Alternatively, it could be a genuine cognate of the Greek, borrowed from some unidentified Indoeuropean language. The Hittite "ist wohl nur metaphorisch gebrauchtes *ḫapuša* ' Stiel, Stengel, Schaft'"; this is "ohne etymologie, wohl fremd" (Tischler 1983:168). Note also the apparent /b/ in the Hittite.

Etymon: Suggested: [a]LIV:303 «h$_3$pews» 'sich mehren, reich werden an' = P:848. The

present Greek headword is given a '?' in this LIV entry, and the only other cognates suggested are Indo-Iranian. Note the very weak resemblance in meaning, 'sich mehren' :: 'marry'. So without a convincing etymology.

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* (-1)
(Vedic cognate fine formally - *s > ∅ intervocalically in Gk - but semantically very poor. There is also a reasonable possibility of a preverb; and if one accepts the Hittite, the vowel may be part of the root.)

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192 *ὄπωπα Ionic* PERFECT MIDDLE **of** *ὁράω* **(LS) 'see'**
B:55

Etymon: Ultimately derived from *ὤψ* 'eye' < *ok̑- (Fr). Beekes (p. 122) considers this an analogical formation.

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Vowel is part of the stem.)

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193 *ὀρέγω* **'to reach'**
B:37

Cognates:
Lat *rēgō*
OIr *rigim* 'strecke aus'
Go *raihts*
Av *rašta* 'gerichtet, geordnet', *rašnu* 'Gerecht'; Skt *r̥ñjáti* 'streckt sich, eilt' (Fr), *ŕ̥jati* (B)
Hit *harganau* 'Sohle' *or* 'Ferse' (Tischler 1983:176)

Remarks: Hittite shows /ha/, reflecting a zero-grade *r̥ vocalized to /ar/. Despite the superficial similarity, the Greek initial *ὀ-* is not cognate. Its vowel is wrong for a vocalized *r̥; and it is not schwebeablaut, since the e-grade *ε* is also present. Moreover, assimilation to the vowel of the following syllable is out of the question.

Note that under the standard Laryngealist explanation of the Greek form, assuming *ὀ-* < h_3, the Hittite cognate would exhibit retained h_3.

Etymon: [a]LIV:304 «$h_3$reg̑» = P:854-7

Rank: 1 *Form* () *Meaning* () *Alternatives* ()
(Despite the Hit /ha/)

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194 *ὀρεχθεῖν* **'stretch oneself'**
B:38

An epic and poetic verb of "unklarer Bed[eutung]", perhaps 'röcheln', 'anbrausen'.

Cognates: Possibly connected with *ῥοχθεῖν* 'rauschen, brausen'; or *ὀρέγω* (qv) (Fr«*ὀρεξθέω* »).

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()
(Entirely unclear.)

195 *ὀρίνω* **'move'** / *ὄρνυμι* **'rouse'** / *ὀρύω* **'to rush'**
B:38

Cognates:
Arm *ari* (Imperative) 'stehe auf!'
Lat ? *ori-tur; rivus* (Fr); *ruō* ['tumble, rush'] (B)
Skt *riṇā́ti* 'go, move' ($\sqrt{}$rī Apte:469) (B)
OCS *rějǫ* 'fließen'
Go *rinnan* 'rennen, laufen' (LIV)

Remarks: The cognates all begin in /r/-, except for Latin (which LIV excludes) and Armenian (also excluded by LIV, and Armenian shows prothesis anyway). The root seems to be *rey ∼ ri (Gk, Skt, and Go have -n(e)- present). Vocalization of *r̥ here is unlikely, but schwebeablaut as *ori is believable.

Etymon: [a]LIV:305 «$h_3$reyH» = P:330-1

Rank: 2 *Form* () *Meaning* () *Alternatives* (-1)

196 *ὀρύσσω* **'dig'**
B:39

Cognates:
Lat *ru$\underset{\wedge}{\underline{n}}$cō* ['weed out']
Skt *luñcati* 'rupfen'
Ir *rucht* < *ruk̑-to 'Schwein'
Alb *rrah* 'Rodeland, Aushölung'
Latv *rūkēt* 'wühlen, scharren' (Fr); Lith *raũkas* 'groove' (B)

Etymon: [a]LIV:307 «$h_3$rewk» = P:869-70

Rank: 1 *Form* () *Meaning* () *Alternatives* ()
(No chance of vocalization of *r̥ before /u/; not schwebeablaut since root is in zero-grade, as are most cognates.)

197 *ὄρχις* **'testicle'**
B:39

Cognates:
< *r̥ĝhī:
Av *ərəzi* 'Hoden'
Lith *eřžilas* 'Hengst'
< *orĝhi:
Arm *orj-ik'* 'Hoden'
Alb *herdhë* 'Hode'
MIr *uirgge* 'Hode' (Fr)
Hit ar-ki-i-e-eš 'testicules' (CEG.iix)

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Initial vowel is part of the root.)

198 *ὀστλίγξ* **'hair'**
B:51

Form: Also occurs as *ἀστλίγξ* (B).

Etymon: "Dunkel" (Fr).

Rank: 0 *Form* (X) *Meaning* (X) *Alternatives* ()
(No etymology.)

199 *'ὄτλος* **'suffering'**
B:55

Form: Also verb *ὀτλεύω*; and *τλῆναι* (2Aorist no corresponding present) 'take upon oneself, to bear, suffer, undergo, endure' (Fr, LS«*τλῆναι*»,«*ὄτλος*»).

Cognates:
Arm *t'ołowm* 'erlaube, lasse zu'
OIr *tlenaid* 'trägt weg, stiehlt'
TokB *tallaṃ* 'erhebt, erträgt'
Lat *tūlī* 'trug'
Go *þulan* 'ertragen, dulden' (LIV)

Remarks: Somewhat resembles a "*τόμος*" formation, which from √tel should regularly be ×*τόλος*, a nonexistent word.

Etymon: ᶜLIV:622 «$telh_2$» = P:1060-1

Rank: 3 *Form* (-2) *Meaning* () *Alternatives* ()
(Persuasive semantics but severe formal problems.)

200 *ὀφέλλω* $_1$ **'sweep'**
B:56

Cognates: Arm *awelum* 'fegen' (Fr«3.*ὀφέλλω*»).

Etymon: Not in LIV. *$h_3$bhel (B). Same as *ὀφέλλω* $_2$ (CEG.vii)

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(No reason to assume prothesis.)

201 *ὀφέλλω* $_2$ **'to increase'**
B:56

Cognates: Suggested:
Skt *phálam* 'frucht' [to be rejected; bad semantics, should have /bh/ not /ph/]
Arm *awel-i* 'mehr', *y-avelum* 'hinzufügen, vermehren', *aṙ-awel* 'mehr', *aṙ-awel-um* 'vermehren' (Fr«2.*ὀφέλλω*»).

Remarks: LIV has no entry for this headword (or its Armenian cognates); but it perhaps represents *√bhel > *ὀ+φελjω* on the basis of LIV:73 «bhelĝh» 'schwellen' = P:124 and less directly, LIV:88 «bhleyd» 'aufschwellen' = P:156.

Etymon: *√obhel > **ὀφελjω* (Fr loc cit). Same as *ὀφέλλω* $_1$ (CEG.vii)

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(No reason to assume prothesis.)

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202 *ὀφρῦς* **'eyebrow'**
B:56

Cognates:
Skt *bhrū́*; Av *brvaṯ-byąm*
OIr *for-bru*
OE *brū*; ON *brún*; OHG *brâwa*
OCS *brŭvĭ*
Lith *brùv-e*
TokB *pärwāne*
Macedonian (Hes) *ἀβροῦτες* (Fr)

Etymon: pIE *bhrū́ (Fr), *$h_3$bhru-H (B)

Rank: 1 *Form* () *Meaning* () *Alternatives* ()

ὀτρύνω

See #208.

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203 *ὤλκα* **'furrow'**
B:58

See *ἄλοξ* .

ὠρύομαι

See #209.

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204 Hes *ἀράζουσι·ἐρεθίζουσιν* **['rouse to anger, provoke' (LS)]**
P:329*f*«ered»

Cognates: Skt √r̥d (See Chapter 4, #43), present *r̥dáti* (P:329*f*)

Remarks: If this is prothesis at all, it is prothesis on *ra, representing either (1) schwebeablaut of *er, or, more regularly, (2) *r̥r. There is a small chance that this word could even show *ἀρα-* directly from *r̥r. Fr.i:128 considers this to be onomatopoeic; in any case, the semantics could be better.

Etymon: Perhaps *erd; See Chapter 4, #43.

Rank: 3 *Form* (-2) *Meaning* (-2) *Alternatives* (-1)

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205 Hes. *᾽ἄσπαλον · χκῆτος* **['animal hide']**
P:985«1.(s)p(h)el»

Cognates: Ved. *phalati* 'birst, springt entzei' (LIV:576*f*)

Remarks: For the semantics, cp. Hes. *χφαλάσσειν · τέμνειν*, and *χπολάς* 'abgezogenes Fell' (P:985).

Etymon: [c]LIV:576 «2.(s)pelH» 'abspalten, trennen' = P:985-6

Rank: 1 *Form* () *Meaning* () *Alternatives* ()

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206 *ἡΐθεος* **'Jungeselle'**
P:1127

Form: Originally *ἡϝίθεος* (P); Attic contracted form *᾽ἡιθεος* (LS)

Cognates:
Skt *vidhávā*
Lat *uidua*
OCS *vĭdova*
Go *widuwō*
OIr *fedb*
Old Prussian *widdewu*
Hittite *udati* all = 'Witwe' (LIV:294«$h_2$wyedh»; KEWA.iii:211«vidhávā»)

Remarks: The traditional view is that the word for "widow" is from pIE *widh-ewā, a derivative of a verb *weydh, 'separate', c.p. Lat. *dīvidere* (P:1127; Watkins:97«weidh»; Buck:131#2.76). But dissenting opinions have arisen over two issues.

LIV:294«$h_2$wyedh» gives the basic meaning not as 'separate' but 'verletzend, tödlich treffen'. Latin *dīvidere* is not cited here, but the "widow" words are given as cognate in Note 1 to LIV's entry.

LIV also departs from tradition in giving the form of the word as *$h_2$wyedh, following Skt. √vyadh (cp. Wh^R:166), instead of *weydh. KEWA.iii:211«vidhavā» does not take a position on this issue (but see the critical comments on the received tradition on this and putatively related forms at KEWA.iii:211,212, and 215). *Dīvīsī*, the perfect of *dīvidere*, may argue in favor of the traditional reconstruction: Sihler:584§527 says that the root vowel in this perfect is from a diphthong, so *dis-weyd- (prefix per Watkins *loc cit*). Further, LIV *loc cit* n.1 *end* cites a full grade √waydh in Iranian, but considers it secondary. Perhaps schwebeablaut?

It should also be noted that the match in meaning between the Greek headword and "widow" is hardly exact. LS:303 glosses *ἡΐθεος* as "a *youth* come to manhood, but not yet married ... rarely a fem. *ἡϊθέη*, a *young girl*".

Fr.i:626 suggests that the initial vowel may be a prefix; or else prothesis.

Etymon: [a]LIV:294 «$h_2$wyedh» 'verletzend, tödlich treffen' = P:1127-8

Rank: 3 *Form* (-2) *Meaning* () *Alternatives* (-1)
(Possibility of prefixation; mediocre semantics.)

207 *ἠρέμα* **'sanft'**
P:864«rem(ə)»

Form: Also: *ἄραμεν·μένειν* ['remain'] (Hes); *ἀράμεναι·ἡσυχάζειν* ['be quiet'](Hes)

Cognates:
< *HremH:
Skt. *rámate* 'ruhen'
Lith. *rìmti* 'ruhig sein'
Go. *rimis* 'Ruhe'
OI *fo·rimim* 'setzen, legen'
TokA *rämneñc* 'bergen sich'; TokB *rämnoyem* 'neigten sich'
< *HerH-m:
Avestan *airime, armaē-šad-*, Khwarizmian *arma* 'to leave alone'
Welsh *araf* 'quiet'
(B:193, 262; Fr.i:643; LIV:252)

Remarks: The cognates imply schwebeablaut variation with this root, but the Greek /*ἑ* /, not the initial /*ἠ* /, seems to be the root vowel. Fr *loc cit* suggests prefixation or prothesis to explain the initial.
Etymon: [a]LIV:252 «$h_1$rem» 'ruhig werden' = P:864

Rank: 2 *Form* () *Meaning* () *Alternatives* (-1)
(Possible prefixation.)

208 *ὀτρύνω* **'treibe'**
P:1100«1.twer»

Cognates:
Ved *tvárate* 'eilt'
OE *þweran* 'rühen' (LIV:655)

Remarks: The initial /*ὀ* / is a prefix (B:24, per Schwyzer:434; LIV:655n2.)

Etymon: [a]LIV:655 «twer» 'aufrühen, erregen, antreiben' = P:1100

Rank: 0 *Form* () *Meaning* () *Alternatives* (X)
(Prefix.)

209 *ὠρύομαι* **'heule'**
P:867«1.rew»

Cognates:
Skt *ruváti* 'heulen, brüllen'
OCS *rovǫ, ruti* 'heulen, brüllen'
Lat *rūgīre* 'brüllen'

Remarks: Cp. #144 *ἐρεύγομαι* Fr.i:1152 suggests that the initial vowel may represent prothesis, a prefix, a fused interjection, or reduplication with aphaeresis: ōru < *rō&ru < *ru&ru.

Etymon: [a]LIV:306 «$h_3$rewH» 'brüllen' = P:867

Rank: 2 *Form* () *Meaning* () *Alternatives* (-1)
(Possible prefixation.)

Chapter 5

Indo-European Etymologies of the Attested Sanskrit Perfects

This chapter presents a list of the Indo-European etymologies of all the Sanskrit verbs with attested perfect forms, as reported in Whitney 1885.

Each entry begins with a header, of which the first item is a reference number. This number is used when an entry is cited in another entry (in the format #nnn; but note that "Werba #nnn" refers to the item numbers in Werba 1997.) Next come the page in Whitney 1885, the root itself, Whitney's gloss, and finally, in parentheses, an indication of the breadth of attestation of the root. This is composed of two parts, separated by a colon. The first part shows the *earliest* attestation of the *perfect* of the root, as reported by Whitney. The symbols used are as follows (see W^Rpp. vii *f* for explanations of Whitney's sometimes counterintuitive sigla, which are *not* the same as those used here.): RV = Rig Veda; AV = Atharva Veda; V = other Vedic; B = Brāhmaṇa; A = Āraṇyaka; U = Upaniṣad; E = Epic; S = Sutra; C = Classical Sanskrit; G = grammarians' forms. "?" following one of these signs marks that occurrence as doubtful, and the next-oldest attestation, if there is one, is supplied. Whitney's notation "(...)" (W^R:ix), signifying "exceptional" forms, is simply ignored here. The second part indicates the *dialectical* attestation of the root; the symbols used are: A = attested in Greek; B = attested outside Indo-Iranian but not in Greek; C = attested only in Indo-Iranian; X = no data or otherwise not applicable (e.g no IE etymology; or sources list only as variant of another entry). Sometimes these dialectical-attestation codes will differ, depending on whether or not a root-extension is taken into account. In these cases, two symbols are assigned, separated by "/"; the first symbol refers to the attestation of the root as it appears in Sanskrit, the second to the root in any form at all. These indications of dialectical attestation are in general based on Pokorny (in order to avoid circularity in argumentation, as explained above), but sometimes on LIV; rarely, on another source such as KEWA, which will be listed in the Remarks.

So, for example, (AV:B/A) means that the perfect of the root in question is attested earliest in the Atharva Veda; and that the root *with whatever extension (or lack thereof) it may have in the given Sanskrit form* is found outside of Indo-Iranian but not in Greek; and that the root *in some other extension-form* is found in Greek.

The body of each entry contains four or five subsections. First is the etymology given in Werba 1997. Abbreviations used in this subsection are:

- "II", signifying forms given a proto-Indo-Iranian etymology, but without a pIE form. These are followed by the proto-Indo-Iranian form itself;
- "XRF" indicating cross-references to Werba's not-yet-issued Volume II, covering secondary roots;
- "ONO" marking onomatopoeia.

Next is the etymology from LIV, and following that, the etymology from Pokorny 1959. The symbol ⇒ preceding such an entry means that the headword under discussion is not attributed explicitly in the article so marked to the protoform which that article concerns. Pokorny often uses as headwords for his entries not a single form, but a list of variants. In these cases, I have ignored the more obvious or less illuminating derivative forms, (but due to their importance for the laryngeal theory, I have retained ablaut variants of the form TR$\bar{\text{V}}$ < *TRVH). and paraphrased the rest according to the notation set out above under *Preliminaries.* A "-" where a page reference to Pokorny would normally be, indicates that LIV reports explicitly the absence of an entry for a root in Pokorny.

Following the material from Pokorny comes a subsection headed "Disposition"; this reports the etymology of the root which is adopted here. In nearly all cases, this will follow Pokorny, to avoid circularity in argumentation as noted above.

A few conventions need to be mentioned. When no plausible etymology is adopted, "NE" for "No Etymology" is entered under "Disposition". A glance at the other entries should reveal why no etymology is adopted. "NE" is assigned for all cases in which a root is not attested outside Indo-Iranian (check the second item in the attestation code, as descibed above), even when LIV or another source supplies a pIE etymology inferred on the basis of such an isolated Indo-Iranian form. Very frequently, what Whitney enters as separate roots turn out to be variants of the same pIE root; in these cases, only one is assigned the pIE root, and the other gets a cross-reference of the form "=#nnn". Prefixed numbers are assmed to be those in Pokorny. Sometimes Pokorny does not furnish a numerical prefix to

distinguish homophonous roots, relying instead on citing the root in variant forms. In these cases I cite both roots in a simple normalized form, with a roman-numeral prefix (i.(s)ker). Roman-numeral prefixes are used in a few other cases where a root is accepted which is not in Pokorny, but is homophonous with one which is. Cross-references in the "=#nnn" format are often given, for convenience, with such things as root-extensions indicated, but there is no strict system enforced here. Similarly, there is no attempt to indicate, in the format of the cross references, whether the item referenced itself contains a root-extension.

A situation common in both the "Pokorny" and "Disposition" sections requires comment. Sometimes two pIE roots with meanings which are identical or nearly so, but differ only in the addition of a consonant "root extension" at the end. A parallel situation exists with root-pairs one of which has an infixed nasal, and with different ablaut grades which have been reinterpreted as different roots. In these cases, it is helpful to distinguish the "immediate" root from the "ultimate" root. I use the following notation for this: 3.ter 'reiben' *as* ter\p. Rarely, it is necessary to give more than one "*as* " clause, resulting in a chain of derivations.

Next comes a section labelled "Cognates". This documents the Greek - and selected other - cognates of the Sanskrit form under discussion.

The last of all the entries is headed "Remarks" and contains any remaining material. Etymologies which are suggestions of the author are reported in this section. Also included here are references to potentially related roots; some *but not all* of these possible relations are accepted and reflected in the etymology given in the "Disposition" section.

Transcriptions have, in general, been silently normalized to the standards set out in *Preliminaries* and Chapter 1 above. But Werba's "E", apparently signifying a vowel of undetermined quality, has been preserved (as has his phonetic spelling of [z] ← pIE */s/, and [a, o] ← pIE */e/). Similarly, Polorny's [z] has been retained, as have his ⟨þ, ð⟩. Note also that the "R" of LIV *et al* (occurring quite commonly in words where Indo-Iranian is ambiguous regarding *l and *r) always, or nearly so, corresponds to "L" of the present orthography. But it is important to remember that the function of the reconstructed forms accepted here is to serve as identification-tags for these forms *as morphemes*; so details of their phonetic form are not really significant for the purposes of this study.

Where Whitney gives more than one form of a root, I have often listed only one here. Usually the rejected variant is a full-grade form, or one with a present-stem formant that has come to be seen as part of the root.

In some cases, Whitney has split into two roots what another source considers a single

root; here I have entered "=√..." as a cross-reference in the entry for the source which consolidates the two items. In the converse situation, where a single root in Whitney is split by another source, each entry in that other source receives its own entry, with duplicate information in the entries from Whitney and any other source that consolidates the roots.

1 W^R:1 √akṣ 'attain' (RV:X)

Werba: **LIV:**

Pokorny: **Disposition:** =#12

Remarks: Secondary form of #12 (W^R; KEWA.i:16, also 60); cp. also # 249. /s/ is desiderative (LIV:284 n16).

2 W^R:1 √aṅg 'move' (G:X)

Werba: **LIV:**

Pokorny: **Disposition:** NE

Cognates: Suggested (but speculative) connections to ἄγγελος ['messenger'] or ἄγγος 'Eimer' (KEWA.i:20).

3 W^R:1 √a(ñ)c 'bend' (B:A)

Werba: $h_2$ank (#2) **LIV:** $h_2$enk (pg. 268)

Pokorny: 2.ank, ang (pg. 45-6) **Disposition:** 2.ank

Cognates: ἀγκών 'Bug, Ellenbogen' (P:45)

4 W^R:2 √aj 'drive' (RV?;G:A)

Werba: h_2aĝ (#378) **LIV:** h_2eĝ (pg. 255)

Pokorny: 2.aĝ (pg. 4-5) **Disposition:** 2.aĝ

Cognates: ἄγω (P:4)

5 W^R:2 √aṭ 'wander' (G:B)

Werba: $h_2$at (#380) **LIV:** 1.$h_2$et (pg. 273)

Pokorny: at (pg. 69) **Disposition:** at

Remarks: Later form of √at, to which the citations from Werba and LIV apply (W^R).

---

6 W^R:3 √ad 'eat' (G:A)

Werba: $h_1$ed (#4) **LIV:** $h_1$ed (pg. 230)

Pokorny: ed (pg. 287-9) **Disposition:** ed

Cognates: ἐσθίω (P:287)

---

7 W^R:3 √an 'breathe' (RV:A)

Werba: $h_2$anh_1 (#256) **LIV:** $h_2$enh_1 (pg. 267)

Pokorny: an(ə) (pg. 38-9) **Disposition:** an(ə)

Cognates: ἄνεμος (P:38)

---

8 W^R:3 √am 'injure' (RV:A)

Werba: $h_3$omh_3 (#257) **LIV:** $h_2$emh_3 (pg. 265)

Pokorny: omə (pg. 778) **Disposition:** omə

Cognates: KEWA gives the meaning of the Skt. as 'dringt an, bedrängt', *also* 'versichert eindringlich', *whence* 'schwört'. This latter is generally but with some controversy taken to match ὄμνῡμι 'schwöre'; the rest correspond to Hom. ὀμοίιοχ 'plangend, leidvoll', ON *ama* 'plagen, belästigen' (KEWA.i:44; P:778; Fr.ii:388)

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9 W^R:4 √r̥c 'shine,praise' (RV:B)

Werba: $h_1$erḰ (#21) **LIV:** $h_1$erḱ (pg. 240)

Pokorny: erḱ(pg. 340) **Disposition:** erḱ

Remarks: Related to #402? (Author). If so, the formation is old: Hittite has *arkuwanun* 'ich betete' (KEWA.i:50).

10 W^R:4 √arh 'deserve' (RV:A)

Werba: $h_2$alǵh (#381) **LIV:** $h_2$elǵh (pg. 263)

Pokorny: alǵh (pg. 32-3) **Disposition:** alǵh

Cognates: ἀλφή 'Erwerb', ἀλφάνω, ἀλφεῖν 'einbringen, verdienen' (P:33; Fr.i:81)

Remarks: Unaspirated variant *arjati* in Sanskrit (P).

11 W^R:4 √av 'favor' (RV:A)

Werba: $h_2$awh_1 (#258) **LIV:** $h_1$ewH (pg. 243)

Pokorny: 7.aw(e) (pg. 77-8) **Disposition:** 7.aw(e)

Cognates: ἀΐτᾱς (Theocritus) 'Freund' (P:77); ἐνηής < *en-āwes (KEWA.i:58)

12 W^R:4 √1.a(ṁ)ś 'attain' (AV:A)

Werba: **LIV:** $h_1$neḱ (pg. 250); $h_2$neḱ (pg. 282)

Pokorny: (e)n(e)ḱ(pg. 316-8) **Disposition:** i.neḱ *as* S√enḱ

Cognates: ἐν&εγκ-εῖν (second aorist of φέρω) 'wurde getragen' (P:317; Fr.i:513)

Remarks: Cp. ##1, 249.

13 W^R:5 √2.aś 'eat' (RV:A)

Werba: II HaćH (#259) **LIV:** h_2eḱh_3 (pg. 261)

Pokorny: 1.aḱ(ō) (pg. 18) **Disposition:** 1.aḱ(ō)

Cognates: ἄκυλος 'Eichel'; ἄκολος 'Bissen' (P:18; "hypothetisch", Fr.i:55,61)

14 W^R:5 √1.as 'be' (RV:A)

Werba: $h_1$es (#8) **LIV:** 1.$h_1$es (pg. 241)

Pokorny: es (pg. 340-1) **Disposition:** i.es

Cognates: *εἰμί* ['am'] (P:340)

---

15 W^R:5 √2.as 'throw' (RV:B)

Werba: HEs (#382) **LIV:** 2.$h_1$es (pg. 242)

Pokorny: - **Disposition:** ii.es

---

16 W^R:6 √ah 'say' (RV:C)

Werba: II Hadh (#539) **LIV:** Hedh (pg. 222)

Pokorny: adh (pg. 291) **Disposition:** adh

Cognates: KEWA.i:84 cites Lat. *ajō* ['I say'], but LIV:256 «h_2eĝ» lists these under different roots. LIV seems right; intervocalic *ĝ-y yields Latin /j/ (Sihler:189§194). So no good cognates.

---

17 W^R:6 √āp 'obtain' (RV:B)

Werba: $h_1$ep (#5) **LIV:** $h_1$ep (pg. 237)

Pokorny: 1.ap,əp,ēp (pg. 50-1) **Disposition:** 1.ap

Cognates: *ἅπτω* (P:50*f*), which "unerklärt" (Fr.i:126*f*), and not listed as cognate by LIV:37«$h_1$ep»). No Gk. cognates at KEWA.i:76, but Hit. *ep-mi* 'nehme', &c.

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18 W^R:6 √ās 'sit' (B:A)

Werba: h_1eh_1s (#612) **LIV:** h_1eh_1s (pg. 232)

Pokorny: ĕs (pg. 342-3) **Disposition:** ēs

Cognates: *ἧσται* 'sitzt' (P:342)

19 W^R:7 $\sqrt{\breve{\mathrm{i}}}$ 'go' (RV:A)

Werba: $h_1$ey (#9) **LIV:** $h_1$ey (pg. 232)

Pokorny: ey (pg. 293-6) **Disposition:** ey

Cognates: *ἔιμι* (P:294)

20 W^R:8 $\sqrt{\mathrm{i(n)dh}}$ 'kindle' (RV:A)

Werba: $h_2$aydh (#11) **LIV:** $h_2$eydh (pg. 259)

Pokorny: 4.$\breve{\breve{\mathrm{a}}}$y 'brennen, leuchten' *as* ay$\frac{\mathrm{n}}{\wedge}$\dh (pg. 11-2) **Disposition:** 4.ay *as* ay$\frac{\mathrm{n}}{\wedge}$\dh

Cognates: *ἀίθω* (P:11)

Remarks: *ăye*$\frac{r}{n}$ 'Tag, Morgen' probably related (P:12).

21 W^R:9 $\sqrt{\mathrm{il}}$ 'be quiet' (G:B)

Werba: **LIV:**

Pokorny: el (pg. 304) **Disposition:** eyl

Cognates: No Greek cognates, but perhaps Lith. *ilsti* 'müde werden' (KEWA.i:92).

Remarks: Pokorny's pIE *el will not yield Skt. *il*. The pIE form reconstructed above is the author's conjecture.

22 W^R:9 $\sqrt{1.\mathrm{iṣ}}$ 'seek,desire' (B:B)

Werba: $h_2$ays (#12) **LIV:** $h_2$eys (pg. 260)

Pokorny: 1.ays (pg. 16) **Disposition:** 1.ays

23 W^R:9 $\sqrt{1.\mathrm{iṣ}}$ 'send' (RV:X)

Werba: $h_1$eys(h_2) (#383) **LIV:** $h_1$eysh_2 (pg. 234)

Pokorny: 1.eys (pg. 299-301) **Disposition:** =#28

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24 W^R:9 $\sqrt{}$īkṣ 'see' (B:A)

Werba: $h_3$okʷ (#1) **LIV:** $h_3$ekʷ (pg. 297)

Pokorny: okʷ(pg. 775-7) **Disposition:** okʷ

Cognates: ὄσσε 'augen', ὄσσομαι 'sehe' (P:776)

Remarks: The Sanskrit root has become fused with the desiderative suffix /s/ (We; LIV).

---

25 W^R:10 $\sqrt{}$īḍ 'praise' (RV:A)

Werba: $h_2$ayzd (#615) **LIV:** $h_2$eysd (pg. 260)

Pokorny: 2.ais 'einfürchtig sein, verehren' *as* ais\d (pg. 16) **Disposition:** 2.ais *as* ais\d

Cognates: ἀΐδομαι < *αισδ-, αἰδέχομαι (P:16); which considered possible by Fr.i:35

Remarks: īḍ < *izd (Fr.i:35)

---

26 W^R:10 $\sqrt{}$īr 'set in motion' (RV:X)

Werba: **LIV:**

Pokorny: **Disposition:** =#41

Remarks: Variant of #41 (W^R, LIV).

---

27 W^R:11 $\sqrt{}$īś 'be master' (RV?:B)

Werba: $h_2$ayk̂ (#541) **LIV:** Heyk̂ (pg. 223)

Pokorny: ēyk (pg. 298-9) **Disposition:** eyk

Remarks: Skt. represents RZ$\sqrt{}$i&ik̂.

28 W^R:11 √īṣ 'move' (RV:A)

Werba: **LIV:**

Pokorny: 1.eys (pg. 299) **Disposition:** #19\s

Cognates: *ἱερός*, *ἱνάω* / *ἱνέω* 'leere aus', *οἴομαι* (P:299; Fr.i:713)

Remarks: Cp. #23. An extended form of #19 √ey? (Author)

29 W^R:11 √īh 'be eager' (G:A)

Werba: II Hayǰh; XRF (#13) **LIV:**

Pokorny: ā(y)ĝh, īh (pg. 14) **Disposition:** ayĝh

Cognates: *ἄχῆν* 'dürftig', *ἰχανάω* 'begehre'; note similar alternation of initials in Avestan *izyeiti* 'streben', *āzi* (P:14 *f*; Fr.i:200)

Remarks: Skt. represents RZ√i&iĝh.

30 W^R:11 √u 'proclaim' (G:X)

Werba: **LIV:**

Pokorny: **Disposition:** NE

Cognates: KEWA.i:104 suggests Lat. *avēre* ['long for' (Smith)], on which see LIV:274 «$h_2$ew». No convinging etymology.

31 W^R:11 √1.ukṣ 'sprinkle' (G:B/A)

Werba: II Hugžh (#616) **LIV:** weǵ (pg. 662)

Pokorny: weǵ\s = [weḱs] (pg. 1118) **Disposition:** weǵ *as* weǵ\s

Cognates: *ὑγρός* 'feucht, flussig' (P:1118; KEWA.i:98) shows a form without the extension.

32 W^R:12 $\sqrt{}$2.ukṣ 'grow' (RV:A)

Werba: **LIV:** $h_2$weks (pg. 288)

Pokorny: (a)weg 'vermehren, zunehmen' *as* weg\s = [weks] (pg. 84-5) **Disposition:** (a)weg *as* weg\s

Cognates: ἀ(ϝ)έξω, αὔξω ['increase'] (P:85; Fr.i:188)

Remarks: N.b. Pokorny's "movable" initial *a*.

33 W^R:12 $\sqrt{}$ujh 'forsake' (C:A)

Werba: **LIV:** ⇒$gheh_1$(pg. 196)

Pokorny: **Disposition:** NE

Cognates: A collapsed form of *ut·jahāti* (KEWA.i:100), which KEWA.i:426 links with κιχήμεναι 'einholen'; so Fr.i:861 (the root being $\sqrt{}$χη).

Remarks: Secondary (W^R).

34 W^R:12 $\sqrt{}$uñch 'gleam' (G:C)

Werba: **LIV:**

Pokorny: **Disposition:** NE

Cognates: No persuasive cognates listed outside Indoiranian (KEWA.i:100).

Remarks: Might this be #441 *as* uccháti, *and* with nasal infix? (Author)

q

35 W^R:12 $\sqrt{}$u(n)d 'wet' (AV:A)

Werba: S$\sqrt{}^e/_o$wd (#16) **LIV:** wed (pg. 658)

Pokorny: 9.aw(e)\d (pg. 78) **Disposition:** 9.aw\d

Cognates: ὕδωρ (Gen. ὕδατος) ['water'] (KEWA.i:104); the /n/ in the verb is apparently

a present formant.

Remarks: See #466 for a discussion of the form of the root.

---

36 W^R:12 √ubj 'force' (G:B)

Werba: **LIV:**

Pokorny: ub (pg. 1103) **Disposition:** ub

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37 W^R:13 √u(m)bh 'confine' (G:A)

Werba: **LIV:** webh (pg. 658)

Pokorny: 5.awē (pg. 75) *as* webh (pg. 1114) **Disposition:** #446 *as* webh

Cognates: ὑφή 'Weben' (P:1114)

---

38 W^R:13 √uṣ 'burn' (B:A)

Werba: $h_1$ews (#385) **LIV:** $h_1$ews (pg. 245)

Pokorny: ews (pg. 347-8) **Disposition:** ews

Cognates: ἑέυω 'senge' (P:348; Fr.i:597)

Remarks: W^Rconsiders this the same root as #441, q.v.

---

39 W^R:13 √1.ūh 'remove' (G:X)

Werba: **LIV:** weĝh (pg. 661)

Pokorny: weĝh (pg. 1118-20) **Disposition:** =#444

Remarks: Evidently same root as #444 (W^R). Skt. represents RZ√u&uĝh.

q

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40 W^R:13 √2.ūh 'consider' (RV:A)

Werba: $h_1$ewgh (#17) **LIV:** weHgh (pg. 663); ⇒$h_1$weǵh (pg. 253)

Pokorny: **Disposition:** ewgh

Cognates: *εὔχομαι* ['pray ... beseech' (LS)] (KEWA.i:133; Fr.i:596*f*); but LIV separates the group into two roots.

Remarks: The velar could be either /gh/, or /ǵh/ with delabialization next to /w/ (Fr).

---

41 W^R:14 $\sqrt{\underset{\circ}{r}}$ 'go, send' (RV:A)

Werba: $h_3$or (#18) **LIV:** $h_1$er (pg. 238)

Pokorny: 3.$^e/_o$r 'sich in Bewegung setzen ...' (pg. 326-9) **Disposition:** 3.er

Cognates: *ὄρνῡμι* (P:331, 327; Fr.ii:423)

---

42 W^R:14 $\sqrt{1.\underset{\circ}{r}(\tilde{n})j}$ 'attain, direct, stretch' (AV?;G:A)

Werba: $h_3$reĝh (#496) **LIV:** $h_3$reĝ (pg. 304)

Pokorny: 1.reĝ(pg. 854-7) **Disposition:** 1.reĝ

Cognates: *ὀρέγω* 'recke' (P:855)

---

43 W^R:15 $\sqrt{\underset{\circ}{r}d}$ 'stir, dissolve' (G:A)

Werba: **LIV:** Herd (pg. 223)

Pokorny: 3.$^e/_o$r *as* ered (pg. 329*f*, 334) **Disposition:** #41\d

Cognates: *ἀράζουσι·ἐρεθίζουσιν* ['rouse to anger, provoke' (LS)] (P:329*f*), but Fr.i:128 considers this onomatopoeic; *ἄρδα* 'Schmutz' (KEWA.i:51)

Remarks: Cp. #41. Pokorny gives no evidence for a vowel between the /r/ and /d/, except for some river-names such as *Rhodanos* - which could as easily be schewebeablaut - and the dubious *ἀράζουσι* .

---

44 W^R:15 $\sqrt{\underset{\circ}{r}dh}$ 'thrive' (RV:A)

Werba: $h_2$reh$_1$dh (#497) **LIV:** $h_2$eldh (pg. 262)

Pokorny: 2.al\dh (pg. 27) **Disposition:** 2.al\dh

Cognates: *ἀλθαίνω* 'heile'(P:27; KEWA.i:124)

---

45 W^R:16 √r̥ṣ 'rush,push' (A:B)

Werba: **LIV:** Hers (pg. 224)

Pokorny: 1.eres (pg. 335) **Disposition:** 1.eres

Remarks: Also 'flows'; cp #466.

---

46 W^R:16 √ī̆j 'stir' (G:A)

Werba: $h_2$ayg (#10) **LIV:** Heyg (pg. 222)

Pokorny: 3.ayg (pg. 13-4) **Disposition:** 3.ayg

Cognates: *ἀΐγεσ·τὰ κύματα* (Hes), *καταιγίς* '...Windstoß' (P:13*f*); considered possible by Fr.i:32

Remarks: Skt. represents RZ√i&ig.

---

47 W^R:16 √edh 'thrive' (C:B)

Werba: **LIV:**

Pokorny: **Disposition:** edh?

Cognates: Arm. *azdu* 'kräftig, heftig' (KEWA.i:128)

---

48 W^R:16 √katth 'boast' (G:A)

Werba: **LIV:**

Pokorny: **Disposition:** k̑o-

Cognates: A "depronominal" version of *kathā́* 'why' (KEWA.i:148*f*), so cognate with Homeric *τέο* 'wessen' (KEWA.i:192). Protoform from Watkins:46.

49 W^R:17 √kan 'be pleased, enjoy' (RV:C)

Werba: kenH (#260) **LIV:** ḱenH (pg. 352)

Pokorny: kā (pg. 515) **Disposition:** =#50\n

Remarks: Whitney consolidates with #50; same as #51? (W^R). Pokorny derives /kan/ < */kØ-en/.

50 W^R:17 √kā 'be pleased, enjoy' (RV:A)

Werba: kah_2 (#261) **LIV:** 1.keh_2 (pg. 343)

Pokorny: kā (pg. 515) **Disposition:** kā

Cognates: κῶμος 'Fest...' (LIV)

Remarks: Whitney consolidates with #49; same as #51? (W^R). LIV (n.1) considers secondary to #51.

51 W^R:17 √kam 'love' (RV:B)

Werba: **LIV:** 1.keh_2 (pg. 343)

Pokorny: kā (pg. 515) **Disposition:** =#50\ə

Remarks: Same as ##49, 50? (W^R). Cp. also √cam 'be pleased' W^R:44. Pokorny derives from reanalysis "schon Indogermanisch" of kā-mo-; cp. LIV:343 «1.keh_2». Better: *kaə (#50) : *ka\m (#51) :: *ǵe\h_2 ('treten' LIV:205) : *ǵe\m ('... gehen, kommen' LIV:209).

52 W^R:17 √kamp 'tremble' (E:A)

Werba: II kamp (#619) **LIV:** ḱemp (pg. 351)

Pokorny: kam 'biegen' *as* kam\p 'biegen' (pg. 525) **Disposition:** kam *as* kam\p

Cognates: κάμπτω 'krümme, biege' (P:525)

Remarks: Pokorny has no entry for *√kam, listing instead its extended forms. Nb. for

*√kam: *σκαμβός* ; and nasalless Skt *cāpa* 'Bogen', *capalá* 'unstet, schwankend'; Latv. *kaparuôtiês* 'zappeln' (P).

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53 W^R:18 √kaṣ 'scratch' (G:B)

Werba: **LIV:**

Pokorny: kars (pg. 532) **Disposition:** kars

Remarks: Pokorny says this root is a Middle Indic form, from an Old Indic *kr̥sati.

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54 W^R:18 √kas 'open' (C:C)

Werba: II kas (#388) **LIV:**

Pokorny: **Disposition:** NE

Cognates: No persuasive etymology (KEWA.i:191).

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55 W^R:18 √kāṅkṣ 'desire' (E:A)

Werba: **LIV:**

Pokorny: 2.kenk (pg. 565) **Disposition:** 2.kenk

Cognates: Hom. *πολυκαγκής* 'sehr brennend'; *κάγκανος* 'dürr' (P:565; but 'unsicher', Fr.i:751)

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56 W^R:18 √kāś 'appear' (E:A)

Werba: k̑ek̂ (#387) **LIV:** k̑ek̂(pg. 383).

Pokorny: k̂w$^e/_o$k (pg. 638) **Disposition:** k̑ek̂

Cognates: *τέκμαρ* (P:638; KEWA.i:204; LIV:384n1.)

Remarks: See also #98. Werba's protoform chosen in preference to Pokorny's; *k̂w- would yield Skt. *śv-*, and see #98 for the final consonant.

57 W^R:19 √kās 'cough' (G:B)

Werba: k̑ah$_2$s (#620) **LIV:** k̑eh$_2$s (pg. 377)

Pokorny: k̑ās, k̑əs (pg. 649) **Disposition:** k̑ās

Remarks: Only in medical works (W^R).

58 W^R:19 √ku(ñ)c 'shrink,curl' (C:B/A)

Werba: **LIV:** K̑ewk (pg. 359)

Pokorny: 2.kew(ə) 'biegen' *as* kew\k (pg. 589) **Disposition:** 2.kew *as* kew\k

Cognates: *κῡφός* 'gebuckt, gekrümmt' (P:590) shows the root with the extension -/bh/ instead of -/k/; for this Greek word Fr.ii:52 lists as possible Sanskrit cognates *kubhrá* 'höckeriger Stier'. KEWA.i:219, 220 lists no Greek cognates, but MHG *hocker* 'Buckel, Hócker'.

59 W^R:20 √kup 'be angry' (U:B/A)

Werba: kewp (#390) **LIV:** kewp (pg. 359)

Pokorny: kewəp (pg. 596) **Disposition:** kewp

Cognates: *καπνός* 'Rauch' (P:569) < the schewbeablaut form *qwep (Fr.i:782)

60 W^R:20 √kuṣ 'tear' (G:C/A)

Werba: k$^a/_o$w\s (#391) **LIV:** 2.keh$_2$w (pg. 345)

Pokorny: kāw, kəw (pg. 535) **Disposition:** keəw\s

Remarks: No good cognates with the /s/-extension (KEWA.i:245; on TokA *koṣt* 'schlagen', apparently a sigmatic aorist, see LIV); but LIV *loc cit* esp. n.6 cites *κείων* 'spaltend', which *may* reflect the /s/, since this would be lost intervocallically in Greek.

Cp. #541.

61 W^R:20 √kūj 'hum' (C:B/A)

Werba: **LIV:**

Pokorny: ⸢k⸢ă̆,ĕ̆⸣w,kū⸣\g (pg. 536) **Disposition:** kew(ə) *as* kewə\g

Cognates: *κωκύω* 'schreie' < *kū (P:535; KEWA.i:220«kuñjati»+250«kū́jati»+274«káuti»), also *καύαξ* 'Möwenart' (Fr.i:801*f*), shows the root in an unextended form.

62 W^R:21 √kūrd 'leap,exhalt' (C:A)

Werba: **LIV:**

Pokorny: (s)ker(ə), skrē *as* sk⸢re,er⸣\d (pg. 934) **Disposition:** i.(s)ker(ə) *as* (s)kerə\d

Cognates: *κραδάω* 'schwinge, schwanke' (P:934; KEWA.i:254)

Remarks: Apparent variants: √gard W^R:35; √gūrd, √gūrdh W^R:38.

63 W^R:21 √1.(s)kr̥̄ 'make' (RV:B)

Werba: k̑er (#226) **LIV:** k̑er (pg. 391)

Pokorny: 1.k̑er (pg. 641) **Disposition:** 1.k̑er

Remarks: Marked "II" by Werba; pIE per cross-reference to √kr̥, We#28.

64 W^R:22 √2.kr̥,kir 'scatter' (E:A)

Werba: II kaLH (#263) **LIV:**

Pokorny: 2.(s)ker(ə), skrē (pg. 933) **Disposition:** 2.(s)kerə

Cognates: *χκαίρω* 'spring, hüppe, tanze' (P:934; KEWA.i:311)

Remarks: 2.(s)ker "nicht zu trennen von [3.](s)ker 'drehen'" (P:933).

65 W^R:22 $\sqrt{1.k\underset{\circ}{r}t}$ 'cut' (RV:B/A)

Werba: kert (#29) **LIV:** k̑er (pg. 391)

Pokorny: 4.(s)ker(ə), (s)kē (pg. 938-47) *as* ker\t (pg. 941) **Disposition:** #500 *as* ker\t

Cognates: Greek shows only a form without the /t/-extension, *κείρω* 'cut' (P:938, 941)

Remarks: Note that LIV compresses the words for 'cut' and 'make' (#62 *supra*) into a single root (but references only Pokorny's 'do'). Cp. #500.

66 W^R:23 $\sqrt{k\underset{\circ}{r}p}$ 'lament' (RV:B/A)

Werba: krap (#526) **LIV:** K̑̊LepH (pg. 370)

Pokorny: 1.(s)k$^e/_o$r 'Schallwort ... heisere, rauhe Töne' *as* k$^e/_o$r\p (pg. 569) **Disposition:** ii.(s)ker *as* ker\p

Cognates: *γκάζω* 'krächen, schreien' shows $\sqrt{1.\text{ker}}$ with extension /g/ (P:569), but (s)ker\p does not seem to have a reflex in Greek.

67 W^R:23 $\sqrt{k\underset{\circ}{r}\acute{s}}$ 'be lean' (AV:B)

Werba: kark̂ (#392) **LIV:** K̑̊werk̂ (pg. 355)

Pokorny: k$^e/_o$rk̂(pg. 581) **Disposition:** kerk̂

Remarks: Pokorny suggests /a∼∅/ vocalism.

68 W^R:23 $\sqrt{k\underset{\circ}{r}\underset{.}{s}}$ 'drag, plough' (B:C/A)

Werba: k̑el\s (#31) **LIV:** k̑els (pg. 388)

Pokorny: 1.k̑el(ə) 'drehen' *as* k̑el\s (pg. 639) **Disposition:** #133\s

69 W^R:24 $\sqrt{\text{kl̥p}}$ 'be adapted' (RV:B)

Werba: **LIV:**

Pokorny: 1.(s)kel 'schneiden' *as* skel(e)\p (p. 926) **Disposition:** 1.(s)kelp

Cognates: Pokorny lists *σκάλοψ* 'Maulwurf', *σκόλοψ* 'Spitzfahl' (P:926). KEWA.i:183 lists no Greek cognates, but Latin *scalpere* 'ritzen', Gothic *halbs* 'geteilt', < pIE *(s)qelp 'schneiden'. Fr.ii:734 likewise does not list a Skt cognate for *σκόλοψ* .

Remarks: Further connections: LIV:552 2.(s)kel 'spalten'; LIV:553 skelH 'aufschlitzen, spalten'. A member of an extensive series of possibly related roots for 'cut' having the general form *k(e)s / s(e)k ± (e)R*: ##81, 146, 489 < *k̂es; 65 < *(s)ker; 69 (the present root) < *(s)kel (connected by Pokorny:545 and *loc cit* with his roots 3.kel(ə), klā 'schlagen, stechen'); 541 < *skew.

70 W^R:24 $\sqrt{\text{kLand}}$ 'cry out' (RV:C/A)

Werba: kleN\d (#393) **LIV:** K̊Lend (pg. 369)

Pokorny: 6.kel 'rufen, schreien' *as* kle\m-d (pg. 548-9) **Disposition:** 6.kel *as* kle\m-d

Cognates: *καλέω* 'call' shows the root but without the /n/ and the /d/-extension (P:548); but Fr.i:763 does not connect *καλέω* with this Skt. root. KEWAi:281, 276 gives no Gk cognates, but Lat. clāmāre.

Remarks: pIE variants: k(ə)lē, k(ə)lā (P). /d/ apparently represents a present formant.

71 W^R:25 $\sqrt{\text{kram}}$ 'stride' (RV:C)

Werba: II kramH ; XRF (#266) **LIV:** K̊LemH (pg. 368)

Pokorny: - **Disposition:** K̊Lem

Remarks: Only Indoiranian (LIV; KEWA.i:278).

72 W^R:25 $\sqrt{}$krī 'buy' (S:A)

Werba: k̑reyh$_2$ (#267) **LIV:** k̑reyh$_2$ (pg. 395)

Pokorny: k̑rey (pg. 648) **Disposition:** k̑rey

Cognates: *πρίαμαι* ['buy'] (P:648)

73 W^R:25 $\sqrt{}$krīḍ 'play' (B:B)

Werba: krizd (#622) **LIV:**

Pokorny: **Disposition:** kreysd

Cognates: Unclear; possible ON cognate *hrista* 'schütteln' (KEWA.i:279). **Remarks:**

74 W^R:26 $\sqrt{}$krudh 'be angry' (B:B)

Werba: kLaudh (#33) **LIV:**

Pokorny: **Disposition:** kLawdh

Remarks: Perhaps ("ganz unsicher") cognate with OE *hrēod* 'Rohr', Hit. *karpi* 'Zorn' (KEWA.i:280)

75 W^R:26 $\sqrt{}$kruś 'cry out' (E:A)

Werba: krEwk (#34) **LIV:**

Pokorny: **Disposition:** krewk

Cognates: *κραυγή* 'Geschrei' (KEWA.i:281).

Remarks: Marked "II" by Werba; pIE per his cross-reference to $\sqrt{}$kruc, We#32.

76 W^R:26 $\sqrt{}$klam 'be weary' (C:A)

Werba: **LIV:**

Pokorny: klĕm (pg. 602) **Disposition:** K̂lem(ə)

Cognates: Hes. *κλαμαράν·πλαδαράν*, *ἀσθενῆ* 'weak, slack' (P:603; Fr.i:865; Burrow:76)

Remarks: Cp. #119. KEWA.i:281*f* and EWA.i:417 propose a development from *krā ́ti* 'stride', #71. A suggested relationship with √śram #506 q.v. is controversial, but accepted here, against LIV and KEWA/EWA. The chief argument against a relationship is that the earlier occurrences of √klam (which in any case is not found before the Classical period) show a short vowel; *klā́myati* predominates later. Under the hypothesis that the roots are unrelated, the long vowel of the later form is explained by assuming analogical influence from *śrā́myati*←√śram (KEWA/EWA *locc. cit.*, also KEWA.iii:390*f*). KEWA and EWA also object to the assumption of interchange between /ś/ and /k/, but for an opposite opinion see Burrow:76, where exactly these roots (among others) are used to illustrate the existence of such doublets. I find the existence of some sort of secondary variation in vowel length (cp. Vedic *śrā́myati*, Epic *śra̱mati*, together with tectal doublets, less surprising than the existence of two synonymous words with nearly identical phonological form. I further assume that the forms split some time *after* pIE.

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77 W^R:27 √klid 'be wet' (G:C/B)

Werba: II kLayd (#35) **LIV:**

Pokorny: **Disposition:** (s)kLeyd

Cognates: Lith. *sklindaũ* 'zerfließe, werde flüssig' (KEWA.i:282).

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78 W^R:27 √kliś 'distress' (C:B)

Werba: II kLayć (#394) **LIV:** K̊leyk̂ (pg. 363)

Pokorny: kleyk̂(pg. 602) **Disposition:** kleyk̂

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79 W^R:27 √kvaṇ 'sound' (G:X)

Werba: **LIV:**

Pokorny: **Disposition:** NE

Cognates: Onomatopoeic, no cognates (KEWA.i:283).

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80 W^R:27 √kvath 'boil' (G:B)

Werba: **LIV:**

Pokorny: kwat(h) (pg. 627-8) **Disposition:** kwat

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81 W^R:27 √kṣad 'divide' (RV:C/A)

Werba: k̂s-ed (#545) **LIV:** k̂sed (pg. 338)

Pokorny: - **Disposition:** k̂s\ed

Cognates: *χκεδάννυμι* 'zersplittere' proposed (KEWA.i:285; Fr.ii:721); but this derived from *(s)kedh$_2$ by LIV:550. A related formation, at any rate.

Remarks: An extension of #489 (LIV *loc cit* n.1).

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82 W^R:28 √kṣan 'wound' (G:A)

Werba: tken (#395) **LIV:** tK̂en (pg. 645)

Pokorny: - **Disposition:** k̂þen

Cognates: *κτείνω* 'töte' (KEWA.i:284)

Remarks: The cited form is adjusted to Pokorny's way of handling "thorn-clusters".

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83 W^R:28 √kṣam 'endure' (RV:C)

Werba: II kšamH ;XRF (#272) **LIV:**

Pokorny: **Disposition:** Ksem

Cognates: Nothing outside of Indoiranian (KEWA.i:286).

84 W^R:28 √kṣar 'flow' (C:A)

Werba: dhǵher (#296) **LIV:** ǵĝher (pg. 213)

Pokorny: ǵhðer (pg. 487-8) **Disposition:** ǵhðer

Cognates: *φθείρω* 'richte zugrunde' (P:487; Fr.ii:1014)

85 W^R:29 √1.kṣi 'posess' (G:A)

Werba: tk̂ey (#36) **LIV:** tk̂ey (pg. 643)

Pokorny: k̂þey; kþ$^{\bar{e}}/_{\partial}$(y) (pg. 626) **Disposition:** k̂þey

Cognates: *κτάομαι* ['get'] (P:626; KEWA.i:287; but relationship "etwa erschüttert" Fr.ii:31).

86 W^R:29 √2.kṣ̆i̯ 'destroy' (G:A)

Werba: dhǵhey (#397) **LIV:** dhǵhey (pg. 150)

Pokorny: ǵhðey(ə) (pg. 487) **Disposition:** ǵhðey(ə)

Cognates: *φθίνω* ['pass away'] (P:487)

87 W^R:29 √kṣip 'throw' (E:B)

Werba: II kšwayp ;XRF (#37) **LIV:** k̑sweybh (pg. 373)

Pokorny: ksey$\frac{p}{b}$ (pg. 625, 1041) **Disposition:** kseyb

Remarks: Cp. *√sweyb 'swingend, werfen ...' (P:1041); √swé(y) 'biegen, drehen, schwingen' (P:1041), 3.√sew(ə) 'biegen' (pg. 914), swe(n)$\frac{g}{k}$ 'biegen' (pg. 1047).

88 W^R:30 √kṣu 'sneeze' (B:B)

Werba: **LIV:**

Pokorny: 3.skĕw, ksĕw (pg. 953) **Disposition:** 3.ksew

Remarks: "Schallwort" (P).

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89 W^R:30 √kṣud 'crush' (E:B)

Werba: II kšawd (#39) **LIV:** K̊sewd (pg. 372)

Pokorny: ksewd (pg. 625) **Disposition:** i.K̊sewd

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90 W^R:30 √kṣudh 'be hungry' (G:B)

Werba: II ćšawdh (#398) **LIV: K̊sewd (pg. 372)**

Pokorny: (pg. 625) **Disposition:** ii.K̊sewd

Cognates: Perhaps OCS *chudŭ* 'arm' [= poor] (KEWA.i:291).

Remarks: Relationship with #89 suggested (P:625).

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91 W^R:30 √kṣubh 'quake' (AV:B)

Werba: ksewb (#399) **LIV:** K̊sewbh (pg. 372)

Pokorny: ksewbh (pg. 625) **Disposition:** ksewbh

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92 W^R:31 √kṣnu 'whet' (G:C/A)

Werba: **LIV:**

Pokorny: kes 'kratzen' *as* ks-n-ew (pg. 585) **Disposition:** kes *as* Z√ks-new

Cognates: *ξέω* 'schaben, glätten' (P:585; pIE root but no Skt. cognates, Fr.ii:335) displays the unextended root.

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93 W^R:31 √khañj 'limp' (G:A)

Werba: skeng (with contamination) (#623) **LIV:** (s)kenĜ (pg. 555)

Pokorny: (s)keng (pg. 930) **Disposition:** (s)keng

Cognates: σκάζω < *skn̥gyo ['to limp' (LS)] (P:930; Fr.ii:714)

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94 W^R:31 √khad 'be hard' (G:X)

Werba: **LIV:**

Pokorny: **Disposition:** NE

Remarks: A "doubtful root" (Whitney); n.b. the present forms given by Whitney for this, and by Werba for his #42 √khad, are different. "Unklar" (KEWA.i:300).

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95 W^R:32 √khan, khā 'dig' (AV:C)

Werba: $kenh_1$ (#275) **LIV:** $\overset{\circ\circ}{K}eh_2$ (pg. 344)

Pokorny: 2.ken 'kratzen, schaben, reiben' *as* kenə (pg. 559; 634n) **Disposition:** 2.ken

Cognates: Nothing certain outside Indoiranian (KEWA.i:301).

Remarks: *√khenə of the 1927-32 Walde-Pokorny has been reassigned to 2.ken in the 1959 Pokorny.

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96 W^R:32 √khād 'chew' (RV:C)

Werba: $\overset{\circ\circ}{K}h_2ad$ (#624) **LIV:** $\overset{\circ\circ}{K}h_2ed$ (pg. 359)

Pokorny: 2.ken 'kratzen, schaben, reiben' *as* Z√kn̥̄\d plus "expressive aspiration" (pg. 160, 559, 634n) **Disposition:** NE

Cognates: Lith. *kándu* 'beiße' (KEWA.i:308).

Remarks: *√khād of the 1927-32 Walde-Pokorny has been reassigned to 2.ken in the 1959 Pokorny. Werba marks "II;XRF"; pIE is per cross reference to √khad, his #42. P's etymology, with its ad-hoc "expressive aspiration" is unpersuasive, so marked "NE" here (otherwise, could be from *Z√kn̥\d).

97 W^R:32 $\sqrt{}$khid 'tear' (G:B)

Werba: kh$_2$ayd (#43) **LIV:** $\overset{\circ\circ}{\text{K}}eh_2$d (pg. 344)

Pokorny: (s)k(h)ay 'schlagen, puffen' *as* (s)k(h)āy\d (pg. 917) **Disposition:** (s)kay\d

Remarks: Claiming a better semantic fit, LIV (loc.cit., «kh$_2$eyd»n.2 pg. 360) connects this with Vedic $\sqrt{}$khād 'reißen', rather than pIE *$\sqrt{}$kh$_2$eyd, the etymon of *caedo*. *Khid* would be from the zero-grade of this proposed root *$\sqrt{}\overset{\circ\circ}{\text{K}}eh_2$d, the (vocalized) laryngeal being reflected both in the /i/, and in the aspiration of the initial. *Khād* would be from the full grade, with aspiration transferred analogically from *khid*. The traditional view seems simpler, and either way there is an unexplained phonetic coincidence - either with *$\sqrt{}$kh$_2$eyd, or with *khād*.

98 W^R:33 $\sqrt{}$khyā 'see' (RV:C)

Werba: **LIV:** $\overset{\circ\circ}{\text{k}}$eĥ (pg. 383)

Pokorny: $\overset{\circ\circ}{\text{k}}^{e}/_{o}$ĥ(pg. 638-9) **Disposition:** =#56.

Remarks: A variant of *kāś*, #56 (KEWA.i:313; LIV:383*ff* esp. 385n.17). Cp. also #129.

99 W^R:33 $\sqrt{}$gad 'say' (E:C)

Werba: II gad (#400) **LIV:**

Pokorny: 2.$\overset{\circ\circ}{\text{g}}$et (pg. 480) **Disposition:** NE

Remarks: Pokorny gives no reason for deriving Skt /d/ from pIE */t/. LIV:212 «$\overset{\circ\circ}{\text{g}}$et» appears to reject Pokorny's etymology. EWA I:460 notes that a root of the shape ÇVÇ is abnormal; perhaps *$\overset{\circ\circ}{\text{g}}$n̥d, cognate with *δέννος* 'Schmähung'; or (EWA *loc cit*; KEWA.i:319) a contamination of $\sqrt{}$*vad* ['say'] #433 + a hypothetical Skt. $\sqrt{}$*gat* < pIE *$\overset{\circ\circ}{\text{g}}$et 'sagen' (LIV:212).

100 W^R:34 $\sqrt{}$gam 'go' (RV:A)

Werba: ǵem (#45) **LIV:** ǵem (pg. 209)

Pokorny: ǵem (pg. 464-5) **Disposition:** #105\m

Cognates: *βαίνω* < *ǵm̥-yō (P:404)

Remarks: Variant of #105 (P).

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101 W^R:34 √garj 'roar' (E:B/A)

Werba: II gar$\frac{g}{j}$ (#625) **LIV:**

Pokorny: 2.ger 'schreien' *as* ger\g (pg. 384) **Disposition:** 2.ger *as* ger\g

Cognates: *γέρανος* ['crane'] (P:383; Fr.i:299) shows the root without the */g/-extension.

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102 W^R:35 √garh 'chide' (E:B/A)

Werba: **LIV:**

Pokorny: 2.gal 'rufen' *as* gal\gh (pg. 350) **Disposition:** 2.gal *as* gal\gh

Cognates: *γλάζω* 'lasse eine Gesang erklingen' (P:350) shows the root without the */gh/-extension, and apparently in schwebeablaut. But Fr.i:307 reports no Skt equivalent for this Greek word.

Remarks: < *√galĝh 'klagen' We#48 = *√ǴerLĜh 'klagen' LIV:187 = P:350-1? *Or,* *√gheldh 'entgelten, büßen' LIV:197 = P:436? (Author) n.b. W^Rgives Epic as the earliest attested stratum of his root, but Werba's entry for √gr̥h < pIE *√galĝh contains a citation from the Rig Veda.

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103 W^R:35 √gal 'drop' (G:A)

Werba: ǵelH (#276) **LIV:** 2.ǵelH (pg. 207)

Pokorny: 2.ǵel(ə), ǵlē (pg. 471-2) **Disposition:** 2.ǵelə

Cognates: *βλύω* 'quelle hervor' (P:472; KEWA.i:329; Fr.i:246).

Remarks: [Schewbeablaut] variant of #119 (P); but this is "gänzlich unbewiesen" (KEWA.i:354)

104 W^R:35 √galbh 'dare' (C:B)

Werba: **LIV:**

Pokorny: **Disposition:** *ghelbh?

Cognates: OE *gielpan* 'prahlen'; Lith. *gulb̃inti* 'rühmen, preisen' (KEWA.i:330).

Remarks: Denominative (W^R).

105 W^R:35 √1.gā 'go' (RV:A)

Werba: ǵah$_2$ (#277) **LIV:** ǵeh$_2$ (pg. 205)

Pokorny: ǵā (pg. 463-4) **Disposition:** ǵaə

Cognates: Hom. *βιβάς*, Laconian *βίβαντι* (P:463)

Remarks: Variant of #100 (P); note that the finals of ##100, 105 are not root extensions of the standard type, as the element to which they are appended, *ǵa*, violates the pIE rule against roots ending in a short vowel.

106 W^R:35 √2.gā 'sing' (B:B)

Werba: gah$_2$ (#278) **LIV:** Ǵ̑eH(y) (pg. 183)

Pokorny: g$^{\bar{e}}/_{\bar{o}}$(y), gī (pg. 355) **Disposition:** geəy

Remarks: Long vowel in Skt implies presence of /ə/.

107 W^R:36 √gāh 'plunge' (S:A)

Werba: II gāǰh (#627) **LIV:** Ǵ̑eĝh (pg. 183)

Pokorny: ǵ̆ādh (pg. 465) **Disposition:** ǵadh

Cognates: *βῆσσα* 'Talgrund, Schlucht' (P:65; Fr.i:234)

108 W^R:36 √guñj 'hum' (G:A)

Werba: **LIV:**

Pokorny: **Disposition:** gVng

Cognates: Seems to be a member of a series of onomatopoeic formations including *γογγύζω*, OCS *gǫgŭnivĭ*, Russian it gugnati (KEWA.i:337; also P:352 «gang»). Although there is a mismatch between the Greek and Sanskrit vocalism, I assume that these are cognate but with onomatopoetic deformation, and tentatively reconstruct *gVng.

109 W^R:37 √gup 'protect' (RV:A)

Werba: **LIV:**

Pokorny: **Disposition:** g̈ow

Cognates: Denominative, from 'cow'; so cognate with *βοῦς* (KEWA.i:339*f*).

Remarks: Protoform from Watkins:35.

110 W^R:37 √gur 'greet' (RV:A)

Werba: g̈erH (#280) **LIV:** g̈erH (pg. 210)

Pokorny: 4.g̈er(ə) (pg. 478) **Disposition:** 4.g̈er(ə)

Cognates: Hes. *δειριᾶν·λοιδορεσῶθαι* ['abuse'] (P:478)

Remarks: Secondary to #112 (W^R; KEWA.i:340«1.guráte»)

111 W^R:38 √guh 'hide' (E:B)

Werba: II gawj́h (#46) **LIV:** Ǵhewĝh (pg. 199)

Pokorny: ghewĝh (pg. 450) **Disposition:** ghewĝh

Remarks: Cp. #131.

112 W^R:38 $\sqrt{1.\underset{\circ}{g}r}$ 'sing' (A:X)

Werba: **LIV:**

Pokorny: **Disposition:** =#110

Cognates: *δέρω* sometimes considered cognate with 2.$\underset{\circ}{j}r$ (see Remarks), but this is "unwahrscheinlich" (Fr.i:358); KEWA.i:343 gives no Greek, but Gallo-Roman *bardus* 'Barde'; Lith. *giriù* 'lobe, rühme'; OCS *granŭ* 'Vers, Formel'.

Remarks: Cognate roots: #110 and 2.$\underset{\circ}{j}r$ 'sing' W^R:55 (for which no perfect is listed) (KEWA.i:421«2.járate»).

113 W^R:38 $\sqrt{2.\underset{\circ}{g}r}$ 'swallow' (RV:A)

Werba: ǵerh$_3$ (#279) **LIV:** ǵerh$_3$ (pg. 211)

Pokorny: 1.ǵer(ə) (pg. 474) **Disposition:** 1.ǵer(ə)

Cognates: *βάραθρον* 'Schlund', *βιβρώσκω* ['eat'] (P:474; Fr.i:236)

- W^R:39 $\sqrt{3.\underset{\circ}{g}r}$ 'wake' (-)

Remarks: Regarding the forms sometimes cited as the perfect of this root, see Chapter 2 #3.

114 W^R:39 $\sqrt{\underset{\circ}{g}rdh}$ 'be greedy' (RV:B)

Werba: ǵeldh (#47) **LIV:** ǵeldh (pg. 185)

Pokorny: gheldh (pg. 434) **Disposition:** gheldh

115 W^R:39 $\sqrt{gra(n)th}$ 'tie' (G:B)

Werba: II granthH (#281) **LIV:** Ǵrenth$_2$ (pg. 191)

Pokorny: 3.ger 'drehen, winden' *as* gre$\frac{\text{n}}{\text{n}}$\t(h) (pg. 386) **Disposition:** 3.ger *as* S√gre$\frac{\text{n}}{\text{n}}$\t(h)

Cognates: LIV lists as only Indoiranian. KEWAi:352 suggests OHG *kratto*, 'Korb'. No Greek cognate.

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116 W^R:40 √gra(b)h 'seize' (RV:B)

Werba: ghrebh$_2$ (#506) **LIV:** ghrebh$_2$ (pg. 201)

Pokorny: gh⸢er,re⸣bh 'ergreifen' (pg. 455) **Disposition:** ghrebh

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117 W^R:41 √gras 'devour' (RV:A)

Werba: gras (#403) **LIV:** gres (pg. 192)

Cognates: *γράω* 'fressen' (P:404; Fr.i:326)

Pokorny: gras, gr̆os (pg. 404) **Disposition:** gras

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118 W^R:41 √glah 'gamble' (G:X)

Werba: **LIV:**

Pokorny: **Disposition:** =#116

Remarks: From #116 (W^R).

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119 W^R:41 √glā 'be weary' (G:C/A)

Werba: ǧrah$_2$ (#507) **LIV:**

Pokorny: 2.ǧel(ə), ǧlē 'fallen lassen' (pg. 471-2) **Disposition:** =#103 *as* ǧleə

Cognates: *βάλλω* proposed, but considered very unsure (Fr.i:216; KEWA.i:354)

Remarks: [Schewbeablaut] variant of #103 (P); but this is "gänzlich unbewiesen" (KEWA.i:354)

120 W^R:41 √ghaṭ 'strive' (C:X)

Werba: **LIV:**

Pokorny: **Disposition:** =#115

Remarks: A metathesized form of #115 (KEWA.i:355).

121 W^R:41 √ghaṭṭ 'rub' (E:X)

Werba: **LIV:**

Pokorny: **Disposition:** NE

Cognates: Unclear (KEWA.i:356).

122 W^R:42 √ghas 'eat' (RV:B)

Werba: ghes (#49) **LIV:** Ǵhes (pg. 198)

Pokorny: ghŏs (pg. 452) **Disposition:** ghes

123 W^R:42 √ghuṣ 'sound' (B:C)

Werba: ghEw\s (#50) **LIV:** Ǵhews (pg. 200)

Pokorny: ghows (pg. 454) **Disposition:** ghows

Cognates: Lat. *heus* ['*inter*[jection] used to call attention' (Smith)] suggested by KEWA.i:363. But difference in meaning, and probability of sound-symbolism, make this unconvincing.

124 W^R:42 √ghūrn 'waver' (E:X)

Werba: **LIV:**

Pokorny: **Disposition:** NE

Cognates: Probably Dravidian (KEWA.i:360).

125 W^R:43 √ghr̥ 'drip' (G:B)

Werba: II ghaL (#51) **LIV:** ǵher (pg. 197)

Pokorny: - **Disposition:** ǵher

Cognates: Tok. kärtkā / kärk(k)ālle 'Brunnen, Teich' (KEWA.i:433); but Adams:163 translates as 'swamp, marsh' and relates to *√kerd 'dung', cp. Lat. *mus-cerda.* Also suggested by KEWA is *ἐθείρω* ; but this is a *hapax legomenon* of uncertain meaning (perhaps 'take care of') at Iliad 21:347 (Fr.i:447; also Chapter 3, #109.

126 W^R:43 √ghr̥s 'rub' (C:C/A)

Werba: II gharš (#53) **LIV:**

Pokorny: 2.gher 'hart worüber steichen, reiben' (pg. 439) *as* gher\s (pg. 440) **Disposition:** 2.gher\s

Cognates: *κέγκρος* 'Hirse, Korn' (P:439) shows the root without the /s/-extension; on the semantics see Fr.i:807.

127 W^R:43 √ghrā 'smell' (C:A)

Werba: ǵhrEH (#282) **LIV:** ǵreh$_1$ (pg. 221)

Pokorny: ǵhrē (pg. 495-6) **Disposition:** ǵhrē

Cognates: *ὀσφραίνομαι* < *odes-ǵhr- 'riechen...' (P:495; with reservations, Fr.ii:439)

128 W^R:43 √cakās 'shine' (G:X)

Werba: **LIV:**

Pokorny: **Disposition:** =#56

Remarks: Reduplicated variant of #56 (KEWA.i:365).

129 W^R:44 √cakṣ 'see' (RV:C/A)

Werba: k̑eĥs (#547) **LIV:** k̑eĥ (pg. 383)

Pokorny: $k^e/_{\bar{o}}$ĥ\s 'erscheinen, sehen, zeigen' (pg. 638-9) **Disposition:** =#98\s

Remarks: Cp. #98.

130 W^R:44 √caṭ 'go' (C:X)

Werba: **LIV:**

Pokorny: **Disposition:** =#131

Remarks: Late, perhaps from #131 (W^R); so KEWA.i:369.

131 W^R:44 √cat 'hide' (G:C)

Werba: K̑et (#54) **LIV:** K̑et (pg. 357)

Pokorny: - **Disposition:** K̑et

Cognates: Unclear; a connection with *χκότος* 'Dunkelheit' has been proposed but is not adopted here. Fr.ii:740 gives no Sanskrit cognate for *σκότος* .

Remarks: Cp. #111.

132 W^R:44 √cam 'sip' (E:A)

Werba: II č(y)amH ;XRF (#283) **LIV:** k̑em (pg. 389)

Pokorny: k̑em (pg. 640-1) **Disposition:** k̑em

Cognates: Hes. '*ἑτεμεν·ἡμελγειν* ['milk ... press out...' (LS)] "zweifelhaft" (P:640)

133 W^R:45 √car 'move' (AV:A)

Werba: k̑el(H) (#284) **LIV:** k̑elh$_1$ (pg. 386)

Pokorny: 1.k̑el(ə) 'drehen' (pg. 639-40) **Disposition:** k̑el(ə)

Cognates: *πέλω* 'bin in Bewegung' (P:639; Fr.ii:500)

Remarks: Cp. #68, also #139.

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134 W^R:45 √cal 'stir' (E:X)

Werba: **LIV:**

Pokorny: 1.k̑el(ə) 'drehen' (pg. 639) **Disposition:** =#133

Remarks: Later variant of #133 (W^R).

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135 W^R:46 √cāy 'note' (B:X)

Werba: **LIV:**

Pokorny: 1.k̑ey (pg. 636) *as* L√k̑ēy **Disposition:** =#137

Remarks: Perhaps ultimately the same as #137 (W^R).

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136 W^R:46 √1.ci 'gather' (RV:A)

Werba: k̑ey (#55) **LIV:** 2.k̑ey (pg. 378)

Pokorny: 2.k̑ey (pg. 637-8) **Disposition:** 2.k̑ey

Cognates: *ποιέω* 'mache' (P:638; Fr.ii:571)

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137 W^R:46 √2.ci 'note' (RV:A)

Werba: k̑ey (#56) **LIV:** 1.k̑ey (pg. 377)

Pokorny: 1.k̑ey (pg. 636-7) **Disposition:** 1.k̑ey

Cognates: *τηρός* ['a watch, guard' (LS)]; with an extension, *ἀτίζω* 'beachte nicht' < *n̥ ·ti\t (P:636; Fr.ii:907)

Remarks: Perhaps ultimately the same as #135 (W^R).

138 W^R:46 √cit 'perceive' (RV:B)

Werba: k̑eyt (#58) **LIV:** k̑eyt (pg. 382)

Pokorny: 1.k̑ey\t 'woraufachten' (pg. 636-7) **Disposition:** =#137\t

Remarks: Apparent variant: cint 'think' (W^R).

139 W^R:48 √cup 'stir' (G:A)

Werba: **LIV:**

Pokorny: k̑[ē,ə]p, kŭp (pg. 596) **Disposition:** k̑ep

Cognates: ἐ·κάπυσσεν 'hauchte aus' (P:596); which <*κϝαπ- <*k̑ep (Fr.i:781)

Remarks: Cp. #133.

140 W^R:48 √cumb 'kiss' (E:A)

Werba: **LIV:** K̂ was (pg. 373)

Pokorny: (pg. 626) **Disposition:** K̂w as

Cognates: κυνέω < *ku$\frac{\text{ne}}{\Lambda}$s-ō (KEWA.i:395; Fr.ii:49).

141 W^R:48 √cr̥t 'bind' (AV:A)

Werba: **LIV:** K̑ert (pg. 356)

Pokorny: ker(ə)t, krāt (pg. 584) **Disposition:** ker(ə) *as* ker(ə)\t

Cognates: κάρταλ (λ)ος 'Korb', κύρτος 'Binse geflecht, Fischreuse, Käfig' (P:584; Fr.ii:55; KEWAi:398)

Remarks: Cp. 1.kerd 'gürten' (P:579), 3.k̂er 'schnur' (P:577), 3.(s)ker 'drehen, biegen' (P:935). N.b. 2.(s)ker "nicht zu trennen von [3.](s)ker 'drehen'" (P:933)

142 W^R:49 √ceṣṭ 'stir' (E:C/A)

Werba: II (#629) **LIV:** K̂eyh$_2$ 'sich in Bewegung setzen' (pg. 346; indirectly, through Pokorny's etymology of *κῑνυμαι* etc.)

Pokorny: kēy\s (pg. 538-9) **Disposition:** =#143\ə\s

Cognates: Unextended forms, *κινέω*, *κίω* (KEWA.i:399; Fr.i:855)

Remarks: The first of the double extensions, /ə/, accounts for the long vowel in *κῑνυμαι*; Pokorny writes this /eyə/ as "ēy".

143 W^R:49 √cyu 'move, stir' (RV:A)

Werba: kyew (#61) **LIV:** k̆yew 'sich in Bewegung setzen' (pg. 394)

Pokorny: kēy 'in Bewegung setzen / sein' *as* ky-ew (pg. 539) **Disposition:** key *as* S√kye\w

Cognates: *σεύω* 'setze in Rasche, heftige Bewegung' (P:539; Fr.ii:694)

Remarks: See remarks to #142.

144 W^R:49 √cyut 'drip' (G:X)

Werba: **LIV:**

Pokorny: **Disposition:** NE

Remarks: A mistake for #502 (W^R).

145 W^R:50 √cha(n)d 'seem,please' (RV:C)

Werba: sk̂end (#63) **LIV:** sk̂end (pg. 546)

Pokorny: - **Disposition:** sk̂end

Cognates: Unclear beyond Indoiranian (KEWA.i:403).

146 W^R:50 √chā 'cut up' (G:A)

Werba: sk̂ah$_2$ (#285) **LIV:** sk̂heh$_2$(y) (pg. 547)

Pokorny: 2.sek 'schneiden' *as* sk̂ĕy (pg. 895, 919) **Disposition:** 2.sek *as* sK̂ē(y)

Cognates: σχάω 'ritze...' (P:919; Fr.ii:836)

Remarks: /kh/ by Sieb's Law, < *sĝh (W^Rn.1). Variants: skĕy, sk$^a/_o$y; sek; and see #147 (P) /a/ vocalism shown in Gk. σχάω, but /e/ in Icelandic *skeina* (P). For the unextended root, see LIV:524 √sekH 'abtrennen ... schneiden ...'

147 W^R:50 √chid 'cut off' (B:A)

Werba: sk̂(h)eyd (#64) **LIV:** sk̂heyd (pg. 547)

Pokorny: skĕy 'schneiden, trennen, scheiden' *as* sk̂ĕy\d (pg. 919-21) **Disposition:** 2.sek *as* sK̂ey\d

Cognates: σχίζω (LIV:548); also perhaps Hes. σκιδαρόν·ἀραιόν ['thin, narrow, weak, slight' (LS)] (KEWA.i:407)

Remarks: Again, /kh/ by Sieb's Law, < *sĝh (W^Rn.1). A variant of #146 (P); see LIV:524 √sekH .

148 W^R:51 √chr̥d 'spew,eject' (C:B/A)

Werba: sk̂er\d (#65) **LIV:** sk̂erd (pg. 547)

Pokorny: sker\d (pg. 947-8) **Disposition:** sker\d

Cognates: σκῶρ (Gen. σκατός) 'Kot' (P:148; KEWA.i:409 "weniger sicher") perhaps shows the root extended by /t/, not /d/.

Remarks: Av. *sairya* 'Dünger, Mist' exhibits the unextended form; Lat. -*cerda* ['dung'] shows the extension (P:919-920). Perhaps just variant forms instead of extension *strictu sensu*?

149 W^R:51 √1.jakṣ 'eat' (G:X)

Werba: **LIV:**

Pokorny: **Disposition:** =#122

Remarks: Reduplicated form of #122 (W^R); so LIV:198. Reduplicated form apparently only Indo-Iranian per KEWA.i:410.

150 W^R:52 √jā, jan 'bear, be born' (RV:A)

Werba: ĝenh$_1$ (#286) **LIV:** ĝenh$_1$ (pg. 163)

Pokorny: 1.ĝen (pg. 373-5) **Disposition:** 1.ĝenə

Cognates: γενέσθαι ['be born', Aorist] (P:373)

151 W^R:52 √jap 'whisper' (E:X)

Werba: ONO (#405) **LIV:**

Pokorny: **Disposition:** NE

Cognates: Unclear; onomatopoeic? (KEWA.i:417).

152 W^R:53 √jalp 'murmur' (E:X)

Werba: ONO (#630) **LIV:**

Pokorny: **Disposition:** NE

Cognates: Unclear; onomatopoeic? (KEWA.i:424).

153 W^R:53 √jas 'be exhausted' (RV:A)

Werba: ĝes (#68) **LIV:**

Pokorny: (z)ǵes (pg. 479) **Disposition:** (s)ǵes

Cognates: σβέννυμι 'lösche' (P:479; Fr.ii:685)

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154 W^R:53 √1.ji 'conquer' (RV:A)

Werba: ǵey (#69) **LIV:** ǵey (pg. 206)

Pokorny: ǵeyə (pg. 469) **Disposition:** ǵey

Cognates: βία (LIV:206)

Remarks: W^R, P:469 and KEWA.i:419,434,448 take as the same root as #163. But LIV separates them on the basis of the initial: #154 *ǵey > Av. *jaiiāi*, also Skt. reduplicated *jiǵgāya*; but #163 *ĝyeH > Av. *zināt*. LIV will be followed here.

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155 W^R:54 √2.ji(nv) 'quicken' (RV:C)

Werba: ǵeyh$_3$ (#631) **LIV:** (pg. 215)

Pokorny: 3.ǵey(ə) (pg. 467-9) **Disposition:** =#156 (nasalized)

Remarks: Werba also cites s*√ǵyoh$_3$. Secondary to #156 (LIV). Cognate with ##156, 158? (W^R). Same as #156; variant with -nv is < *ǵī$\frac{\text{n}}{\text{Λ}}$\u (P; also KEWA.i:435).

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156 W^R:54 √jīv 'live' (B:A)

Werba: **LIV:** ǵeyh$_3$ (pg. 215)

Pokorny: 3.ǵey(ə) 'leben' *as* ǵī\w (pg. 467-9) **Disposition:** 3.ǵey(ə) *as* ǵī\w

Cognates: Hom. βέομαι 'Ich werde leben' (P:467)

Remarks: Cognate with ##155, 158? (W^R) Same as #155 (P).

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157 W^R:54 √juṣ 'enjoy' (RV:A)

Werba: ĝews (#70) **LIV:** ĝews (pg. 166)

Pokorny: ĝews (pg. 399-400) **Disposition:** ĝews

Cognates: γεύομαι 'koste, genieße' (P:399; Fr.i:302)

158 W^R:55 √jū 'be swift' (RV:B)

Werba: II ʃawH (#287) **LIV:** ĝewH (pg. 166)

Pokorny: ĝew(ə) (pg. 399) **Disposition:** ĝew(ə)

Remarks: W^R suggests that this is cognate with ##155, 156; but the initial consonants don't match.

159 W^R:55 √1.jr̥ 'waste away' (RV:A)

Werba: ĝerh$_2$ (#288) **LIV:** ĝerh$_2$ (pg. 165)

Pokorny: ĝer(ə), ĝrē (pg. 390-1) **Disposition:** ĝer(ə)

Cognates: γέρων ['old man'] (P:391)

160 W^R:56 √jr̥mbh 'gape' (E:C/B)

Werba: **LIV:**

Pokorny: **Disposition:** Glebh *as* Gl̥mbh?

Cognates: KEWA.i:443 suggests pGc. *kalp* 'den Mund offen haben'.

161 W^R:56 √jeh 'loll,pant' (G:B)

Werba: ĝey\ĝh (#632) **LIV:** G̈heyĜh (pg. 196)

Pokorny: gheyĝh (pg. 427) **Disposition:** i.ghey *as* ghey\ĝh

Remarks: Perhaps a reduplicated form of ##578, 579 (W^R). Evidently related to √gheydh 'begehren, gierig sein' (P:426). (But cp. ##581, 584.)

162 W^R:56 √jñā 'know' (RV:A)

Werba: ĝnoh$_3$ (#508) **LIV:** ĝneh$_3$ (pg. 168)

Pokorny: 2.ĝen(ə), ĝn$^{ē}/_{ō}$ (pg. 376-8) **Disposition:** 2.ĝen(ə) *as* S√ĝnō

Cognates: *γιγνώσκω* ['know'] (P:376)

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163 W^R:56 √jyā, jī 'overpower, injure' (B:C)

Werba: II ǰyaH (#509) **LIV:** ĝyeH (pg. 167)

Pokorny: ǧeyə (pg. 469) **Disposition:** ĝyeH

Remarks: Attested only in Indo-Iranian (LIV). For the form of the root and its connections, see the discussion under #154. Pokorny's final /ə/ is unnecessary; the supporting form *jīna* is a mistake for simple *jina* (W^R:54).

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164 W^R:57 √jri 'go' (G:B)

Werba: II ǰray (#72) **LIV:** ĝrey (pg.170)

Pokorny: ĝley (pg. 401) **Disposition:** ĝLey

Cognates: Unclear; perhaps Westfalian *kladísen* 'laufen' (KEWA.i:420, 450*f*). LIV cites Hittite *kar(a)i-tt* 'Flut'.

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165 W^R:57 √jvar 'be hot' (G:B)

Werba: ĝwelH (#510) **LIV:** ĝwelH (pg. 170)

Pokorny: ĝwer(ə) (pg. 479) **Disposition:** ĝwer(ə)

Remarks: Variant of #166 (W^R), so LIV:171n2.

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166 W^R:57 √jval 'burn' (B:X)

Werba: **LIV:**

Pokorny: **Disposition:** =#165

Remarks: Variant of #165 (W^R), so LIV:171n2.

167 W^R:57 √jhaṭ 'confuse' (G:X)

Werba: **LIV:**

Pokorny: **Disposition:** NE

Cognates: Unclear (KEWA.i:451).

168 W^R:58 √ḍī 'fly' (G:A)

Werba: II dayH (#299) **LIV:** deyh$_1$ (pg. 107)

Pokorny: 2.deyə (pg. 187) **Disposition:** 2.deyə

Cognates: *διν*ε*́ω* '... schwinge', *δίω* 'fliehe' (P:187; Fr.i:390)

Remarks: Later form of 1.dī, for which no perfect is cited (W^R); the entries for this root which are cited from We and LIV pertain to dī.

169 W^R:59 √ḍhāuk 'approach' (C:X)

Werba: **LIV:**

Pokorny: **Disposition:** NE

Cognates: Unclear; probably not Aryan (KEWA.i:465).

170 W^R:59 √ta(ṁ)s 'shake' (RV:B/A)

Werba: ten\s (#73) **LIV:** tens (pg. 629)

Pokorny: 1.ten 'dehnen, ziehen, spannen' (pg. 1065) *as* ten\s (pg. 1068-9) **Disposition:** =#175\s

Remarks: For the meaning, nb. Lith. *tęsiù* 'dehnen' (LIV:629), also *remarks* to #175 *infra*. Cp. #175.

171 W^R:59 √tak 'rush' (G:B)

Werba: tek̑ (#74) **LIV:** tek̑ (pg. 620)

Pokorny: tek̑(pg. 1059-60) **Disposition:** tek̑

172 W^R:59 √takṣ 'fashion' (E:A)

Werba: tetk̂ (#75) **LIV:** tetk̂ (pg. 638)

Pokorny: tek̂þ(pg. 1058-9) **Disposition:** tek̂þ

Cognates: *τέκτων*, *τέχνη* (P:1058)

Remarks: Cp. 3.tek 'weben, flechten' (P:1058); *not* connected with #196.

173 W^R:60 √ta(ñ)c 'coagulate' (G:B)

Werba: tenk (#76) **LIV:** temk (pg. 625)

Pokorny: 1.ten 'dehnen, ziehen, spannen' (pg. 1065) *as* 2.ten\k 'sich zusammanziehen; fest, dick werden' (pg. 1068) **Disposition:** teNk

Remarks: Pokorny's citations provide no convincing reasons to link his 1.ten and 2.ten\k. His gloss of *tañc* ('zieht zusammen') should not be taken to indicate that any semantic element of *ziehen* inheres in √tañc; this word is translated 'contract, shrink' by Apte:227«taṁc». Pokorny lists the alleged extended and unextended (1.ten(\d) 'dehnen' pg.1065) roots separately. LIV gives the nasal as /m/ per Hittite *tamekzi*. Cp. #175.

174 W^R:60 √taḍ 'beat' (C:X)

Werba: **LIV:**

Pokorny: **Disposition:** NE

Cognates: Unclear (K.i:492).

175 W^R:60 √1.tan, tā 'stretch' (RV:A)

Werba: ten(H) (#407) **LIV:** ten (pg. 626)

Pokorny: 1.ten (pg. 1065-6) **Disposition:** 1.ten

Cognates: τείνω < *ten-yō (P:1065; Fr.ii:864)

Remarks: Cp. √temp 'dehnen, ziehen, spannen' (P:1064).

176 W^R:61 √tap 'heat' (RV:B)

Werba: tep (#77) **LIV:** tep (pg. 629)

Pokorny: tep (pg. 1069-70) **Disposition:** tep

Cognates: Lat. *tepeō* 'bin warm' (K.i:477).

177 W^R:61 √tam 'faint' (B:B)

Werba: temH (#289) **LIV:** temH (pg. 624)

Pokorny: 2.tem (pg. 1063) **Disposition:** 2.tem

178 W^R:62 √tarj 'threaten' (G:A)

Werba: terǵ (#633) **LIV:** terǵ (pg. 632)

Pokorny: terǵ(pg. 1076-7) **Disposition:** terǵ

Cognates: ταρβέω 'erschrecke' (P:1077); though Fr.ii:855 considers this "semantisch wenig treffend" and lists the proposed Greek cognate as "ohne sichere Etymologie".

179 W^R:62 √tāy 'stretch' (B?,G:X)

Werba: **LIV:**

Pokorny: **Disposition:** =#175

Remarks: The passive of *tanoti*, #175 (KEWA.i:496).

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180 W^R:62 √tij 'be sharp' (B:A)

Werba: teyg (#78) **LIV:** (s)teyg (pg. 592)

Pokorny: (s)tey 'spitzig' (pg. 1016) *as* tey\g 'stechen, spitz' (pg. 1016-7) **Disposition:** (s)tey\g

Cognates: *στίζω* 'steche', *στίγμα* ['mark'] (P:1016; Fr.ii:799)

Remarks: See P:1015 for √(s)tey.

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181 W^R:62 √tim 'be quiet' (G:X)

Werba: **LIV:**

Pokorny: **Disposition:** NE

Cognates: Unclear (KEWA.i:503).

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182 W^R:63 √tu 'be strong' (RV:A)

Werba: $tewh_2$ (#290) **LIV:** $tewh_2$ (pg. 639)

Pokorny: tewə (pg. 1080-1) **Disposition:** tewə

Cognates: Hes. *ταῦσ·μέγας*, *πολύς* ['great, many'], *σάος* (Attic *σῶς* < *twə-wo-s 'heil, unversehrt', *σώιζω* 'retten, erhalten' (P:1080)

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183 W^R:63 √tuj 'urge, thrust' (RV:A)

Werba: II $taw\frac{g}{j}$ (#79) **LIV:** (s)tewg (pg. 602)

Pokorny: (s)tew 'stoßen, schlagen' *as* tew\g (pg. 1032-3) **Disposition:** (s)tew\g

Cognates: The unextended root is seen in *τύκος* 'Hammer..' and *τυκάνη* 'Dreschvorrichtung'; and with an extension /p/ it is reflected in *τύπτω* 'schlage' (P:1032; Fr.ii:945; also KEWA.i:512«tup'ati»). LIV proposes to find the extended root in *στυγέω* 'hasse, verabscheue, scheue mich'; but this is "semantisch schierieger zu begründen" (Fr.ii:813).

Remarks: Cp. #184.

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184 W^R:63 √tud 'push' (RV:B/A)

Werba: tewd (#80) **LIV:** 1.(s)tewd (pg. 601)

Pokorny: (s)tew 'stoßen, schlagen' *as* tew\d (pg. 1032-4) **Disposition:** =#183\d

Cognates: P:1033 proposes Τυνδάρεως, a character in myth; but without any discoverable reason. KEWA.i:511 lists no Greek cognates, but Albanian *štüń* [standard orthography *shtynj*] and Go. *stautan*, both 'stoßen'. LIV also finds no Greek, but gives among others Lat. *tundō, -ere* 'stoßen, schlagen'. See also the discussion under #183 for the further connections of the root.

Remarks: Cp. #183.

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185 W^R:63 √tuṣ 'be content' (E:B)

Werba: tews (#82) **LIV:** 1.tews (pg. 641)

Pokorny: taus (pg. 1056-7) **Disposition:** taws

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186 W^R:64 √tr̥ 'pass' (RV:A)

Werba: terh$_2$ (#291) **LIV:** terh$_2$ (pg. 633)

Pokorny: 4.ter 'hinübergelangen ... retten' (pg. 1074-5) **Disposition:** 3,4,6.terə

Cognates: τέρμα 'Ziel, Endpunkt' (P:1075; Fr.ii:880)

Remarks: Cp. 3.ter 'reiben...', 5.ter 'hindurch', 6.ter- '... bohrendes Insekt'; also √tor 'laut ... durchdringend' (P:1088). For range of meanings: Skt. *tūrvati* 'überwältigt', *taráṇi* 'durchlaufend, verdringend ... hilfreich', *tárati* 'setzt über, übertrifft, überwindet', *trā* 'schützen, hüten'; Hit *tarḫzi* 'besiegt, überwindet'; Lat. *trans*

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187 W^R:65 √tr̥d 'split, bore' (RV:B/A)

Werba: terd (#83) **LIV:** terd (pg. 631)

Pokorny: 3.ter 'reiben, durchbohren' (pg. 1071) *as* t{er,re}d 'durchbohren' (pg. 1076)

Disposition: =#186\d

Remarks: Cp. #186.

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188 W^R:65 √tr̥p 'be pleased' (RV:B)

Werba: terp (#84) **LIV:** 1.terp (pg. 636)

Pokorny: terp, trep (pg. 1077-8) **Disposition:** terp

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189 W^R:66 √tr̥s̥ 'be thirsty' (RV:A)

Werba: ters (#408) **LIV:** ters (pg. 637)

Pokorny: ters (pg. 1078-9) **Disposition:** ters

Cognates: *τέρσομαι* ['be *or* become dry...' (LS)] (P:1078)

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190 W^R:66 √tr̥h 'crush' (AV:X)

Werba: II tarʃH (#85) **LIV:**

Pokorny: **Disposition:** =#550

Remarks: Variant of #550 (W^R:194; We#85; LIV:598).

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191 W^R:66 √tyaj 'forsake' (RV:A)

Werba: tyeǵ (#485) **LIV:** tyeǵ (pg. 643)

Pokorny: tyeǵ(pg. 1086) **Disposition:** tyeǵ

Cognates: *σέβω* ['reverence'] (P:1086); Fr.ii:686 notes the semantic mismatch between these items, but LIV *loc cit* accepts the equation, and adds an o-grade reflex with a meaning closer to the Skt root: *σοβέω* 'verscheuche, jage weg'.

192 W^R:67 √trap 'be abashed' (G:A)

Werba: trep (#527) **LIV:** 2.trep (pg. 650)

Pokorny: 2.trep (pg. 1094) **Disposition:** 2.trep

Cognates: *τρέπω* 'wende' (P:1094; Fr.ii:925; LIV *loc cit*); for the semantic development of the Sanskrit form see LIV + refs.

Remarks: Perhaps = 3.ter\p (P). But semantic difference ('reiben':'be abashed') makes this *very* speculative (Author).

193 W^R:67 √tras 'be terrified' (E:A)

Werba: **LIV:** tres (pg. 650)

Pokorny: 1.ter 'zappeln, zittern' *as* tre\s, ter\s (pg. 1070, 1095) **Disposition:** 1.ter *as* tre\s

Cognates: *τρέω* 'zittere' (P:1095; Fr.ii:929)

Remarks: Pokorny lists extended form as a separate item (pg. 1095) and under root (tr\s, beside tr\em(s), tr\ep; pg. 1070.)

194 W^R:67 √trā 'protect' (RV:C)

Werba: II traH (#292) **LIV:**

Pokorny: **Disposition:** S√#186.

Remarks: Secondary form of #186 (W^R). On the semantics, note < 4.ter Skt *taráṇi* 'hilfreich', *radhra-túr* 'den Ermattenden rettend' (P). Only Indo-Iranian (KEWA.i:533).

195 W^R:67 √truṭ 'come to pieces' (C:X)

Werba: **LIV:**

Pokorny: **Disposition:** NE

Cognates: Unclear outside Indoiranian (KEWA.i:536).

Remarks: Perhaps denominative (W^R).

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196 W^R:68 √tvakṣ 'fashion' (G:C)

Werba: II twakš (#551) **LIV:**

Pokorny: **Disposition:** NE

Cognates: Only Indo-Iranian, "nicht erklärt"; not to be connected with #172 √tvakṣ (KEWA.i:538).

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197 W^R:68 √tvar 'hasten' (E:A)

Werba: (h_3)twer (#634) **LIV:** twer (pg. 655)

Pokorny: 1.twer (pg. 1100) **Disposition:** 1.twer

Cognates: *ὁ·τρύνω* 'treibe an' (P:1100; Fr.ii:441)

Remarks: W^R claims this is secondary to #186, which is cited with a variant *tur*; but this *tur* is from *tr̥ə, and the *-w- in the present form does not look like a derivational element. According to Pokorny, the initial *ὁ* of the Greek cognate is a prefix.

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198 W^R:68 √tviṣ 'be stirred up' (RV:A)

Werba: tweysH (#410) **LIV:** tweys (pg. 654)

Pokorny: 2.twey\s (pg. 1099) **Disposition:** 2.twey\s

Cognates: *σείω* 'schüttle, schwinge, erschüttere' < *tweysō (P:1099; Fr.ii:689)

Remarks: Pokorny describes the /s/ as a present marker; LIV:14*ff* lists no such thing.

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199 W^R:68 √tsar 'approach stealthily' (RV:B)

Werba: t-sel (#411) **LIV:** 3.sel (pg. 528)

Pokorny: 5.sel (pg. 900) **Disposition:** 5.sel

Cognates: *εἰλί-ποδας* 'schleppfüßig' (P:900; but this Greek form is of "unklaren Bedeu-

tung" Fr.i:460). Also Lith. *selù / selt̂i* '(an)schleicen' (LIV)

Remarks: Cp. #537.

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200 W^R:69 √da(ṁ)s 'bite' (RV:A)

Werba: denk̂ (#86) **LIV:** denk̂ (pg. 117)

Pokorny: denk̂(pg. 201) **Disposition:** denk̂

Cognates: *δάκνυω* ['bite'] (P:201)

Remarks: Cp. 2.dek̂'zerreißen' (P:191).

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201 W^R:69 √dakṣ 'be able' (B:X)

Werba: II dakš (#552) **LIV:** dek̂s (pg. 112)

Pokorny: 1.dek̂-s (pg. 189) **Disposition:** =#210

Remarks: With desiderative {-s} (P). Same root as ## 210, 214 (P).

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202 W^R:70 √da(m)bh 'harm' (RV:A)

Werba: dhembh (#635) **LIV:** dhembh (pg. 144)

Pokorny: dhebh (pg. 240) **Disposition:** dhebh

Cognates: *ἀτέμβω* (*ἀ-* < *sm̥) 'beschädige, beraube ...' (P:240; Fr.i:177)

Remarks: The nasal forms are new (P). Cp. We#88 √debh < *dhebh; same meaning.

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203 W^R:70 √day 'share' (C:X)

Werba: **LIV:**

Pokorny: **Disposition:** =#208

Remarks: Secondary to #208; "hardly worth separating" (W^R).

204 W^R:70 √dal 'burst' (G:X)

Werba: der (#414) **LIV:**

Pokorny: **Disposition:** =#221

Cognates: Unclear outside Indoiranian (KEWA.ii:24).

Remarks: Secondary to #221, to which the reference to Werba applies (W^R). < *√$delh_1$ 'behauen, spalten' (LIV:114) = P. 194-6 ? (Author).

205 W^R:71 √dă̆s 'waste' (RV:X)

Werba: **LIV:**

Pokorny: **Disposition:** NE

Cognates: Unclear outside Indoiranian (KEWA.ii:28).

Remarks: Usually given as two separate roots (W^R).

206 W^R:71 √dah 'burn' (B:A)

Werba: dheǵh (#90) **LIV:** dheǵh (pg. 133)

Pokorny: dheǵh (pg. 240-1) **Disposition:** dheǵh

Cognates: *τέφρα* 'Asche'; outside Greek there are Lith. *degù*, Tok. *tsäk / tsak* 'brennen' (KEWA.ii:29).

Remarks: Cp. #240.

207 W^R:71 √1.dā, dad 'give' (RV:A)

Werba: doh_3 (#294) **LIV:** deh_3 (pg. 105)

Pokorny: dō, də (pg. 223-5) **Disposition:** dō

Cognates: *δίδωμι* ['I give'] (KEWA.ii:13).

208 W^R:72 √2.dā 'divide, share' (B:A)

Werba: dah_2 (#297) **LIV:** deh_1(y) (pg. 103)

Pokorny: dā(y), də(y) (pg. 175-6) **Disposition:** dā(y)

Cognates: *δαίομαι* 'teile, verteile' (P:175; Fr.i:341*f*)

209 W^R:72 √4.dā 'clear' (G:X)

Werba: **LIV:**

Pokorny: **Disposition:** =#208

Remarks: Probably a specialized form of #208 (W^R).

210 W^R:73 √dāś 'make offering' (RV:A)

Werba: dek̂ (#89) **LIV:** dek̂ (pg. 109)

Pokorny: 1.dek̂(pg. 189-90) **Disposition:** 1.dek̂

Cognates: *δέχομαι* 'nehmen' (P:189; Fr.i:374, 376)

Remarks: Same root as ##201, 214 (P).

211 W^R:73 √diś 'point' (AV:A)

Werba: deyk̂ (#91) **LIV:** deyk̂ (pg. 108)

Pokorny: deyk̂(pg. 188-9) **Disposition:** i.deyk̂

Cognates: *δείκνῡμι* ['point'] (P:188)

212 W^R:73 √dih 'smear' (E:A)

Werba: dheyĝh (#92) **LIV:** dheyĝh (pg. 140)

Pokorny: dheyĝh (pg. 244-5) **Disposition:** dheyĝh

Cognates: *τεῖχος* 'Mauer, Wand'; *θιγγάνω* ['...touch...' (LS)] (P:244; Fr.ii:866, citing *déhmi*, a form not found in W^R; KEWA.ii:62, headword *degdhi*, RV *déhat* 'smears, anoints'.)

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213 W^R:74 √2.dī 'shine' (RV:A)

Werba: $deyh_2$ (#300) **LIV:** $deyh_2$ (pg. 108)

Pokorny: 1.dey(ə), dī, dyā (pg. 183-4) **Disposition:** 1.dey(ə)

Cognates: *δέατο* 'schien' (P:184; Fr.i:354)

Remarks: Probably related to #215 (W^R).

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214 W^R:74 √dīkṣ 'be consecrated' (B:X)

Werba: **LIV:** deḱ (pg. 109)

Pokorny: 1.deḱ-s (pg. 189-90) **Disposition:** = #210

Cognates: Etymology unclear (KEWA.ii:44).

Remarks: Originally a desiderative, *di&dḱ-se > *diḱse > (secondary lengthening of /i/) dīkṣa (LIV *loc cit* n.20; P; KEWA). Pokorny identifies with ##201, 210.

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215 W^R:74 √dīp 'shine' (C:C/A)

Werba: **LIV:**

Pokorny: 1.dey(ə), dī, dyā (pg. 183) **Disposition:** =#213\p

Remarks: Probably related to #213 (W^R). Pokorny cites *dī́pyate* but does not explicitly cite the /p/ as a root-extension.

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216 W^R:75 √1.dīv 'play' (AV:C)

Werba: II dyawH (#412) **LIV:**

Pokorny: **Disposition:** NE

Cognates: Obscure; perhaps a connection with OCS *divjǫ* 'schaue, blicke' (KEWA.ii:47).

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217 W^R:75 √2.dīv, dev 'lament' (G:A)

Werba: **LIV:**

Pokorny: **Disposition:** deyw

Cognates: A denominative from *dévaḥ* ['god'], thence congnate with Ζεύς (KEWA.ii:63).

Remarks: Cp. #225.

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218 W^R:75 √dŭ̆ 'burn' (G:A)

Werba: dah_2u (#413) **LIV:** deh_2w (pg. 104)

Pokorny: $d^{\bar{a}}/_{\partial}w$, dŭ̆ (pg. 179-81) **Disposition:** dāw

Cognates: δαίω < *δαϝ- ju̯ω ['burn'] (P:180)

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219 W^R:76 √duṣ 'spoil' (G:A)

Werba: dews (#94) **LIV:** dews 'bedürfen, ermangeln' (pg. 125)

Pokorny: 3.dew(ə), dwā 'sich raumlich bewärts bewegen' (pg. 219) *as* dew-s **Disposition:** dews

Cognates: δυσ- ['bad'] (Fr.i:425)

Remarks: Identity of this item's number and the page reference in Pokorny is coincidence, not typographic error. Pokorny's derivation from √3.dewə (= LIV:123 «$dewh_2$» 'zusammenfügen') is only tentative; there seems to be little semantic sense in combining these items. See also Fr. «2.δέω»,«δυσ-»; KEWA «duṣ», «dúṣyati».

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220 W^R:76 √duh 'milk, derive' (RV:A)

Werba: dhewgh (#95) **LIV:** dhewgh (pg. 148)

Pokorny: dhewgh (pg. 271) **Disposition:** dhewgh

Cognates: *τυγχάνω* ['happen, hit the mark'], *τύχη* ['fate'] (P:271; KEWA.ii:66)

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221 W^R:76 √1.dr̥ 'pierce, split' (RV:A)

Werba: **LIV:** der (pg. 119)

Pokorny: der(ə), drē (pg. 206-8) **Disposition:** der(ə)

Cognates: *δέρω* / *δείρω* 'häute ab, schinde' (P:206; Fr.i:350)

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222 W^R:77 √dr̥p 'rave' (G:C)

Werba: II daLp (#415) **LIV:**

Pokorny: **Disposition:** deLp

Cognates: No good cognates (KEWA.ii:60).

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223 W^R:78 √dr̥ś 'see' (AV:A)

Werba: derk̂ (#97) **LIV:** derk̂ (pg. 122)

Pokorny: der 'sehen' *as* derk̂(pg. 213) **Disposition:** der *as* derk̂

Cognates: *δέρκομαι* ['see'] (P:213)

Remarks: √der inferred on the basis of der(ep), P:212.

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224 W^R:78 √dr̥(ṁ)h 'make firm' (RV:B/A)

Werba: dheLĝh (#98) **LIV:** delĝh [/d/:sic!] (pg. 113)

Pokorny: 2.dher(ə) 'halten, festhalten, stützen' *as* dhere\ĝh (pg. 252-4) **Disposition:** #243\ĝh

Remarks: The Indian grammarians treat this as two roots (W^R).

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225 W^R:79 √dyut 'shine' (AV:A)

Werba: II dyawt ;XRF (#99) **LIV:** dyewt (pg. 125)

Pokorny: 1.dey(ə), dī, dyā 'hell glänzen, schimmern, scheinen' (pg. 183) *as* dy\u+t (pg. 185) **Disposition:** =#213\w+t

Cognates: Ζεύς shows the root in full-grade, with a /u/-extension, though of course without the appended /t/.

Remarks: /t/ under influence of *śvit* 'hell sein' (P:185).

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226 W^R:79 √1.drā 'run' (RV:A)

Werba: $drah_2$ (#302) **LIV:** $1.dreh_2$ (pg. 127)

Pokorny: 3.der, drā (pg. 204) **Disposition:** 3.der *as* drā

Cognates: *διδράσκω* (Future, *δράσομαι*) ['run'] (P:204)

Remarks: Same root as #228 (P). Note also √dram, 'run' (W^R; =dre\m, Pokorny), and ##231, 232. Also √dhav 'flow'.

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227 W^R:79 √2.drā 'sleep' (C:A)

Werba: II draH (#303) **LIV:** $dreh_1$ (pg. 126)

Pokorny: drē, drə (pg. 226) **Disposition:** drē

Cognates: Hom. '*ἔδραθον* 'schlief' (P:226; Fr.i:350)

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228 W^R:80 √dru 'run' (B:B/A)

Werba: drew (#100) **LIV:** drew (pg. 129)

Pokorny: 3.der 'laufen, treten, trippen' *as* dre\w (pg. 205-6) **Disposition:** =#226\w

Remarks: Same root as #226 (P).

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229 W^R:80 √druh 'be hostile' (RV:B)

Werba: dhrewgh (#101) **LIV:** dhrewgh (pg. 157)

Pokorny: 2.dhrewgh (pg. 276) **Disposition:** 2.dhrewgh

Remarks: Cp. dhrew 'zerbrechen, zerbröckeln' (P:274), dhwer(ə) 'durch Täuschung zu Falle bringen' (P:277).

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230 W^R:81 √dviṣ 'hate' (B:C/A)

Werba: dweys (#102) **LIV:** dweys (pg. 131)

Pokorny: dwey 'fürchten' *as* dwey\s (pg. 228) **Disposition:** dwey\s

Cognates: *δείδω* ['fear'] shows the root without the /s/-extension (KEWA.ii:87), though LIV considers the equation "unsicher".

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231 W^R:81 √dhan 'run' (RV:B)

Werba: $dhenh_2$ (#305) **LIV:** $dhenh_2$ (pg. 249)

Pokorny: 1.dhen (pg. 249) **Disposition:** 1.dhen

Remarks: Note also ##226, 232; and √dhav 'flow'.

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232 W^R:81 √dhanv 'run' (RV:B)

Werba: **LIV:**

Pokorny: 1.dhen (pg. 249 - OPersian *danuvatiy*) **Disposition:** =#231\w

Remarks: Secondary to #231 (W^R; KEWA.ii:91). Note also ##226, 231; 236. Originally a {-nu-} present, like #279? (Author)

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233 W^R:81 √dham, dhmā 'blow' (E:B)

Werba: dhmEH (#306) **LIV:** dhmeH (pg. 153)

Pokorny: dhem(ə) (pg. 247-8) **Disposition:** dhem(ə)

Cognates: P:247 and KEWA.ii:92 relate this to *θέμερος* 'ernst, finster' - for which Fr.i:660 gives no Skt. cognate. KEWA also cites Norwegian *daam* 'Geruch', Lith. *dùmti*, OCS *dǫti*, both 'blasen'. LIV accepts these Balto-Slavic words but proposes no Greek cognate. The proposed Greek cognate is not accepted here because of the lack of any real similarity in

meaning to the present Sanskrit root.

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234 W^R:82 √1.dhā 'put' (RV:A)

Werba: $dheh_1$ (#307) **LIV:** $dheh_1$ (pg. 136)

Pokorny: 2.dhē, dhə (pg. 235-9) **Disposition:** 2.dhē

Cognates: *τίθημι* ['put'] (P:236)

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235 W^R:82 √2.dhā 'suck' (RV:A)

Werba: $dheh_1$(y) (#308) **LIV:** $dheh_1$(y) (pg. 138)

Pokorny: dh$^{\bar{e}}/_{\partial}$y (pg. 241-2) **Disposition:** i.dhē

Cognates: *θήσατο* 'sog' (P:241)

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236 W^R:82 √1.dhāv 'run' (G:A)

Werba: dhew (#103) **LIV:** dhew (pg. 147)

Pokorny: 1.dhew (pg. 259-60; 262) **Disposition:** =#231\w

Cognates: *θέω* ['run'] (P:260)

Remarks: = L√dhew; note Vedic *dhā́vati* vs. *dhávate* (LIV:147). Perhaps originally the same as #241 (P). De-nasalized back-formation from #232?; cp. #231 (Author).

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237 W^R:83 √2.dhāv 'rinse' (C:X)

Werba: **LIV:** dhewH (pg. 149)

Pokorny: **Disposition:** =#236

Remarks: LIV references P:261-3 but Pokorny gives no etymology for the subject Skt. word at that place. KEWA.ii:101*f* notes that the original meaning is 'runs, streams, flows, glides', later developing to 'rinse'.

238 W^R:83 √dhi(nv) 'nourish' (G:X)

Werba: **LIV:** dheh$_1$(y) (pg. 138)

Pokorny: dhē(y) *as* dhəy (pg. 241) **Disposition:** =#235

Remarks: Variant of #235, with {-nu-} present (LIV; KEWA.ii:103).

239 W^R:83 √dhī 'think' (RV:A)

Werba: dhyah$_2$ (#309) **LIV:** dheyH (pg. 141)

Pokorny: dheyə, dhyā, dhī (pg. 243) **Disposition:** dheyə

Cognates: *σῆμα* < *dhyā-mn̥ 'Zeichen ... Merkmal' (P:243; KEWA.ii:114); Fr.ii:696 says that the Greek word is "ohne überzeugende Etymologie", though he cites the above derivation.

Remarks: Listed by Werba as "II", but pIE form per cross-reference to √dhyā We#593.

240 W^R:83 √dhukṣ 'kindle' (G:B/A)

Werba: **LIV:**

Pokorny: **Disposition:** #206 *as* dhwek\s

Cognates: No Greek cognates given, but Lith. *dvẽkti* 'atmen, keuchen' proposed (KEWA.ii:106).

Remarks: dhe̯gh 'brennen' (P:240) *as* dhewk\s, cp. #206; also *√dhweh$_2$ 'Rauch machen' LIV:158 = P.262-3 (Author).

241 W^R:84 √dhŭ 'shake' (RV:A)

Werba: dhew(H) (#417) **LIV:** dhewH (pg. 149)

Pokorny: 4.dhew(ə) (pg. 261-3) **Disposition:** 4.dhew(ə)

Cognates: *θυμός* (P:261; Fr.i:694); *θύω* ['rush'] (Fr.i:698)

Remarks: Perhaps originally the same as #236 (P:259-60); same root as #246 (P).

242 W^R:84 √dhūrv 'injure' (G:B)

Werba: dhwer(H) (#106) **LIV:** dhwer (pg. 159)

Pokorny: dhwer(ə) 'durch Täuschung ... zu Falle bringen, schädigen' *as* Z√dhurə (pg. 277) **Disposition:** =#248

Remarks: Secondary to #248 (W^R; P; KEWA.ii:110, 118).

243 W^R:84 √dhr̥ 'hold' (RV:A)

Werba: dher (#104) **LIV:** dher (pg. 145)

Pokorny: 2.dher(ə) (pg. 252-3) **Disposition:** 2.dher

Cognates: *θρᾶνος* 'Bank, Schemel' (P:253; Fr.i:700)

244 W^R:85 √dhr̥ṣ 'dare' (RV:A)

Werba: dhers (#418) **LIV:** dhers (pg. 147)

Pokorny: dhers (pg. 259) **Disposition:** dhers

Cognates: *θάρσος* (P:259; Fr.i:655)

245 W^R:85 √dhyā 'think' (B:X)

Werba: **LIV:**

Pokorny: **Disposition:** =#239

Remarks: Later, and secondary to #239 (W^R).

246 W^R:86 √dhvaṁs 'scatter' (RV:B/A)

Werba: **LIV:** dhwens (pg. 159)

Pokorny: 4.dhew(ə) 'stieben, wirbeln...' (pg. 261) *as* dh(e)w(ĕ)\s 'stieben, stäuben,

wirbeln...' (pg. 268-9) **Disposition:** =#241 *as* dhwe$\underset{\wedge}{\mathrm{n}}$\s

Cognates: Suggested: Hes. *Θυστάδεσ·Βάκχαι* ['Baccantes']; also Lat. *furō* 'rase' (KEWA.ii:117). Outside of Indo-Iranian LIV lists only pGc ***dunsta*, 'Staub, Dunst'.

Remarks: Same root as #241; /ṁ/ apparently represents nasal present (P).

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247 W^R:86 √dhvan 'sound' (C:B)

Werba: dhwen (#528) **LIV:** dhwen (pg. 158)

Pokorny: dhwen (pg. 277) **Disposition:** dhwen

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248 W^R:86 √dhv$\underset{\circ}{\mathrm{r}}$ 'injure' (G:X)

Werba: dwer(H) (#106) **LIV:** dhwer (pg. 159)

Pokorny: dhwer(ə) (pg. 277) **Disposition:** dhwer(ə)

Remarks: Same root as #242 (P).

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249 W^R:87 √nakṣ 'attain' (RV:B/A)

Werba: $H_{1,2}$ne$\hat{\mathrm{k}}$\s (#557) **LIV:** $h_1$ne$\hat{\mathrm{k}}$ (pg. 250); $h_2$ne$\hat{\mathrm{k}}$ (pg. 282)

Pokorny: (e)n(e)$\hat{\mathrm{k}}$-s (pg. 316-8) **Disposition:** =#12-s

Cognates: *ἠνέχθειν* (passive aorist to *φέρω* 'wurde getragen' (P:317; Fr.i:513) reflects the root form *ne$\hat{\mathrm{k}}$, though without the -s; for which cp. perhaps Go. *bi·niuhsjan* (KEWA.ii:123; Lehmann:71#B63).

Remarks: Desiderative {-s} (P). Secondary to √na(ṁ)ś, which has no perfect recorded (W^R). Cp. ##1, 12.

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250 W^R:87 √nad 'sound' (E:C)

Werba: ned (#420) **LIV:** ned (pg. 448)

Pokorny: 2.ned (pg. 759) **Disposition:** 2.ned

Cognates: As Greek cognates P:759 lists only river-names. KEWA.ii:129 gives no cognates beyond Indo-Iranian.

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251 W^R:87 √nand 'rejoice' (E:X)

Werba: **LIV:**

Pokorny: **Disposition:** =#333

Remarks: From *mándati* #333 by assimilation (KEWA.ii:131, 580).

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252 W^R:88 √nabh 'burst' (G:B)

Werba: $h_3$nebh (#107) **LIV:** nebh (pg. 448)

Pokorny: 1.nebh (pg. 758) **Disposition:** 1.nebh

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253 W^R:88 √nam 'bend, bow' (RV:B)

Werba: nem (#108) **LIV:** 2.nem (pg. 453)

Pokorny: 2.nem (pg. 764) **Disposition:** 2.nem

Cognates: *νέμος* 'Weideplatz' (P:764); but the equation with this word and *νέμω* ['...distribute...' (LS)], Lat. *nemus* is considered hypothetical by Fr.ii:302. Presumably the semantic drift is 'bend' > 'bend in landscape contour' = 'valley' > 'grove'. LIV:453 assigns the Skt root to √2.nem 'sich neigen', but the proposed Gk cognates to √1.nem 'zuteilen'. If one wished to defend the proposed relationship, it could be pointed out that there is no branch of IE which has cognates listed under *both* of these roots. There is, however, a Tokharian cognate: nämseñc 'beugen sich' / *nemar* 'bogen', *namṣäṁ* 'beugt' (LIV).

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254 W^R:88 √nard 'bellow' (E:C)

Werba: II nard (#637) **LIV:**

Pokorny: **Disposition:** NE

Remarks: Onomatopoeia (KEWA.ii:139).

255 W^R:89 √1.naś 'be lost' (RV:A)

Werba: neḱ (#109) **LIV:** neḱ (pg. 451)

Pokorny: neḱ(pg. 762) **Disposition:** ii.neḱ

Cognates: νέκῡς ['corpse'] (P:762; Fr.ii:300)

256 W^R:89 √nah 'tie' (G:B)

Werba: II Hnaǵh (#110) **LIV:** Hnedh (pg. 227)

Pokorny: 1.ned 'zusammendrehen, knüpfen' (pg. 758) **Disposition:** neTh

Remarks: Cp. (s)nēy, 'Fäden zusammendrehen' (P:973). Note the *unaspirated* /d/ in Pokorny's main etymology, evidenced by Go. *nati*, Lat. *nōdus*; consequently this etymology is rejected here. (LIV:227 derives the Skt /dh/ from a sequence /dH/.)

257 W^R:89 √nāth, -dh 'seek aid' (G:C)

Werba: noh_3dh (#529) **LIV:**

Pokorny: 1.nā *as* nā-tha (pg. 754) **Disposition:** NE

Cognates: Unclear outside Indo-Iranian; suggestions include Gk. ὀνίνημι ['profit'], OCS *nǫžda* 'Not' (KEWA II:151).

258 W^R:90 √niṁs 'kiss' (G:A)

Werba: **LIV:** nes (pg. 454)

Pokorny: nes 'vereinigen', *reduplicated* [as *ni&n∅s*] (pg. 766) **Disposition:** nes

Cognates: Pokorny *loc cit* relates the unreduplicated *√nes to νέομαι 'komme glücklich an, kehre heim'; Fr.ii:304 thinks that this proposal "schwebt indessen semantisch ziemlich in der Luft". KEWA.ii:157 regards the derivation of √niṁs from *√nes as "nicht ganz sicher", and cites νίσομαι, a variant of νέσομαι showing the same reduplication as proposed for the

subject Sanskrit form. LIV accepts the derivation from *√nes and the relationship with *νέομαι,* and glosses Vedic *nm̥̑sate* as 'suchen auf, kommen hin'.

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259 W^R:90 √nikṣ 'pierce' (G:B)

Werba: II (H)naiǵ\s (#421) **LIV:**

Pokorny: **Disposition:** i.neyǵ\s

Cognates: No Greek cognate given, but perhaps OCS *za·nĭzati* ['cut'] (KEWA.ii:158).

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260 W^R:90 √nij 'wash' (G:A)

Werba: neyǵ (#111) **LIV:** ii.neyǵ (pg. 450)

Pokorny: neyǵ(pg. 761) **Disposition:** neyǵ

Cognates: *νίζω* < *niǵyō ['wash'] (P:761)

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261 W^R:90 √ni(n)d 'revile' (RV:A)

Werba: h$_3$neyd (#112) **LIV:** h$_3$neyd (pg. 303)

Pokorny: 1.neyd (pg. 760-1) **Disposition:** 1.neyd

Cognates: *ὄνειδος* 'Vorwurf, Schmach' (P:760; Fr.ii:394)

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262 W^R:90 √nī 'lead' (RV:B)

Werba: neyH (#311) **LIV:** neyH (pg. 450)

Pokorny: 1.ney (pg. 760) **Disposition:** 1.neyə

Remarks: Long vowel in Skt. implies a following /ə/.

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263 W^R:91 √nū̆ 'praise' (C:B)

Werba: **LIV:** newH (pg. 456)

Pokorny: 1.new (pg. 767) **Disposition:** 1.new

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264 W^R:91 √nud 'push' (RV:B)

Werba: II nawd (#114) **LIV:** 2.newd (pg. 456)

Pokorny: 2.new-d (pg. 767) **Disposition:** 2.new

Cognates: If the root is ultimately *√new, then a Greek cognate could be *νεύω* 'nicke, winke' (P:767). Fr.ii:309 calls the connection of this Greek word with *návate* 'gehen' - the direct Sanskrit reflex of *√new - "nicht ganz sicher". Furthermore, KEWA.ii:176 denies that this *√new is a component of Skt. √nud, suggesting instead a possible rhyme-formation with *tudáti* and *khudáti*, or else relationship to OCS *nuditi* 'zwingen, nötigen'. Although a derivation of *√newd 'push' = 'make go' from *√new 'go' is certainly plausible, the suggestion is not quite persuasive enough to establish *νεύω* as a cognate; so Skt. √nud is given rank of "B" here.

Remarks: Pokorny considers the allegedly appended /d/ to be a present-stem formant, *not* a root-extension.

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265 W^R:92 √nr̥t 'dance' (E:C/B)

Werba: $h_2$ner\t (#423) **LIV:**

Pokorny: 2.(s)ner 'drehen, winden' (pg. 975) **Disposition:** 2.(s)ner\t

Cognates: *Nert* as such is only Indo-Iranian, but is probably a /t/-extension of a root *√ner 'lebenskraft' (KEWA.ii:177).

Remarks: Pokorny gives no information on origin of final /t/; but cp. *narma*, 'Scherz'. He suggests that 2.(s)ner is itself an extension of √snē 'Fäden zusammendrehen...' (pg. 973), and cp. also 3.ner 'eindringen, untertauchen...' (pg. 766).

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266 W^R:92 √ned 'flow' (G:B)

Werba: neyd (#558) **LIV:** neyd (pg. 449)

Pokorny: 2.neyd (pg. 761) **Disposition:** 2.neyd

Remarks: Cp. #262

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267 W^R:92 √pac 'cook' (RV:A)

Werba: pek̑ (#115) **LIV:** 1.pek̑ (pg. 468)

Pokorny: pek̑(pg. 798) **Disposition:** pek̑

Cognates: *πέσσω*, *πέπτω* ['cook'] (P:798)

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268 W^R:93 √paj 'start' (RV:A)

Werba: $pah_2ĝ$ (#561) **LIV:** $peh_2ĝ$ (pg. 461)

Pokorny: pă̆k̂, pă̆ĝ(pg. 787) **Disposition:** paĝ

Cognates: *πήγνυμι* 'befestige...' (P:787), for which Fr.ii:477, 526 gives no Greek cognate. This fits nicely with KEWA's suggested meaning, below. KEWA.ii:186 also connects with Lith *pẽžinti* 'langsam, zögernd gehen'.

Remarks: N.b. = LIV's 'fest werden', and We's √pā̆j; but the listed principal parts make it clear that the roots are the same. The word is a *hapax legomenon* at RV 10.105.3, possibly meaning 'zurückbleiben' (KEWA *loc cit*).

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269 W^R:93 √paṭh 'read' (C:X)

Werba: **LIV:**

Pokorny: **Disposition:** =#291

Remarks: Variant of #291 (KEWA.ii:193).

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270 W^R:93 √paṇ 'bargain' (G:B)

Werba: **LIV:**

Pokorny: **Disposition:** ii.(s)pelə

Cognates: Lith. *pelnýti* 'gewinnen' (KEWA.ii:194).

Cognates: A variant of *pr̥ṇāti* 'give' (split by KEWA from the homophonous word for

'fill'). The etymon is *(s)pel. An alternative possibility relates the present headword to *πέρνημι* 'verkaufen' (LIV:474 «perh$_2$»), but KEWA prefers the former possibility on semantic grounds. (KEWA *loc cit*, ii:330).

Remarks: The /ə/ is implied by the long /ā/ in the inflected form.

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271 W^R:94 √1.pat 'fly, fall' (RV:A)

Werba: pet(H) (#312) **LIV:** peth$_1$ (pg. 477)

Pokorny: 2.pet(ə), pt$^{ē}/_{ō}$ (pg. 825-6) **Disposition:** 2.pet(ə)

Cognates: Hom. *πέτομαι* ['fly'] (P:825)

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272 W^R:94 √path 'go' (G:A)

Werba: **LIV:**

Pokorny: pent 'treten' (pg. 808) **Disposition:** pent

Cognates: *πόντος* ['sea'] (P:809)

Remarks: "No real root" (W^R).

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273 W^R:94 √pad 'go' (RV:A)

Werba: ped (#116) **LIV:** ped (pg. 458)

Pokorny: 2.p$^e/_o$d, p$^{ē}/_{ō}$d (pg. 790-2) **Disposition:** ped

Cognates: *πούς* (Gen. *ποδός*) ['foot'] (P:790)

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274 W^R:95 √pan 'admire' (RV:C)

Werba: II panH ;XRF (#313) **LIV:**

Pokorny: **Disposition:** pen

Cognates: Unclear; *σπένδω* 'verspreche, bringe ein Trankopfer dar' suggested (KEWA.ii:208); but Fr.ii:763*f* lists no Skt. equivalent for this word.

275 W^R:95 √(s)paś 'see' (RV:A)

Werba: spek̂ (#234, (560)) **LIV:** spek̂ (pg. 575)

Pokorny: spek̂(pg. 984) **Disposition:** spek̂

Cognates: σκέπτομαι (showing metathesis) 'schaue' (P:984)

Remarks: Cp. sp$^e/_o$ĝ'schar hin- oder zusehen' (P:981).

276 W^R:95 √1.pā 'drink' (RV:A)

Werba: poh$_3$ (#316) **LIV:** peh$_3$(y) (pg. 462)

Pokorny: 2.pō(y), pī (pg. 839-40) **Disposition:** 2.pō(y)

Cognates: πίνω ['drink'] (P:840)

277 W^R:96 √2.pā 'protect' (G:A)

Werba: pah$_2$/poh$_3$ (#314) **LIV:** peh$_2$(y) (pg. 460)

Pokorny: 1.pō(y), pī (pg. 839) **Disposition:** 1.pō(y)

Cognates: ποιμήν ['shepherd'], ποιμαίνω (P:839)

278 W^R:96 √pĭ 'swell' (RV:A)

Werba: peyH (#424) **LIV:** 1.peyH (pg. 464)

Pokorny: pey(ə), pĭ (pg. 793) **Disposition:** pey(ə)

Cognates: πῖμελή 'Fett' (P:793; Fr.ii:532)

Remarks: Note also √pyā 'fill up' W^R:101.

279 W^R:97 √pinv 'fatten' (RV:X)

Werba: **LIV:** (pg. 464)

Pokorny: **Disposition:** =#278

Remarks: Secondary to #278 (Whitney); its {-nu-} present (KEWA.ii:282, also LIV).

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280 W^R:97 √piś 'adorn' (RV:A)

Werba: peyk̂ (#435) **LIV:** peyk̂ (pg. 465)

Pokorny: 1.pey$\frac{k}{g}$ (pg. 794-5) **Disposition:** 1.peyk̂

Cognates: *ποικίλος* ['variegated'] (P:794; Frii:572, citing the transparent derivative *peśa* 'Schmuck, Zierat')

Remarks: Also -k̂ (P).

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281 W^R:97 √piṣ 'crush' (RV:A)

Werba: peys (#119) **LIV:** peys (pg. 466)

Pokorny: 1.peys (pg. 796) **Disposition:** 1.peys

Cognates: *πτίσσω* 'stampfe' (P:796; Fr.ii:614)

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282 W^R:98 √pis 'stretch' (B:X)

Werba: **LIV:**

Pokorny: **Disposition:** NE

Cognates: Unclear (KEWA.ii:290).

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283 W^R:98 √put 'scale' (G:X)

Werba: **LIV:**

Pokorny: **Disposition:** NE

Cognates: Unclear (KEWA.ii:299*f.*

Remarks: "Late bastard root" (W^R).

284 W^R:98 √puṣ 'thrive' (RV:A)

Werba: II pawš; XRF (#120) **LIV:** $h_3$pews (pg. 303)

Pokorny: 1.p(h)$^e/_o$w 'Schallwort ... aufblasen, aufgeblasen, angeschwollen, aufgebauscht' *as* p(h)u\s (pg. 847-8) **Disposition:** 1.pew *as* pew\s

Cognates: *φῡσάω* 'blase' (P:848; KEWA.ii:318)

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285 W^R:99 √pū 'cleanse' (RV:A)

Werba: pewH (#318) **LIV:** 1.pewH (pg. 480)

Pokorny: i.pew(ə), pŭ (pg. 827) **Disposition:** i.pew(ə)

Cognates: *πτύον* 'Wurfschaufel' ("unsicher", P:827; Fr.ii:616)

Remarks: Pokorny lists under zero-grade, so doesn't require numerical prefixed to distinguish from 1,2.√pew; prefixed "i." here is supplied by the author.

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286 W^R:99 √pūj 'reverence' (E:C)

Werba: **LIV:**

Pokorny: **Disposition:** NE

Cognates: Connections beyond Indo-Iranian are uncertain; perhaps Russian *pugát'* 'erschrecken' (KEWA.ii:320); but this seems to fit better with *√pewĜ'stechen' > Lat. *pungō, -ere* 'stechen, verletzen', Gk. *πύγμη* 'Faust, Faustkampf' (LIV:480).

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287 W^R:99 √pūy 'stink' (G:A)

Werba: **LIV:** 2.pewH (pg. 480)

Pokorny: 2.pew(ə), pŭ (pg. 848-9) **Disposition:** 2.pew(ə)

Cognates: *πυον* / *πυος* 'pus' (Watkins:69«2.pŭ»); *πῡ́θω* 'mache faulen'; also Lat. *pūtēo* ['stink' (Smith)]; Go. *fūls* ['foul'] (KEWA.ii:322).

288 W^R:100 √1.pr̥(n) 'fill' (RV:A)

Werba: **LIV:** $pleh_1$ (pg. 482)

Pokorny: 1.pel(ə), plē (pg. 798-800) **Disposition:** 1.pelə

Cognates: πολύς ['many'] shows the o-grade of the "Theme I" of this root (LIV *loc cit* n.1)

Remarks: Cp. #292.

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289 W^R:101 √pr̥c 'mix' (RV:B)

Werba: II paL$\frac{k}{\hat{c}}$;XRF (#122) **LIV:** perk (pg. 476)

Pokorny: 1.perk, prek (pg. 820) **Disposition:** 1.perk

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290 W^R:102 √prach 'ask' (B:B)

Werba: **LIV:** prek̂ (pg. 490)

Pokorny: 4.perk̂, prek̂(pg. 821-2) **Disposition:** 4.perk̂ *as* S√prek̂

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291 W^R:102 √prath 'spread' (RV:A)

Werba: $pleth_2$ (#511) **LIV:** $pleth_2$ (pg. 486)

Pokorny: pl{ă̆,ē̆,ŭ̆,ə}t (pg. 833) **Disposition:** pel\t *as* S√plet

Cognates: πλατύς ['broad'] (P:833)

Remarks: Cp. pl{ă̆,ŏ,e,ə}k and pl$^{\bar{a}}/_{\partial}$, peləg 'breit u. flach ausbreiten' (P:831).

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292 W^R:102 √prā 'fill' (RV:A)

Werba: $pleh_1$ (#512) **LIV:** (pg. 482)

Pokorny: **Disposition:** =#288 (schwebeablaut)

Cognates: *πίμπλημι* ['fill'],'*ἔ·πλησα* 'füllte' (P:799; LIV:482)

Remarks: Secondary to #288 (W^R; LIV).

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293 W^R:102 √prī 'please' (RV:A)

Werba: preyH (#320) **LIV:** preyH (pg. 490)

Pokorny: pr$^a/_\partial$, pri (pg. 844) **Disposition:** praəy

Cognates: *πραΰς* 'sanft, mild' (P:844; LIV); Fr.ii:588 considers this "unerklärt". KEWA.ii:378 lists no Greek cognates, but OE *fríd* ['peace'].

Remarks: Long /ī/ requires /ə/. LIV (*loc cit* n.1) remarks that the Greek may justify a proto-form *preh$_2$y, which is adopted here with the laryngeal translated to shwa.

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294 W^R:103 √pru 'flow' (B:X)

Werba: **LIV:**

Pokorny: **Disposition:** =#297

Remarks: By-form of #297 (W^R).

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295 W^R:103 √pruth 'snort' (G:B/A)

Werba: prewth$_2$ (#321) **LIV:** prewth$_2$ (pg. 494)

Pokorny: 1.per(ə), pre 'sprücken, spritzen, prusten, schnauben' *as* pr-ew\t(h) (pg. 809-10) **Disposition:** 1.per(ə) *as* Z√pr-ew\t(h)

Cognates: *πμ́ &πρη-μι* 'zünde an' shows the unextended root (P:809; Fr.ii:539). OE *ā·frēoðan* shows the extended form (LIV).

Remarks: N.b. LIV's *√prew 'springen' (pg. 493), perhaps showing the root without the apical element.

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296 W^R:103 √pruṣ 'sprinkle' (G:B/A)

Werba: prews(H) (#427) **LIV:** prews (pg. 493)

Pokorny: 1.per(ə), pre 'sprücken, spritzen, prusten, schnauben' *as* pr-ew\s (pg. 809-10,846) **Disposition:** =#295\s

Cognates: Cognate with ON *friósa* '(ge)frieren', perhaps also Lith. *prausiù / praũsti* 'waschen' (LIV). See also the corresponding entry under #295.

Remarks: See corresponding entry under #295.

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297 W^R:103 √plu 'float' (B:A)

Werba: **LIV:** plew (pg. 487)

Pokorny: 1.pel(ə),plē 'fließen, schwimmen' (P:798) *as* plew (pg. 835-7) **Disposition:** 1.pel(ə) *as* S√pl\ew

Cognates: πλέ(ϝ)ω ['float'] (P:836)

Remarks: Cp. pel(ew) 'füllen voll' (P:799); also #294.

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298 W^R:104 √pluṣ 'burn' (G:B)

Werba: **LIV:**

Pokorny: prews (pg. 846) **Disposition:** prews

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299 W^R:104 √psā 'devour' (G:A)

Werba: (#598) **LIV:** bhseH (pg. 98)

Pokorny: 1.bhes 'abreiben, zerreiben, ausstreuen' *as* ps⧼ā, ō, ə, y⧽, psī (pg. 145) **Disposition:** 1.bhes *as* LZ√psā\y

Cognates: ψάω 'reibe' (P:145; Fr.ii:1136)

Remarks: Secondary to √bhas, which has no perfect (W^R:109). So Werba: √bhas (We#432) < *√bhes. LIV's form represents s√bhes.

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300 W^R:104 √phakk 'swell' (G:X)

Werba: **LIV:**

Pokorny: **Disposition:** NE

Remarks: "Artificial" (W^R).

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301 W^R:104 √phaṇ 'spring' (G:X)

Werba: ph_2an (#428) **LIV:**

Pokorny: **Disposition:** NE

Cognates: Unclear (KEWA.ii:390).

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302 W^R:105 √1.phal 'burst' (E:A)

Werba: (s)pel(H) (#429) **LIV:** 2.(s)pelH (pg. 576)

Pokorny: 1.(s)p(h)el (pg. 985-6) **Disposition:** 1.(s)pel

Cognates: Hes. *σφαλάσσειν·τέμνειν* ['cut']; *σφολάς* 'abgezogenes Fell' (P:985; Fr.ii:771)

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303 W^R:105 √2.phal 'fruit' (C:X)

Werba: **LIV:**

Pokorny: **Disposition:** =#302

Remarks: Ultimately < #302, via a derived noun for 'fruit' (W^R).

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304 W^R:105 √bandh 'bind' (AV:A)

Werba: bhendh (#430) **LIV:** bhendh (pg. 75)

Pokorny: bhendh (pg. 127) **Disposition:** bhendh

Cognates: *πεῖσμα* 'Tau, Seil' (P:127; Fr.ii:492)

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305 W^R:106 √bādh 'oppress' (RV:B)

Werba: II b(h)ādh ;XRF (#640) **LIV:** $bheh_1dh$ (pg. 68)

Pokorny: 2.bhedh (pg. 114) **Disposition:** 2.bhēdh

Remarks: Long vowel in root per Skt *bā́dhate* (P), also Lith. it bėdà 'Not, Kummer'; but Pokorny cites root with short vowel, assuming that Go. *bida* 'Gebet' etc. are cognate.

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306 W^R:106 √budh 'know; wake' (RV:A)

Werba: bhewdh (#125) **LIV:** bhewdh (pg. 82)

Pokorny: bhewdh (pg. 150-2) **Disposition:** bhewdh

Cognates: *πεύθομαι* (P:151; KEWA.ii:449)

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307 W^R:107 √1.b̥rh 'make big, strong' (RV:B)

Werba: bheLĝh (#126) **LIV:** bherĝh (pg. 78)

Pokorny: bhereĝh (pg. 140-1) **Disposition:** bherĝh

Remarks: Possibly cognate with 1.bher(ə) 'bear' (P:128, 131)

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308 W^R:108 √bhaj 'divide, share' (RV:A)

Werba: bhaǧ (#127) **LIV:** bhag (pg. 65)

Pokorny: 1.bhag (pg. 107) **Disposition:** 1.bhag

Cognates: *φαγεῖν* 'essen' (P:107; Fr.ii:980)

Remarks: Note also secondary formation of √bhaj, bhakṣ, W^R:107.

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309 W^R:108 √bhañj 'break' (RV:B)

Werba: bhag (#128) **LIV:** bheg (pg. 66)

Pokorny: bhe(n)g (pg. 114-5) **Disposition:** bhe(n)g

Remarks: Nasalized form of #308? (W^R)

310 W^R:108 √bhaṇ 'speak' (C:A)

Werba: bhenH (#599) **LIV:** 2.bheh$_2$ (pg. 69)

Pokorny: 6.bhel (pg. 123) **Disposition:** 2.bhā

Cognates: *φημί* ['I say'] (P:105)

Remarks: Late form of √bhan, for which no perfect is recorded (W^R). LIV:69 connects with Gk. *φημί*, Lat. fārī, deriving the /n/-form from *bhn̥éh$_2$, and rejecting Werba's root *bhen(H) (pg. 70 n.6). N.b. also *√bhah$_2$, etymon of We#600 √bhā; and #313. Pokorny derives from * *bhel-no-*; his 2.bhā (pg. 105-6) corresponds to LIV's etymon.

311 W^R:109 √bhaṣ 'bark' (G:C/B)

Werba: ONO (#431) **LIV:**

Pokorny: 6.bhel\s (pg. 123) **Disposition:** 6.bhel\s

Remarks: Pokorny represents the juncture as "-". He cites only a participial form *bhaṣáḥ*; cp. W^R.

312 W^R:110 √bhā 'shine' (E:A)

Werba: bhah$_2$ (#323) **LIV:** 1.bheh$_2$ (pg. 68)

Pokorny: 1.bh-[ā, ō, ə]- (pg. 104-5) **Disposition:** 1.bhā

Cognates: *φαίνω* < **φανjω* (P:104; Fr.ii:984)

313 W^R:110 √bhāṣ 'speak' (B:C/A)

Werba: **LIV:**

Pokorny: 6.bhel\s (pg. 123). **Disposition:** =#310\s

Remarks: Cognate with #310, q.v. with refs (W^R). Pokorny gives no explanation for the difference in vowel length between this and #311; and represents the juncture as "-".

314 W^R:110 √bhās 'shine' (E:A)

Werba: **LIV:**

Pokorny: 1.bh{ā,ø,e}\s (pg. 105) **Disposition:** =#312\s

Cognates: *φωστῆρ* 'Glanz, Leuchte' (P:105)

Remarks: Secondary to #312 (W^R).

315 W^R:111 √bhikṣ 'beg' (B:X)

Werba: **LIV:**

Pokorny: **Disposition:** =#308

Remarks: Desiderative of #308 (W^R; LIV:65).

316 W^R:111 √bhid 'split' (RV:B)

Werba: bheyd (#130) **LIV:** bheyd (pg. 70)

Pokorny: bheyd (pg. 116-7) **Disposition:** bheyd

Remarks: Possibly an extended form of bheyə, pg. 117 (P).

317 W^R:111 √bhī(ṣ) 'fear' (RV:B)

Werba: bheyH (#324) **LIV:** $bheyh_2$ (pg. 72)

Pokorny: bh{ōy, əy,ī} (pg. 161-2) **Disposition:** bheəy

Cognates: Suggested: *πίθηκος* ['ape'], also Lat. *foedus* ['foul'] (P:162; Fr.ii:534; KEWA.ii:471*f*); but the strained semantics forbid acceptance of the Greek cognate here.

Remarks: Skt. long vowel implies a following /ə/.

318 W^R:112 √1.bhuj 'bend' (RV:B)

Werba: bhewg(h) (#132) **LIV:** bhewgh (pg. 85)

Pokorny: 3.bhewg(h) (pg. 152-3) **Disposition:** 3.bhewg(h)

Cognates: Meillet suggests πτύσσω ['crouch' (LS)] (KEWA:ii:506); Fr.ii:616 gives no Skt cognate for this.

319 W^R:112 √2.bhuj 'enjoy' (RV:B)

Werba: bhewg (#131) **LIV:** 2.bhewg (pg. 84)

Pokorny: 4.bhewg (pg. 153) **Disposition:** 4.bhewg

320 W^R:113 √bhū 'be' (RV:A)

Werba: $bhuh_2$ (#325) **LIV:** $bhweh_2$ (pg. 98)

Pokorny: bhewə, bhŏw, bhū, $bhw^{\bar{e}}/_{\bar{a}}$ (pg. (99), 146-50) **Disposition:** bhewə

Cognates: 'ἐ·φῡ ['bring forth' (LS)] (P:146)

Remarks: Note also P:98 √b(h)ew 'aufblasen, schwellen'.

321 W^R:113 √bhūṣ 'attend upon, adorn' (G:A/C)

Werba: II bhūš (#642) **LIV:**

Pokorny: **Disposition:** =#320\s

Remarks: Secondary to #320 (W^R; We).

322 W^R:114 √bhr̥ 'bear' (RV:A)

Werba: bher (#133) **LIV:** bher (pg. 76)

Pokorny: 1.bher(ə), bherē (pg. 128-32) **Disposition:** 1.bherə

Cognates: $\phi\acute{\epsilon}\rho\omega$ ['bear'] (P:129)

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323 W^R:114 $\sqrt{}$bhr̥jj 'roast' (G:A)

Werba: bherĝ (#134) **LIV:** bherĝ (pg. 78)

Pokorny: 2.bher 'aufwallen, sich heftig bewegen, wallen, kochen' *as* bhereĝ (="6.bher") (pg. 137) **Disposition:** 2.bher\ĝ

Cognates: $\phi\rho\acute{\upsilon}\gamma\omega$ 'röste, dörre, brate'; but formal problems with the vowel, the Sanskrit implying *bhereĝ, the Greek *bhrūg (P:137; Fr.ii:1046). Perhaps the Skt and Gk can be brought into alignment by assuming a doublet: *bher\ĝ*beside* *bher\w\ĝ> Z$\sqrt{}$*bhruĝ(Author).

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324 W^R:115 $\sqrt{}$bhyas 'fear' (G:B)

Werba: **LIV:**

Pokorny: **Disposition:** =#317 *as* Z$\sqrt{}$\es

Remarks: Secondary to #317 (W^R). Extension in /-s/ seems present also in Germanic and Baltoslavic (KEWA.i:472).

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325 W^R:115 $\sqrt{}$bhra(ṁ)ś 'fall' (G:B)

Werba: II bhranć (#135) **LIV:**

Pokorny: bhre$\frac{\text{n}}{\Lambda}$k̂ (pg. 168) **Disposition:** bhre$\frac{\text{n}}{\Lambda}$k̂

Remarks: /n/ is perhaps the nasal present formant (P).

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326 W^R:115 $\sqrt{}$bhram 'wander' (E:B/A)

Werba: bhrem(H) (#530) **LIV:** bhremH (pg. 94)

Pokorny: 2.bher 'aufwallen', 'bewegt sich' *as* bhre\m (pg. 132-3) **Disposition:** =#323 *as* S$\sqrt{}$bhre\m

327 W^R:115 √bhrāj 'shine' (E:B)

Werba: bhrEHĝ (#643) **LIV:** bhreh$_1$ĝ (pg. 92)

Pokorny: bherəĝ, bhrēĝ (pg. 139-40) **Disposition:** bherəĝ *as* S√bhreəĝ

Cognates: *φλέγω* ['burn'] has been suggested, but Gothic *bairhts* 'glänzend, hell' and Lithuanian *bré´kšti* 'dämmern' show that the protoform of the Skt had /r/, not /l/ (KEWA.ii:530).

Remarks: Cp. bherək̂, bhrēk̂'glänzen' (P:141).

328 W^R:116 √bhrī 'consume' (G:B/A)

Werba: bhreyH (#327) **LIV:** bhreyH (pg. 92)

Pokorny: 3.bher 'mit scharfem Werkzeug bearbeiten; ritzen ...' (pg. 133) *as* bhrēy, bhrī 'mit scharfem Werkzeug schneiden' (pg. 166-7) **Disposition:** 3.bher *as* bhrēy

Cognates: The root, without the /y/-extension, is seen in Hes. *φάρσαι·σχισαι* ['split', aorist of *σχίζω* (LS)] (P:134; Fr.ii:995)

Remarks: P:133, 3.bher 'schneiden'.

329 W^R:116 √bhres 'totter' (G:B/A)

Werba: **LIV:**

Pokorny: 2.bher 'aufwallen', 'bewegt sich' *as* bher\s (pg. 133). **Disposition:** =#323\s

330 W^R:116 √ma(ṁ)h 'be great, bestow' (RV:A)

Werba: magh (#136; 568) **LIV:** magh (pg. 422)

Pokorny: mă̆gh (pg. 695) **Disposition:** magh

Cognates: *μέγιστος* ['greatest'] (KEWA.ii:610)

331 W^R:116 √majj 'sink' (E:A)

Werba: mezg (#566) **LIV:** mesg (pg. 441)

Pokorny: 1.mezg (pg. 745-6) **Disposition:** 1.mesg

Cognates: *μίσγειν* 'vermengen, verbinden < *mi&msg- (KEWA.ii:549; "unsicher", P:746)

332 W^R:117 √ma(n)th 'shake' (AV:A)

Werba: menth_2 (#330) **LIV:** menth_2 (pg. 438)

Pokorny: 1.me(n)th (pg. 732) **Disposition:** 1.me(n)th

Cognates: *μόθος* 'Schlachgetrümmel' (P:732; but formal problems, Fr.ii:249)

333 W^R:118 √ma(n)d 'exhilarate' (RV:A)

Werba: med (#433) **LIV:** 2.med (pg. 423)

Pokorny: mad (pg. 694-5) **Disposition:** mad

Cognates: *μαδάω* 'zerfließen' (P:694; Fr.ii:158)

Remarks: Cp. #360

334 W^R:118 √man 'think' (RV:A)

Werba: men (#137) **LIV:** 1.men (pg. 435)

Pokorny: 3.men (pg. 726-8) **Disposition:** 3.men

Cognates: *μαίνομαι* 'rase' (P:727; Fr.ii:160)

335 W^R:119 √1.mā 'measure' (RV:A)

Werba: meh_1 (#331) **LIV:** meh_1 (pg. 424)

Pokorny: 2.mē (pg. 703-4) **Disposition:** 2.mē

Cognates: *μητιάω* 'beschliesse' (P:703; Fr.ii:233)

Remarks: Same as #336 (W^R). Cognate with 1.mē (P).

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336 W^R:119 √2.mā 'exchange' (G:X)

Werba: (#331) **LIV:**

Pokorny: **Disposition:** =#335

Remarks: Same as #335 (W^R).

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337 W^R:119 √3.mā 'bellow' (RV:C)

Werba: II maH(y) (#332) **LIV:**

Pokorny: **Disposition:** NE

Cognates: Onomatopoeic. Suggestions are *μιμίζω* 'wiehere' (not found in Frisk or LSJ) and Hittite *mema-* 'sprechen', which LIV:435 assigns to √1.men (KEWA.ii:639). No convincing cognates.

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338 W^R:120 √mārg 'chase' (G:X)

Werba: **LIV:**

Pokorny: **Disposition:** NE

Cognates: No good etymologies beyond Indoiranian (KEWA.ii:626).

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339 W^R:120 √mi 'fix' (RV:B)

Werba: Hmey (#138) **LIV:** 1.mey (pg. 426)

Pokorny: 1.mey (pg. 709) **Disposition:** 1.mey

340 W^R:120 √mikṣ 'mix' (RV:C/A)

Werba: mik̂\s (#492) **LIV:** meyk̂ (pg. 428)

Pokorny: mey-k̂(pg. 714) **Disposition:** #342\s

Remarks: Extension per KEWA.ii:641; LIV:428 n.1, but the entry under *Desiderative* takes it as (possibly) a desiderative. The suffixal nature of -k̂ in Pokorny's form seems supported only by Lat. *miscēo* < *miØ-sk̂-o.

341 W^R:120 √mith 'alternate, altercate' (RV:B)

Werba: $(h_2)meyth_2$ (#333) **LIV:** $meyth_2$ (pg. 430)

Pokorny: 2.mey\t(h) (pg. 715) **Disposition:** 2.mey\t(h)

Remarks: Cp. 2.mey 'wechseln, täuchen' P:710 (the only reason to assume an extension \t); also mey-ǵ'wechseln, täuchen" P:713.

342 W^R:121 √mil 'combine' (C:A)

Werba: **LIV:** **LIV:** ⇒meyk̂ (pg. 428)

Pokorny: **Disposition:** meyk̂

Cognates: *μίγνῡμι* ['mix'] (P:714).

Remarks: A variant of *miślati* 'vermischt sich', which < √meyk̂(LIV:428; KEWA.ii:640); the /la/ is apparently a nominal suffix (Burrow:136, note also LIV *loc cit* "miśra"). Cp. #340.

343 W^R:121 √miṣ 'wink' (C:C/B)

Werba: II (#434) **LIV:** meys (pg. 429)

Pokorny: mey *as* meys (pg. 714) **Disposition:** ii.mey\s

Cognates: No Greek, but Latin shows *micāre* 'zuckend bewegen, funkeln, blinken', with a

/k/-extension. (KEWA.ii:641). The /s/-forms seem to be only Indo-Iranian (LIV).

Remarks: √mey inferred from 1.mey$\frac{gh}{k}$ 'flimmern, blintzeln' (P:712).

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344 W^R:121 √mih '[urinate]' (G:A)

Werba: h$_3$meyĝh (#140) **LIV:** h$_3$meyĝh (pg. 301)

Pokorny: meyĝh (pg. 713) **Disposition:** meyĝh

Cognates: *ὀμείχειν* ['urinate'] (P:713)

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345 W^R:121 √mĭ̆ 'damage' (RV:A)

Werba: meyH (#334) **LIV:** meyH (pg. 427)

Pokorny: 5.mey (pg. 711) **Disposition:** 5.meyə

Cognates: *μινύθω* 'mindere' (P:711; KEWA.ii:636)

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346 W^R:122 √mīl 'wink' (C:C/B)

Werba: II mižd (#644) **LIV:**

Pokorny: meys (pg. 714) **Disposition:** =#343\d

Remarks: Same root as #343: mīl < *miẓḍ < **miṣd (P; KEWA.ii:644).

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347 W^R:122 √muc 'release' (RV:A)

Werba: mewk (#141) **LIV:** mewk (pg. 443)

Pokorny: 2.mew$\frac{g}{k}$ (pg. 744) **Disposition:** 2.mewk

Cognates: *ἀπο·μύσσω* 'schneuze...'; *μύξ* 'Schleim' (P:744; LIV; but rejected by Fr.ii:277)

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348 W^R:123 √mud 'be merry' (RV:B)

Werba: (H)m$^a/_e$wd (#436) **LIV:** mewd (pg. 443)

Pokorny: 1.mewə, mŭ 'feucht, moderig, netzen, unreine Flußigkeit ... beschmutzen, waschen, reinigen [sic!]' *as* mew\d 'munter' (pg. 741-2) **Disposition:** mewd

Cognates: *μυδάω* 'bin feucht' has been proposed, and is accepted by Frisk; but there is no similarity in meaning and this suggestion is not adopted here (KEWA.ii:693; Fr.ii:263).

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349 W^R:123 √muṣ 'steal' (C:B)

Werba: II mawšH (#335) **LIV:** mewsH (pg. 445)

Pokorny: 2.mew(ə) 'fortschieben' *as* mew\s (pg. 743) **Disposition:** 2.mew(ə) *as* mew\s

Cognates: Pokorny *loc cit* attempts to connect with *ἀμεύσασθαι* 'vorankommen, übertreffen', *ἀμύνω* 'wehre ab', etc; but this is unsatisfactory on semantic grounds. LIV lists Tokharian but no Greek cognates. Also (Old?) Franconian *chrēo-mōs-ido* 'Leichenberaubung' (KEWA.ii:658). Skt. *mīvati* 'scheibt', Lat. *movēre* show unextended root form; the /s/ appears only in the subject word (P).

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350 W^R:123 √muh 'be crazed' (B:C)

Werba: II maw-[gh, ǰh, ǵh]- (#142) **LIV:**

Pokorny: **Disposition:** NE

Cognates: Unclear outside Indoiranian (KEWA.ii:662).

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351 W^R:124 √mūr(ch) 'thicken' (E:X)

Werba: **LIV:**

Pokorny: **Disposition:** NE

Cognates: A connection has been proposed with *βρότος*, in its *possible* meaning 'geronnenes Blut' (KEWA.ii:665).

352 W^R:124 √1.mr̥ 'die' (RV:A)

Werba: mer (#143) **LIV:** mer (pg. 439)

Pokorny: 4.mer(ə) (pg. 735) **Disposition:** 4.mer(ə)

Cognates: ἄ·μβροτος ['immortal'] (P:735)

Remarks: Same as 5.mer (P).

353 W^R:124 √2.mr̥(n) 'crush' (RV?:A)

Werba: $melh_2$ (#336) **LIV:** $melh_2$ (pg. 432)

Pokorny: 1.(s)mel(ə), mlē (pg. 716-7) **Disposition:** 1.(s)mel(ə)

Cognates: μύλη 'Mühle'; ἀμαλός (P:716; Fr.ii:269)

Remarks: Cp. #357. A few reflexes, mostly Germanic but some Baltic, show initial /s/: Norwegian *smola* 'zermahlmen'; OSwedish *smola, smule* 'Brocken' (vs. Icelandic *moli*); OHG *smelzan* 'zerfließen, schmelzen'; Lith *smėlỹs* 'Sand' (P:717, 718)

354 W^R:124 √mr̥ks̯ 'stroke' (RV:X)

Werba: **LIV:**

Pokorny: **Disposition:** =#355

Remarks: KEWA.ii:593 gives no separate listing for a form in /-s/; secondary to #355 (W^R).

355 W^R:125 √mr̥j 'wipe' (RV:A)

Werba: $H_{2,3}$meLĝ (#437) **LIV:** $h_2$merĝ (pg. 280)

Pokorny: 1.merĝ(pg. 738) **Disposition:** 1.merĝ

Cognates: αμέργω ['*pluck* or *pull*' (LS)] (P:738)

356 W^R:125 √m̥ṛḍ 'be gracious' (RV:C/B)

Werba: mers\d (#438) **LIV:** mers\d (pg. 440*f* n1)

Pokorny: mĕlĝ'abstreifen, wischen' [sic!] (pg. 722) **Disposition:** =#359\d

Cognates: Often connected with the words for 'milk', 'rub', cp. 1,2.melk (P:723*f*), 1.merĝ (P:738); but KEWA.ii:672 suggests separating them. This view is followed here; the divergence in meaning makes a connection unpersuasive. KEWA and LIV *locc cit* suggest a derivation via root-extension from #359. No direct cognates beyond Indoiranian.

Remarks: For the */sd/ cp. Avestan *mərəždā* 'versehen' (P).

357 W^R:126 √m̥rd 'rub, crush' (E:A)

Werba: merd(H) (#439) **LIV:** meld (pg. 431)

Pokorny: 1.mel\d (pg. 718) **Disposition:** =#353\d

Cognates: *ἀμαλδύνω* ['soften']; *μέλδω* 'schmelze' (P:718; KEWA.ii:676)

Remarks: Cp. #353.

358 W^R:126 √m̥ṛś 'touch, feel' (RV:A)

Werba: melk̂ (#146) **LIV:** Hmelk̂ (pg. 226)

Pokorny: merk̂(pg. 739) **Disposition:** merk̂

Cognates: *μάρπτω* 'ergreifen' (P:739; Fr.ii:178)

Remarks: Cp. 1.melk 'worüber streichen', 2.melk 'naß' (P:724).

359 W^R:126 √m̥ṛṣ 'not heed' (RV:B)

Werba: mers (#440) **LIV:** mers (pg. 440)

Pokorny: 6.mer 'stören, ärgern, vernachlässigen, vergessen' *as* mer\s (pg. 737-8) **Disposition:** 6.mer\s

Remarks: Identical reference numbers in Werba and LIV are coincidence, not typographic error. Cp. 4.mer 'sterben', 5.mer '(auf)reiben'.

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360 W^R:127 √mid 'be fat' (G:A)

Werba: mazd (#570) **LIV:** masd (pg. 422)

Pokorny: mad [sic] (pg. 694) **Disposition:** masd

Cognates: *μαζός* 'Brustwarze' (LIV)

Remarks: Cp. #333. The Skt. root is actually *med*, with /e/ < */as/ / _/d/, and *not* as Whitney and the Sanskrit grammarians suppose, representing a full-grade */ay/. The Skt. zero-grade forms with /i/ are grammarians' fictions based upon this mistaken assumption.

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361 W^R:127 √mnā 'note' (G:A)

Werba: $mneh_2$ (#447) **LIV:**

Pokorny: 3.men\ə (pg. 726-7) **Disposition:** =s√#334

Cognates: *μι &μνήσκω* 'errinere' (P:727; Fr:ii:240)

Remarks: Secondary to #334 (W^R).

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362 W^R:127 √myakṣ 'be situated' (RV:C)

Werba: **LIV:** myek̂s (pg. 445)

Pokorny: - **Disposition:** myek̂s

Cognates: No good cognates beyond Indoiranian (KEWA.ii:695).

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363 W^R:128 √mLuc, mlup 'set' (B:X)

Werba: **LIV:**

Pokorny: **Disposition:** NE

Cognates: No cognates outside Indoiranian (KEWA.ii:698).

364 W^R:128 √mlā 'relax' (E:A)

Werba: **LIV:**

Pokorny: 1.(s)mel(ə), mlē (pg. 716) **Disposition:** 1.(s)mel(ə) (schwebeablaut)

Cognates: ἀμβλύς ['blunt, dulled...' (LS)] < *Z√m̥l-u-s ? (Author).

Remarks: Cp. ##353, 357.

365 W^R:128 √mlech 'speak barbarously' (G:X)

Werba: **LIV:**

Pokorny: **Disposition:** NE

Cognates: A suggested cognate is ἀμβλακεῖν (per LSJ an early and Doric form of ἀμπλακεῖν) 'fehlen', which Greek form Fr.i:89,95 calls unclear. Probably foreign. (KEWA.ii:699).

366 W^R:129 √yaj 'offer' (RV:A)

Werba: Hyaĝ (#494) **LIV:** Hyaĝ (pg. 224)

Pokorny: yag (pg. 501) **Disposition:** yag

Cognates: ἅγιος ['holy'] (P:501)

367 W^R:129 √yat 'stretch' (RV:B)

Werba: yet (#441) **LIV:** yet (pg. 313)

Pokorny: yet (pg. 506-7) **Disposition:** yet

Cognates: Tok. *yatatär / yototär* 'is imstande' (LIV), though KEWA.iii:5 considers the headword's connections beyond Indoiranian to be unsure.

368 W^R:129 $\sqrt{}$yabh '[copulate]' (G:A)

Werba: $h_3$yebh (#149) **LIV:** yebh (pg. 309)

Pokorny: $^e/_o$ybh, yebh (pg. 298) **Disposition:** yebh

Cognates: *οἴφω* ['copulate'] (P:298; Fr.ii:371)

369 W^R:130 $\sqrt{}$yam 'reach' (RV:B)

Werba: II yam ; XRF (#150) **LIV:** yem (pg. 312)

Pokorny: yem (pg. 505) **Disposition:** yem

Cognates: "Unsicher" outside Indo-Iranian; but Tok *yäm / yom* 'erlangen, erreichen' (KEWA.iii:3). Pokorny brings forward *ἥμερος* 'zahm, mild', but there is no similarity in meaning.

370 W^R:130 $\sqrt{}$yas ['ferment'] (G:A)

Werba: (h_3)yes (#495) **LIV:** yes (pg. 312)

Pokorny: yes (pg. 506) **Disposition:** yes

Cognates: *ζέω* 'kochen, wallen, sieden...' (P:506; Fr.i:612)

371 W^R:131 $\sqrt{}$yā 'go' (RV:A)

Werba: $h_1$yah$_2$ (#514) **LIV:** 1.yeh$_2$ (pg. 309)

Pokorny: 1.ey 'gehen' *as* yā (pg. 293-6) **Disposition:** 1.ey *as* yā

Cognates: 'Eπ-*ίασσα* 'Demeter' (P:296); which < *y-n̥t- (Fr.i:535)

Remarks: Secondary to #19 (W^R; P:296).

372 W^R:131 √yāc 'ask' (B:B)

Werba: $yah_2\overset{\circ\circ}{K}$ (#645) **LIV:** 2.yeh_2 'erbitten, erstreben' (pg. 310) *as* yeh_2\k (pg. 311 «yek»n.1)

Pokorny: yek (pg. 503) **Disposition:** yeə\k

Remarks: Pokorny takes as cognate with short-vowel forms such as OHG *jehan* 'sprechen' and Umbrian *iuki* 'Worte', placed by LIV:311 under yek 'sprechen', thus leaving the long root-vowel unaccounted for.

373 W^R:131 √1.yu 'unite' (RV:B)

Werba: (h_3)yew(H) (#442) **LIV:** 1.yew (pg. 314)

Pokorny: 2.yew(ə) (pg. 508) **Disposition:** 2.yew(ə)

Remarks: Related to #374? Note also √2.yu 'separate' W^R:132 ... related to both through use with prefixes?

374 W^R:132 √yuj 'join' (RV:A)

Werba: $h_3$yewg (#152) **LIV:** yewg (pg. 316)

Pokorny: 2.yew(ə) 'verbinden' *as* yu\g (pg. 508-10) **Disposition:** =#373\g

Cognates: *ζεύγνῡμι* 'schirre an, verbinde' (P:509)

Remarks: Related to #373? Note also √2.yu 'separate' W^R:132 ... related to both through use with prefixes?

375 W^R:133 √yudh 'fight' (RV:A)

Werba: Hyewdh (#153) **LIV:** Hyewdh (pg. 225)

Pokorny: yew\dh (pg. 511-2) **Disposition:** yewdh

Cognates: *ὑσμίνη* 'Treffen, Schlacht, Kampfgetrümmel' (P:511; Fr.ii:974)

Remarks: No evidence for status of -dh given by Pokorny.

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376 W^R:133 √yup 'obstruct' (RV:C)

Werba: II (H)yawp (#443) **LIV:**

Pokorny: **Disposition:** yewp

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377 W^R:133 √ram̐h 'hasten' (RV:A)

Werba: $h_1$lenǵh (#154) **LIV:** $h_1$lenǵh (pg. 247)

Pokorny: leǵh (pg. 660-1) **Disposition:** lenǵh

Cognates: ἐλαφρός < *lṇ̥ǵhr'os 'leicht, flink'; also ἐλαχύς 'gering'; cp. Skt laghú 'rasch, leicht, gering' (P:660)

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378 W^R:134 √rakṣ 'protect' (RV:A)

Werba: $h_2$leks (#646) **LIV:** $h_2$leks (pg. 278)

Pokorny: aleq (pg. 32) **Disposition:** lek *as* lek\s

Cognates: ἀλέξω (P:32)

Remarks: Variant: areq P:65; which is same root as areg 'verschließen' P:64. Pokorny assumes an initial /a/ for this root, but the forms supporting this seem to reflect either prothesis or schebeablaut, see the entry in Chapter 3 for ἀλέξω; also, Arm. *aracel* 'weiden, hüten', Tok. B *alāsk* 'beseitigen'. Adams 1999:54 lists this last as √āl 'keep away, check, restrain', and expresses doubts about its cognacy with ἀλέξω With Gk. ἀλέξω, this item shows an extension -s-.

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379 W^R:134 √ra(ñ)j 'color' (G:A)

Werba: reg (#155) **LIV:** (s)reĜ(pg. 587)

Pokorny: 1.(s)reg (pg. 854) **Disposition:** 1.(s)reg

Cognates: ῥέζω 'farben' (P:854; Fr.ii:648)

Remarks: Forms with nasal are later (W^R). Cp. #411.

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380 W^R:135 √raṭ 'howl' (G:X)

Werba: ONO (#444) **LIV:**

Pokorny: **Disposition:** NE

Cognates: Onomatopoeia (KEWA.iii:36).

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381 W^R:135 √rad 'dig' (RV:B)

Werba: (H)rad (#446) **LIV:** Led (pg. 497)

Pokorny: 2.r⌈ē, ō, ə⌋d (pg. 854) **Disposition:** reəd *as* O√ roəd

Remarks: Schrijver 1991:309*f* connects with Lat. *rōdere* 'gnaw', and perhaps OHG *rāzi* 'wütend, wild', as reflex of *(H)reh$_3$d or Hroh$_1$d; note loss of /H/ before voiced consonant in Skt. Lat. *rādere* and Welsh *rhathu*, contra Pokorny, cannot be from *radd(h)-, but must instead be from *rasd-.

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382 W^R:135 √ra(n)dh 'be, make subject' (RV:B)

Werba: lendh (#156) **LIV:** lendh (pg. 412)

Pokorny: 2.lendh (pg. 675) **Disposition:** 2.lendh

Remarks: None of the Skt entries in LIV appear to match those given in Pokorny (loc. cit., pg. 961, also «rendh» pg.864); but LIV«lendh»n.1 cites 'Lende', also cited by P«2.lendh»

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383 W^R:135 √1.ran 'take pleasure' (RV:C)

Werba: II (H)Lan(H) ;XRF (#447) **LIV:**

Pokorny: **Disposition:** NE

Cognates: Uncertain connections beyond Indoiranian; suggested is 'ἔρανος 'Mahlzeit auf gemainsame Kosten, Freudesmahl, Liebesmahl' (KEWA.iii:36); which Fr.i:547 calls "nicht

sicher erklärt".

Remarks: Related to #386? (W^R)

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384 W^R:136 √rapś 'be full' (RV:X)

Werba: **LIV:**

Pokorny: **Disposition:** NE

Cognates: No certain relations outside of Indoiranian (KEWA.iii:42, 219).

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385 W^R:136 √ra(m)bh 'take hold' (RV:A)

Werba: Hrembh (#159) **LIV:** lembh (pg. 411)

Pokorny: labh (pg. 652) **Disposition:** lembh

Cognates: *λαφῡ́ρον* 'Beute', also *λαφυρεύω / -έω*, *λαφής* (P:652; Fr.ii:91; LIV *loc cit*)

Remarks: Cp. (s)lāg̑h 'fassen' P:652; 2.lā 'verbergen, versteckt sein' P:651. Refer to #413 for a discussion for the form of this root.

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386 W^R:137 √ram 'make, be content' (B:A)

Werba: $h_1$rem (#158) **LIV:** $h_1$rem (pg. 252)

Pokorny: rem(ə) (pg. 864) **Disposition:** rem(ə)

Cognates: *ἠρέμα* 'ruhig, sanft, leise' (P:864; Fr.i:643)

Remarks: Related to #383? (W^R) Note also variant √lam, W^R:146.

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387 W^R:137 √ras 'roar' (E:B)

Werba: II Las ; XRF (#449) **LIV:**

Pokorny: răs *as* ras (pg. 852) **Disposition:** ras

Remarks: Related to ##389, 392? (W^R) Or just onomatopoeia? (Author).

388 W^R:138 √1.rā(s) 'give' (RV:C)

Werba: h_2reh_1 (#340) **LIV:**1.reh_1 (pg. 499)

Pokorny: **Disposition:** NE

389 W^R:138 √2.rā 'bark' (G:A)

Werba: lah_2 (#603) **LIV:** 1.leh_2 (pg. 400)

Pokorny: $l^{\bar{a}}/_{\bar{e}}$ (pg. 650-1) **Disposition:** lā

Cognates: *ληρέω* 'schwatze' (P); similar onomatopoiec formations, e.g. Lat. *lt̄āre*, 'bellen' (KEWA.iii:55)

Remarks: Related to ##387, 392? (W^R) Or just onomatopoeia? (Author).

390 W^R:138 √rāj 'be kingly' (E:X)

Werba: **LIV:** $h_3reĝ$ (pg. 304)

Pokorny: 1.reĝ(pg. 854-7) **Disposition:** =#42

Remarks: Denominative? (W^R) Same root as #42 (P.) Long vowel is a late, secondary development.

391 W^R:138 √rādh 'succeed' (RV:B/A)

Werba: h_2reh_1dh (#497) **LIV:** reh_1dh (pg. 499)

Pokorny: 1.ar(ə), rē 'fügen, passen' *as* S√rā\dh (pg. 55-60) **Disposition:** √raə\dh

Cognates: The root appears in schebeablaut variants:

< ***rā** (=raə):

Skt. √rā\dh

< ****arə**:

Skt. *araḥ* 'spoke of a wheel';

Arm. *aṙnem* 'mache'

Lat. *artus* 'Gelenk'

TokA *ārwar* 'bereit' (KEWA.i.48).

Gk *ἀραρίσκω* is apparently a reduplicated formation from this second form, given by LIV:270 (esp. notes 7 and 8) as *h_2é&h_2r-, cp. the similar formation of *ἀλέξω*

ἀριθμός (P:60) is also from the *arə variant, and shows the */dh/ which closes the present Sanskrit form, but on top of a /y/ which Watkins:70*f*«rē(i)» lists as an optional part of the root.

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392 W^R:139 √1.rās 'roar' (C:B)

Werba: **LIV:**

Pokorny: răs *as* rās (pg. 852) **Disposition:** =#387 (onomatopoeic? lengthened grade)

Remarks: <*√reh$_2$(y) 'schreien, brüllen' LIV:501 = P:859? (Author) Related to ##387, 389? (W^R) Or just onomatopoeia? (Author).

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393 W^R:139 √rĭ 'flow' (G:A)

Werba: $h_1$rey(H) (#451) **LIV:** $h_3$reyH (pg. 305)

Pokorny: 3.$^e/_o$r, er(ə) 'sich in Bewegung setzen, erregen ... in die Höhe bringen' *as* re\yə, rī 'Fließen' (pg. 326, 330-1) **Disposition:** =#41\y

Cognates: *ὀρίνω* (Lesbic) 'setz in Bewegung' (P:330; Fr.ii:417)

Remarks: Cp. #41.

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394 W^R:139 √rīng, -kh 'creep' (G:A)

Werba: **LIV:**

Pokorny: (s)rey$\frac{g}{k}$h (pg. 1002) **Disposition:** = (s)reygh

Cognates: ἀνα·ρριχάομαι 'mühselig mit Händen und Füßen emporklettern' (P:1002; but Fr.i:103 calls this Greek word "ohne sichere Entsprechungen').

Remarks: Cp. #393. For value of final, cp. G. ἀρριχάομαι (P).

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395 W^R:139 √ric 'leave' (RV:A)

Werba: leyk̑ (#161) **LIV:** leyk̑ (pg. 406)

Pokorny: leyk̑(pg. 669-70) **Disposition:** leyk̑

Cognates: λείπω ['leave'] (P:669)

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396 W^R:140 √rip 'smear' (RV:X)

Werba: **LIV:**

Pokorny: **Disposition:** =#419

Remarks: Variant of #419 (W^R).

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397 W^R:140 √riph 'snarl' (G:X)

Werba: II (H)rayphH (#342) **LIV:**

Pokorny: **Disposition:** =#398

Remarks: Cognate with #398 (We).

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398 W^R:140 √ribh 'sing' (RV:B)

Werba: II (H)raybh (#163) **LIV:** Leybh (pg. 502)

Pokorny: reybh (pg. 860) **Disposition:** 3.rey\bh

Remarks: Cognate with #397 (We). "Wohl zu 3.rey 'schreien'" (P:859).

399 W^R:140 √riṣ 'be hurt' (G:B/A)

Werba: II (H)rayš (#165) **LIV:** reys (pg. 505)

Pokorny: 1.rey 'ritzen' *as* rey\s (pg. 857-9) **Disposition:** #420\s

400 W^R:141 √rih 'lick' (RV:X)

Werba: **LIV:**

Pokorny: **Disposition:** =#421

Remarks: Variant of #421 (W^R).

401 W^R:141 √1.ru 'cry' (E:A)

Werba: $h_3$rew(H) (#452) **LIV:** $h_3$rewH (pg. 306)

Pokorny: rĕw (pg. 867) **Disposition:** 1.rew

Cognates: *ὠρύομαι* 'heule...' (P:867; Fr.ii:1152)

Remarks: Cp. #404.

402 W^R:141 √ruc 'shine' (RV:A)

Werba: lewk (#454) **LIV:** lewk (pg. 418)

Pokorny: lewk (pg. 687-9) **Disposition:** lewk

Cognates: *λευκός* ['white'] (P:687)

403 W^R:142 √ruj 'break' (RV:A)

Werba: lewg (#455) **LIV:** 1.lewg (pg. 415)

Pokorny: lewĝ(pg. 686) **Disposition:** =#427 *as* lew\ĝ

Cognates: *ἀ·λυκτο-πέδη* 'unzerreißbares Band' (P:686; but not certain, Fr.i:80)

Remarks: Baltic implies *lewĝ, but Indoiranian *lewg, perhaps under influence of √lewg 'biegen' (P). Cp. #427, and apparent /r/-variants ##406, 425.

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404 W^R:142 √rud 'weep' (E:A)

Werba: (h_3)rewd(H) (#343) **LIV:** rewdH (pg. 508)

Pokorny: 1.rew 'brüllen' *as* rew\d (pg. 867) **Disposition:** =#401\d

Cognates: ῥύζω '"knurren, murren" vom Hunde' (tentative, P:867; but no etymology, "Schallwort" Fr.ii:664)

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405 W^R:143 √2.rudh 'obstruct' (RV:B)

Werba: lewdh (#168) **LIV:** lewdh (pg. 415)

Pokorny: - **Disposition:** i.lewdh

Remarks: Cp. #408.

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406 W^R:143 √rup 'break, pain' (G:B)

Werba: **LIV:** rewp (pg. 510)

Pokorny: 2.rew(ə) 'aufreißen, graben ...' *as* rew\p (pg. 868-870) **Disposition:** = 2.rew *as* rew\p

Remarks: Same as #425 (W^R; also LIV:420«lewp,n.1»)? Cp. apparent /l/-variants ##403, 427. For the root structure and extension, see also KEWA.iii:68.

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407 W^R:143 √ruṣ 'be vexed' (G:B/A)

Werba: II Lawš (#457) **LIV:**

Pokorny: $^e/_o$r 'sich in Bewegung siztzen ... ärgern' *as* re\w\s (pg 326 - 32) **Disposition:** =#41 *as* re\w\s

Remarks: Cp. #41, also #401.

408 W^R:143 √ruh 'ascend' (RV:A)

Werba: $h_1$lewĝh (#170) **LIV:** $h_1$lewdh (pg. 248)

Pokorny: 1.lewdh (pg. 684-5) **Disposition:** 1.lewdh

Cognates: ἐλεύθερος (P:684; KEWA.iii:81+78)

Remarks: Cp. #405.

409 W^R:144 √lag 'attach' (G:C)

Werba: II Lag (#458) **LIV:**

Pokorny: **Disposition:** NE

Cognates: No etymology (KEWA.iii:84).

410 W^R:145 √lan̄gh 'leap' (G:X)

Werba: **LIV:**

Pokorny: leǵh *as* le$\frac{\text{n}}{\Lambda}$ǵh (660) **Disposition:** =#377

Remarks: "Doubtless" cognate with #377 (W^R).

411 W^R:145 √lajj 'be ashamed' (C:X)

Werba: **LIV:**

Pokorny: **Disposition:** =#379

Remarks: A variant of #379 (KEWA.iii:86, see also Fr.ii:648).

412 W^R:145 √lap 'prate' (E:A)

Werba: lep (#448) **LIV:**

Pokorny: 1.lep (pg. 677) **Disposition:** 1.lep

Cognates: λαπίζω 'benehme mich übermütig' (P:678; Fr.ii:85)

Remarks: "Schallwurzel" (P). Variant of √rap, to which the entries from Werba apply.

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413 W^R:145 √labh 'take' (RV:X)

Werba: Hrembh (#159) **LIV:** lembh (pg. 411)

Pokorny: labh (pg. 652) **Disposition:** =#385

Remarks: This is clearly the same, in some way, as #385, without the northwest Indic shift of /l/ to /r/. The difficulty is deciding whether *labh* represents *lebh, a non-nasal variant of *lembh, or *lm̥bh, the zero-grade of the same. A further possibility is that the pIE vowel was /a/, in which case the attested forms with /a/ could reflect a full grade of the root. Note further the possibility of contamination with *sleh$_2$ǵ> λαμβάνω, LIV:566. The view that is adopted here, and by LIV, is that there was only one root, *lembh, and that the /a/ forms and the non-nasal forms are from its zero-grade. This has the advantage of requiring only one very common phenomenon (zero-grade m̥ becoming Greek and Sanskrit /a/), as opposed to the less frequently occurring nasal/non-nasal doublets, or even rarer pIE */a/.

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414 W^R:146 √lamb 'hang down' (E:B/A)

Werba: XRF Lamb ; II (#574) **LIV:** lembH (pg. 411)

Pokorny: l[ĕ, ŏ, ā]m̥b (pg. 656-7) **Disposition:** le(m)bh *as* lembh

Cognates: λοβός 'Schotenhülse, Samenkapsel, Ohrläppchen' (P:655, but "Etymologie umstritten" (Fr.ii:132) shows a non-nasal form of the root. This etymology is accepted here because *hanging down* is one of the few characteristics common to seed-pods and earlobes, and so is likely to reflect the original sense of the word. Tocharian (*lyäm / lyama*, 'saß') and Germanic (English *limp*) show the root with its nasal element (LIV).

Remarks: Variant *ramb*, W^R:137.

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415 W^R:146 √laṣ 'desire' (C:X)

Werba: **LIV:**

Pokorny: las (pg. 654) *as* REDUPLICATED la-ls **Disposition:** =#416 (reduplicated)

Cognates: *λιλαίομαι* < *li&lasyo- 'begehre, sehne mich' (P:654; Fr.ii:123)

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416 W^R:147 √las 'be lively' (C:A)

Werba: las (#459) **LIV:** las (pg. 397)

Pokorny: las (pg. 654) **Disposition:** las

Cognates: See the corresponding entry under #415.

Remarks: "very possibly" the same as #415 (W^R).

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417 W^R:147 √lā 'grasp' (E:X)

Werba: **LIV:**

Pokorny: **Disposition:** =#385

Remarks: "Probably artificial" (W^R). A late form of #385 (KEWA.iii:99).

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418 W^R:147 √likh 'scratch' (B:B/A)

Werba: **LIV:** rey$\breve{K}h_2$ (pg. 504)

Pokorny: 1.rey 'ritzen' *as* rey\k(h) (pg. 858) **Disposition:** 1.rey\k(h)

Cognates: See #420 for the root with a different extension. For the present form, LIV notes Lith. *riekiù / riēkti*, '(Brot) schneiden; aufreißen'.

Remarks: Variant form: *rikh* (W^R). Cp. ##399, 420. Unextended form in e.g. Lat. *rīma* ['cleft', Smith] (P).

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419 W^R:147 √li(m)p 'smear' (B:A)

Werba: leyp (#162) **LIV:** 1.leyp (pg. 408)

Pokorny: 1.leyp (pg. 670-1) **Disposition:** 1.leyp

Cognates: λίπος ['fat'], ἀλείφω ['anoint'] (P:670)

Remarks: Variant of √rip (W^R), to which the entries from the other sources apply. Perhaps related to 3.leg 'schleimig...' (P:662).

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420 W^R:148 √liś 'tear' (B:A)

Werba: $h_1$reyk̂ (#164) **LIV:** (h_2)reyk̂(pg. 504)

Pokorny: 1.rey 'ritzen, reißen, schneiden' (pg. 857) *as* reyk̂ (VARIANT: reyk(h) (pg. 858)

Disposition: =#418\kj

Cognates: ἐρείκω 'zerbreche, zerreiße' (P:858; Fr.i:552; LIV).

Remarks: Variant of √riś (W^R), to which the entries from Werba apply.

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421 W^R:148 √lih 'lick' (G:A)

Werba: leyĝh (#166) **LIV:** leyĝh (pg. 404)

Pokorny: (s)leyĝh (pg. 668) **Disposition:** (s)leyĝh

Cognates: λείχω 'lecke' (P:668; Fr.ii:102).

Remarks: Variant of √rih (W^R), to which the entries from the other sources apply.

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422 W^R:148 √lī 'cling' (B:A)

Werba: **LIV:** 1.leyH (pg. 405)

Pokorny: 3.ley (pg. 662-3) **Disposition:** 3.leyə

Cognates: ἀλίνω ['anoint'] (P:662), λινεύς 'Schleimfisch' (P:663).

Remarks: Long vowel in Skt. implies a following /ə/.

---

423 W^R:149 √luñc 'tear' (E:A)

Werba: II Law$\frac{k}{\check{c}}$; XRF (#460) **LIV:** $h_3$rewk (pg. 307)

Pokorny: 2.rew(ə), rŭ 'aufreißen, graben ...' *as* rew\k (pg. 869) **Disposition:** 2.rew(ə)

as rew\k

Cognates: *ὀρύσσω* ['dig' (LS)] (P:869)

Remarks: Cp. #418.

---

424 W^R:149 √1.luṭh 'roll' (C:X)

Werba: **LIV:**

Pokorny: **Disposition:** NE

Cognates: No etymology (KEWA.iii:105).

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425 W^R:149 √lup 'break' (B:X)

Werba: **LIV:** rewp (pg. 510)

Pokorny: **Disposition:** =#406

Remarks: Variant of #406 (LIV:420«lewp»,n.1). Cp. apparent /l/-variants of the pIE root, ##403, 427.

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426 W^R:150 √lubh 'be lustful' (S:A)

Werba: lewbh (#461) **LIV:** lewbh (pg. 414)

Pokorny: lewbh (pg. 683-4) **Disposition:** lewbh

Cognates: *λυπτά·ἑταίρα*, *πόρνη* ['prostitute'] (P:683; Fr.ii:146)

---

427 W^R:150 √lū 'cut' (C:A)

Werba: lewH (#346) **LIV:** lewH (pg. 417)

Pokorny: 2.lew(ə), lēw, rew, lū (pg. 681-2) **Disposition:** 2.lew(ə)

Cognates: *λύω* ['to loose'] (P:681; Fr.ii:150)

Remarks: Cp. #403, and apparent /r/-variants ##406, 425.

428 W^R:150 √lok 'look' (C:X)

Werba: **LIV:** (pg. 419)

Pokorny: lewk (pg. 687-9) **Disposition:** =#402

Remarks: Variant of #402 (W^R, P); LIV:419«lewk»,n.4a denies this, takes as denominative.

429 W^R:151 √loc 'see' (C:X)

Werba: **LIV:**

Pokorny: lewk (pg. 687-9) **Disposition:** =#402

Remarks: Variant of #428 (W^R, P).

430 W^R:151 √vakṣ, ukṣ 'increase' (RV:A)

Werba: $h_2$weks (#531) **LIV:** $h_2$weks (pg. 288)

Pokorny: (a)weg 'vermehren, zunehmen' *as* (a)weg\s (pg. 84-5) **Disposition:** #32\s

Remarks: Cp. #32.

431 W^R:151 √vac 'speak' (RV:A)

Werba: wek̑ (#498) **LIV:** wek̑ (pg. 673)

Pokorny: wek̑(pg. 1135-6) **Disposition:** wek̑

Cognates: 'ἔπος (Elean, Cypriot ϝέπος) ['word'] (P:1136)

432 W^R:152 √vañc 'move crookedly' (RV:B)

Werba: wenk (#172) **LIV:** wenk (pg. 683)

Pokorny: we$\underset{\wedge}{\underline{n}}$k (pg. 1134-5) **Disposition:** we(n)k

Remarks: Perhaps < 2.wā 'auseinander biegen, drehen' P:1109.

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433 W^R:152 √vad 'speak' (RV:A)

Werba: $h_2$wedH (#518) **LIV:** $h_2$wedH (pg. 286)

Pokorny: 6.aw(ĕ)d (pg. 76-7) **Disposition:** wed

Cognates: ϝοδᾶν [Ms. γοδᾶν]·kla'ien ['cry'], ὑδέω 'besinge' (P:76)

Remarks: Pokorny treats the Greek prothetic ἀ as part of the root; see Chapter 3 #8.

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434 W^R:153 √van, vā 'win' (RV:B)

Werba: wen (#174) **LIV:** wen (pg. 680)

Pokorny: 1.wen(ə) (pg. 1146-7) **Disposition:** 1.wen(ə)

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435 W^R:153 √vand 'greet' (RV:C/A)

Werba: II (H)wand (#650) **LIV:** wend (pg. 681)

Pokorny: 6.aw(ĕ)d 'sprechen' *as* aw(ĕ)n̥d (pg. 76) **Disposition:** =#433 (nasalized)

Remarks: The form with the nasal is apparently only Indo-Iranian (P:76; KEWA.iii:142)

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436 W^R:154 √1.vap 'strew' (RV:B)

Werba: II (H)wap ;XRF (#532) **LIV:** wep (pg. 684)

Pokorny: 2.wep (pg. 1149) **Disposition:** 2.wep

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437 W^R:154 √vam 'vomit' (B:A)

Werba: wemh_1 (#348) **LIV:** wemh_1 (pg. 680)

Pokorny: wem(ə) (pg. 1146) **Disposition:** wem(ə)

Cognates: ἐμέω (P:1146; Fr.i:505)

438 W^R:155 √val 'turn' (C:A)

Werba: **LIV:**

Pokorny: 7.wel(ə), wlē 'drehen, winden, wälzen' (pg. 1140) **Disposition:** 7.wel(ə)

Cognates: *εἰλέω* < *ϝελ-ν-έω 'drehe, winde' (P:1141)

Remarks: <*√2.wel LIV:675 'drehen, rollen' = P:1140-2? (Author) W^Rsuggests is secondary to #460.

439 W^R:155 √valg 'spring' (E:B/A)

Werba: w$^a/_e$l(H)g (#651) **LIV:** 1.welg (pg. 676)

Pokorny: 7.wel(ə) 'drehen, winden, wälzen' (pg. 1140) *as* wol\g (pg. 1144) **Disposition:** =#438\g

440 W^R:155 √vaś 'be eager' (RV:A)

Werba: wek̂ (#499) **LIV:** wek̂ (pg. 672)

Pokorny: wek̂(pg. 1135) **Disposition:** wek̂

Cognates: *ἑκών* (Cretan *ϝεκών*) 'freiwillig' (P:1135; Fr.i:479)

441 W^R:155 √1.vas, uṣ 'shine' (RV:A)

Werba: $h_2$wes (#534) **LIV:** 1.$h_2$wes (pg. 292)

Pokorny: (ă̆)w(e)s (pg. 86-7) **Disposition:** i.wes

Cognates: *ἠώς* < *āusōs 'Morgen' (P:86)

Remarks: Cp. ## 34, 38; also P:1173 9.wes 'leuchten'. A member of a schwebeablaut pair; see Chapter 3 #159 for the forms. Pokorny's initial /a/ reflects the schebeablauting vowel preceding the /w/.

442 W^R:156 √2.vas 'clothe' (RV:A)

Werba: wes (#535) **LIV:** 1.wes (pg. 692)

Pokorny: 5.wes (pg. 1172-3) **Disposition:** 5.wes

Cognates: '*ἔννῡμι* 'kleiden' (P:1172; Fr.i:522)

443 W^R:156 √3.vas 'dwell' (RV:A)

Werba: $h_2$wes (#536) **LIV:** 2.$h_2$wes (pg. 293)

Pokorny: 1.wes (pg. 1170-1) **Disposition:** ii.wes

Cognates: *ἄστυ*, *ϝάστυ* 'Stadt' (P:1170)

Remarks: Cp. 2.aw(e)s 'übernachten' (P:72), usually considered the same root. For the continuum of meaning, note Vedic *vásati* 'übernachten, verweilt', Tokharian B *wṣi* 'übernachtet, verweilt' (LIV); Gk. *ἄστυ* ['town'] < pIE *3.wes 'live, dwell, pass night ... be' (Watkins). See also Chapter 3 #15.

444 W^R:157 √vah 'carry' (RV:A)

Werba: weĝh (#500) **LIV:** weĝh (pg. 661)

Pokorny: weĝh (pg. 1118-20) **Disposition:** weĝh

Cognates: Hes. *ἐχεσφιν·ἅρμασιν* ['by chariots'] (P:1119, Fr.ii:458); also Pamphylian *ϝεχέτω* 'er soll bringen'; *ὄχος* 'Wagen'; *ὀχέω* 'führe' (P *loc cit*)

445 W^R:157 √1.vā 'blow' (B:A)

Werba: $h_2$weh$_1$ (#349) **LIV:** $h_2$weh$_1$ (pg. 287)

Pokorny: 10.(a)w(ĕ)(y) 'wehen, blasen, hauchen' *as* wē (pg. 81-4) **Disposition:** 10.(a)we *as* wē

Cognates: *ἄησι* (P:82)

Remarks: For a discussion of the form of this root, see Chapter 3 #11.

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446 W^R:157 √2.vā, vi 'weave' (RV:C/A)

Werba: **LIV:** Hew (pg. 224)

Pokorny: 5.aw(ē) (pg. 75) **Disposition:** weə

Remarks: Cp. #37 for an extended form. The cognates of this word form schwebeablaut groups (see Persson:128):

< ***aw**:

Skt *ótum* 'weben'

Arm. *z-aud* 'Band'

Lith. *áudžiu/áusti* 'weben'

< ***wV**:

Skt *váyati, vā́tave*; pGc. **wēði*

also, < **Z√*u**:

Gk. *ὑφαίνειν* (P; Fl.i:26).

Pokorny takes the form with initial /a/ as the base form. The /ə/ is inferred on the basis of Skt. *vā́tave* and pGc. **wēði*.

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447 W^R:158 √vañch 'desire' (G:B)

Werba: **LIV:** wenH (pg. 682)

Pokorny: 1.wen(ə)-sk̂(pg. 1146-7) **Disposition:** =#434

Remarks: Suffix is iterative/inceptive morpheme.

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448 W^R:158 √vāś 'bellow' (RV:C)

Werba: II wāć (#653) **LIV:**

Pokorny: **Disposition:** NE

Cognates: Onomatopoeia (KEWA.iii:196).

449 W^R:158 $\sqrt{}$vāh 'press' (G:B)

Werba: **LIV:**

Pokorny: **Disposition:** bhaəĝ?

Cognates: Perhaps (assuming the Sanskrit has original /b/, not a late /b/ < /v/) cognate with Lith. *bãžmas* 'Menge, Gedräng', Latv. *bâzt* 'stecken, stopfen' (KEWA.iii:199). Otherwise, with *weh$_2$Ĝ 'brechen' LIV:664? (Author).

450 W^R:158 $\sqrt{}$1.vic 'sift' (RV:B)

Werba: h$_2$weyk (#175) **LIV:** 1.weyk (pg. 670)

Pokorny: 1.weyk (pg. 1128) **Disposition:** 1.weyk

451 W^R:159 $\sqrt{}$vij 'tremble' (RV:A)

Werba: (h$_3$)weyd (#462) **LIV:** weyg (pg. 667)

Pokorny: 1.wey *as* 4.wey$\frac{k}{g}$ (pg. 1130-1) **Disposition:** =#473\g

Cognates: *ἐίκω* 'zurückweichen, nachstehen, unterliegen'; the /κ / is due to intraparadigmatic analogy (P:1130; Fr.i:454; LIV:667*f*).

Remarks: Cp. 1.wey ##473, also 454, 457, 469, and #456.

452 W^R:159 $\sqrt{}$1.vid 'know' (RV:A)

Werba: weyd (#176) **LIV:** weyd (pg. 665)

Pokorny: 2.w(e)yd (pg. 1125-7) **Disposition:** 2.weyd

Cognates: *ἐίδομαι* 'erscheine'; *οἶδα* 'weiß' (P:1125)

Remarks: Pokorny misprints 2.w(e)yd as "w(e)di".

453 W^R:159 √2.vid 'find' (RV:X)

Werba: (#463) **LIV:** (pg. 665)

Pokorny: **Disposition:** =#452

Remarks: Same as #452 (W^R, We, LIV).

454 W^R:160 √vip 'tremble' (RV:B/A)

Werba: weyp (#177) **LIV:** weyp (pg. 671)

Pokorny: wey$\frac{p}{b}$ (pg. 1131-2) **Disposition:** =#473\p

Cognates: No Greek cognates showing the /p/-extension; but ON *veifa* 'schwingen' (KEWA.iii:260)

Remarks: Cp. ##473, also 451, 457, 469, and #456. Root meaning is given by Pokorny as 'drehen': cp. 1.wey\d 'drehen' (P:1124) ←1.wey; cp. also 2.wey\s 'drehen' (P:1133). Curiously, Pokorny fails to connect with his 1.wey (pg. 1120).

455 W^R:160 √viś 'enter' (RV:A)

Werba: **LIV:** weyk̂ (pg. 669)

Pokorny: w$^e/_o$yk̂(pg. 1131) **Disposition:** weyk̂

Cognates: *οἶκος, ϝοῖκος* 'Haus' (P:1131; Fr.ii:361)

Remarks: Cp. # 457.

456 W^R:161 √viṣ 'be active' (RV:A)

Werba: II (H)wayš (#179) **LIV:** 2.weys (pg. 672)

Pokorny: 3.weys (pg. 1134) **Disposition:** 3.weys

Cognates: *ἰός* 'Gift'; for meaning cp. Lat. *virus* 'zähe Flussigkeit, Schleim, Saft' (P:1134; Fr.i:730)

Remarks: Cp. ##451, 454, 457.

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457 W^R:161 √viṣṭ 'wrap' (G:B)

Werba: II wayš-t (#464) **LIV:**

Pokorny: 2.weys (pg. 1133) **Disposition:** =#473 *as* wey\s

Remarks: Cp. ##473, 451, 454, 469 wey$\frac{p}{b}$ 'drehen' (P:1131); 1.weyd 'drehen' (P:1123).

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458 W^R:161 √vī 'enjoy' (RV:A)

Werba: weyH (#350) **LIV:** weyh$_1$ (pg. 668)

Pokorny: 3.wey(ə), wī (pg. 1123-4) **Disposition:** 3.wey(ə)

Cognates: 'ἔμαι 'bewege mich vorwärts, eile, strebe, begehre' (P:1123; Fr. i:711)

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459 W^R:162 √vīj, vyaj 'fan' (E:X)

Werba: **LIV:**

Pokorny: **Disposition:** NE

Cognates: No good etymology (KEWA.iii:272).

Remarks: The entry *vyájati* in Pokorny's index is apparently a misprint for *vyáyati* (pg. 1120).

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460 W^R:162 √1.vr̥ 'cover' (RV:X)

Werba: wel; werH (#180) **LIV:** 1.wel (pg. 674)

Pokorny: 7.wel(ə), wlē (pg. 1140) **Disposition:** =#438

Remarks: Principal meaning of root is 'drehen, winden, wältzen' (P).

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461 W^R:163 √2.vr̥ 'choose' (RV:A)

Werba: (h_1)welH (#465) **LIV:** welh$_1$ (pg. 677)

Pokorny: 2.wel, wl̆ĕ(y) (pg. 1137) **Disposition:** 2.wel(ə)

Cognates: λείω, λήω, λῶ 'will' (P:1137); but this is "unerklärt" (Fr.ii:150)

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462 W^R:163 $\sqrt{\frac{b}{v}}$r̥m̥h 'roar' (C:A)

Werba: **LIV:**

Pokorny: **Disposition:** brengh?

Cognates: Onomatopoeia? Perhaps βράχε 'rasselte, knarrte, brachte' (KEWA.ii:443, iii:239). **Remarks:** Assuming the /b/-variant is original (see note under #449), a form *brengh would yield the Sanskrit headword, and its zero-grade *brn̥gh the proposed Greek cognate (Author).

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463 W^R:163 $\sqrt{}$vr̥j 'twist' (RV:B/A)

Werba: $h_2$werg (#181) **LIV:** $h_2$werg (pg. 290)

Pokorny: 3.wer 'drehen, biegen' *as* wer\g (pg. 1152-4) **Disposition:** =#464\g

Remarks: See Chapter 3, #106: the meaning of the apparent Greek cognate is here taken as 'ward off', *not* 'twist'.

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464 W^R:164 $\sqrt{}$vr̥t 'turn' (RV:A)

Werba: wert (#182) **LIV:** wert (pg. 691)

Pokorny: 3.wer 'drehen, biegen' *as* wer\t (pg. 1152-6) **Disposition:** 3.wer\t

Cognates: ῥατάνη 'Rührlöffel' (P:1156*f*; Fr.ii:644)

Remarks: /ρα / is < r̥, not schwebeablaut (Fr *loc cit*).

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465 W^R:164 $\sqrt{}$vr̥dh 'grow' (RV:A)

Werba: $h_1$weldh (#183) **LIV:** HweLdh (pg. 229)

Pokorny: werdh, wredh (pg. 1167) **Disposition:** werdh

Cognates: *ὀρθός* 'aufrecht...' (P:1167; Fr.ii:416).

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466 W^R:165 √vr̥ṣ 'rain' (RV:A)

Werba: Hwers (#184) **LIV:** $h_2$wers (pg. 291)

Pokorny: 9.aw(e) 'benetzen, befeuchten, fließen' *as* wĕ\r\s (pg. 78-81) **Disposition:** wers

Cognates: *ὀρέω* < *worseyō 'harne' (P:81; Fr.ii:447); and see the following.

Remarks: Pokorny's unextended form "aw(e)" should be just *aw*; the /e/ here is an ablauting element belonging to the *inflectional termination* {$^{e}/_{\emptyset}$nt}, as Italic river-name *avēns*, cp. Skt *avatáḥ* < *awn̥tos; extended forms, however, have /e/ as part of the stem: awe\d, awe\r.

Pokorny takes this as a member of a schwebeablaut pair:

< ***aw**:

Skt. *avatáḥ* < *av-n̥t- 'Brunnen' (P; Burrow:153), *ódatī* 'quellende' (P; KEWA.i.122+103)

Latv. *avuõts*

Italic *Avens* (KEWA.i:57)

< ***wa**:

Skt. *várṣati* '(be)regnet' (LIV)

Gk. *ἐϝέρση 'dew' (see Chapter 3 #107)

But the vocalism of the Greek does not match the rest, so we are probably dealing with two roots, *aw and *wers. See also #35.

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467 W^R:165 $\sqrt{\frac{u}{b}}$r̥h 'tear' (RV:C/A)

Werba: II waLǰh; XRF (#185) **LIV:** weLĝh (pg. 688)

Pokorny: 7.werĝh (pg. 1163) **Disposition:** =#475 *as* werĝh

Remarks: Cp. #475 for √7.wer.

468 W^R:165 √ven 'long [for]' (G:B/A)

Werba: **LIV:**

Pokorny: 3.wey(ə), wī (pg. 1123) *as* 1.wen (pg. 1146) **Disposition:** =#458\n

469 W^R:166 √vic, vyac 'extend' (RV:B/A)

Werba: II wya$\frac{k}{c}$ (#501) **LIV:** wyek̑ (pg. 696)

Pokorny: 1.wey 'drehen, biegen' *as* 4.wey$\frac{g}{k}$ 'biegen, winden' (pg. 1120, 1130) **Disposition:** =#473\k

Cognates: Hes. (Thessalian) *'ίμψασ·ζεύξας* 'angespannt habend' shows the root with a nasal insertion (LIV *loc cit* n.2); also Latin *uinciō* 'umwinden, binden' (LIV; KEWA.iii:223, 271).

Remarks: Cp. ##451, 454, 457, 473.

470 W^R:166 √vyath 'waver' (E:B)

Werba: wyeth$_2$ (#520) **LIV:** wyeth$_2$ (pg. 696)

Pokorny: wyeth (pg. 1178) **Disposition:** wyeth

471 W^R:166 √vyadh, vidh 'pierce' (RV:A)

Werba: h$_2$wyedh (#502) **LIV:** h$_2$wyedh (pg. 294)

Pokorny: weydh (pg. 1127-8) **Disposition:** weydh *as* S√wyedh

Cognates: *ἡ(ϝ)ίθεος* 'Jungeselle' (P:1128; Fr.i:626)

Remarks: Perhaps < *wi* 'auseinander' + *dhē* 'setzen' (P). See discussion of the form, relationships, and meaning of this item under Chapter 3, #206.

472 W^R:167 √vyay 'expend' (G:X)

Werba: **LIV:**

Pokorny: **Disposition:** NE

Remarks: = √i+√vi; or denominative (W^R).

473 W^R:167 √vyā, vī 'envelop' (RV:B/A)

Werba: s√weyh$_1$ (#521) **LIV:** wyeh$_1$ (pg. 695)

Pokorny: 1.wey(ə), wī 'drehen' (pg. 1120-2) **Disposition:** 1.wey(ə) *as* S√wyeə

Cognates: No Greek forms sharing the Sanskrit root-form; but Latin *viēre* 'binden', Lith. *v'yti* 'drehen, winden' (KEWA.iii:273).

Remarks: Cp ## 451, 454, 457, 469.

474 W^R:167 √vraj 'proceed' (RV:B)

Werba: wreg (#466) **LIV:** wreg (pg. 697)

Pokorny: wreg (pg. 1181) **Disposition:** wreg

Remarks: Cp. 2.wrāĝh, wrəĝh 'schlagen, stoßen' (P).

475 W^R:168 √vraśc 'cut up' (RV:A)

Werba: (#503) **LIV:** wLesḰ (pg. 701)

Pokorny: 7.wer 'aufreißen, ritzen' *as* wrek-sk (pg. 1163) **Disposition:** 7.wer *as* wre\k

Cognates: ῥάκος ['...rags...' (LS)] (Fr.ii:641; KEWA.iii:250)

Remarks: Secondary to √vrac < *√wrak (We).

476 W^R:168 √vrīḍ 'be abashed' (G:B)

Werba: II wrayžd < wrayć-d (#467) **LIV:**

Pokorny: 3.wer 'drehen, biegen' *as* ur-ey *as* uri\s-d = [wrizd] (pg. 1152-8) **Disposition:** wrey *as* wrey\s-d

Cognates: KEWA.iii:281 derives from pII *vriś\d*, listing no Greek cognates, but Lat. *rīdēre*, 'lachen' has been proposed.

Remarks: The final */d/, with the preceding [z] this yields Indic ḍ (P). The meaning is quite divergent from any of the *wer*-roots in Pokorny, so it is here considered unconnected with them. Pokorny says that the /d/ is a present formant; if this is so, and Lat. *ridere* is related, then Sanskrit and Latin have developed the root in just the same way. Cp.#477.

477 W^R:168 $\sqrt{\frac{b}{v}}$lī 'crush' (G:C)

Werba: (#352) **LIV:** wLeyH (pg. 699)

Pokorny: - **Disposition:** =#476 *as* wrey\ə

Cognates: A connection with √*wel-, thence with *εἰλέω* , has been proposed (KEWA.iii:283), but the difference in meaning (twist : crush) makes this not quite persuasive. In any event, if #476 is related to Lat. *ridere*, then that and the present root could not come from *wel.

Remarks: Cognate with #476 (We). Limited to Indoiranian (LIV).

478 W^R:169 √śaṁs 'praise' (B:B)

Werba: k̂eNs (#188) **LIV:** k̂eNs (pg. 326)

Pokorny: k̂ens (pg. 566) **Disposition:** k̂ens

Cognates: Apparently none; but Lat. *censeo* (LIV).

Remarks: Often connected with #481 (Fr.i:812).

479 W^R:169 √śak 'be able' (RV:B)

Werba: k̂ak (#189) **LIV:** k̂eK̆ (pg. 322)

Pokorny: k̂ak (pg. 522) **Disposition:** k̂ak

Remarks: Cp. k̂ăk 'vermögen, helfen' (P:522).

480 W^R:170 √śaṅk 'doubt' (G:B)

Werba: k̂enk (#655) **LIV:** k̂enk (pg. 325)

Pokorny: k̂$^{e}/_{o}$nk (pg. 566) **Disposition:** k̂enk

481 W^R:170 √1.śad 'prevail' (RV:A)

Werba: k̂end (#582) **LIV:** k̂end (pg. 325), K̂end (pg. 351)

Pokorny: 2.k̂ad (pg. 516-7) **Disposition:** 2.k̂ed

Cognates: *κέκασμαι* < *ke&kn̥s- 'sich auszeichnen'; n.b. for the */d/ its participle *κεκαδμένος* (KEWA.iii:285; LIV:351).

Remarks: Often connected with #478 (Fr.i:812). LIV separates into two roots on semantic grounds.

482 W^R:170 √2.śad 'fall' (B:B)

Werba: k̂ad (#191) **LIV:** k̂ad (pg. 318)

Pokorny: 1.k̂ad (pg. 516) **Disposition:** 1.k̂ad

483 W^R:170 √śap 'curse' (RV:B)

Werba: k̂ap (#192) **LIV:** k̂ep (pg. 327)

Pokorny: - **Disposition:** k̂ep

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484 W^R:171 √1.ś$^a/_i$m 'labor' (RV:A)

Werba: k̂emh$_2$ (#604) **LIV:** k̂emh$_2$ (pg. 323)

Pokorny: 4.k̂em(ə) (pg. 557) **Disposition:** k̂em

Cognates: *κάμνω* 'mühe mich' (P:557; Fr.i:773)

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485 W^R:171 √2.śam 'be quiet' (B:X)

Werba: k̂emh$_2$ (#353) **LIV:** k̂emh$_2$ (pg. 323)

Pokorny: **Disposition:** =#484

Remarks: Same as #484 (LIV).

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486 W^R:171 √3.śam 'note' (C?:X)

Werba: **LIV:**

Pokorny: **Disposition:** NE

Remarks: Perhaps a specialization of #485 (W^R).

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487 W^R:171 √śal 'leap' (G:A)

Werba: **LIV:**

Pokorny: **Disposition:** k̂er

Cognates: From 'deer', which in turn from *śr̥ṅgam* 'horn' (KEWA.iii:312*f*, 305); this is cognate with *κέρας* (KEWA.iii:369) < *k̂er (Watkins:40).

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488 W^R:171 √śaś 'leap' (G:B)

Werba: **LIV:**

Pokorny: **Disposition:** k̂as

Cognates: From *śaśáḥ* 'hare' (KEWA.iii:316*f*) which < *k̂as (Watkins:37), cp. German *Hase*.

Remarks: "Doubtless" denominative (W^R).

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489 W^R:172 √śă̆s 'cut' (E:A)

Werba: k̂as (#468) **LIV:** k̂es (pg. 329)

Pokorny: k̂es (pg. 586) **Disposition:** k̂es

Cognates: *κεάζω* 'spalte', *κέαρνον* 'Axt' (P:586; Fr.i:806)

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490 W^R:172 √ś$^{ā}/_{i}$ 'sharpen' (AV:A)

Werba: k̂oh$_3$ (#354) **LIV:** k̂eh$_3$(y) (pg. 319)

Pokorny: k̂⸢ē, ō, ə⸣y (pg. 541-2) **Disposition:** i.k̂ēy

Cognates: *κῶνος* 'Kegel...' (P:542; Fr.ii:63)

Remarks: Cp. ak̂'sharp' (P). N.b. ≠ √k̂ey 'lie'.

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491 W^R:172 √ś$^{ā}/_{i}$s 'order' (RV:B)

Werba: k̂$^{e(:)}/_{0}$h$_1$s (#194) **LIV:** k̂eHs (pg. 318)

Pokorny: k̂$^{ā}/_{ə}$s (pg. 533) **Disposition:** k̂ās

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492 W^R:173 √śiñj 'twang' (G:C)

Werba: II ćinj (#656) **LIV:**

Pokorny: **Disposition:** NE

Cognates: Onomatopoeia; only Indoiranian (KEWA.iii:335).

493 W^R:173 √śiṣ 'leave' (B:C)

Werba: II ćayš (#195) **LIV:** k̂eys (pg. 321)

Pokorny: - **Disposition:** k̂eys

Cognates: No good etymology (KEWA.iii:336, 348).

494 W^R:174 √2.śī 'lie' (RV:A)

Werba: k̂ey (#469) **LIV:** 1.k̂ey (pg. 320)

Pokorny: 1.k̂ey (pg. 539-40) **Disposition:** 1.k̂ey

Cognates: *κεῖται* 'liegt' (P:539)

Remarks: Skt. long vowel is secondary.

495 W^R:174 √śuc 'gleam' (RV:A)

Werba: k̂ewk (#196) **LIV:** 1.k̂ewk (pg. 331)

Pokorny: 2.k̂ew 'leuchten, hell' *as* k̂ew\k (pg. 594, 597) **Disposition:** 1.k̂ew\k

Cognates: *κύκνος* ['swan'] (P:595, 597; Fr.ii:45)

Remarks: Cp. ##496, 497. Pokorny explicitly states *k̂ewk* to be an extension of 2.k̂ew - but lists it separately.

496 W^R:174 √śu(n)dh 'purify' (G:C/A)

Werba: II ćawdh (#197) **LIV:** k̂ewdh (pg. 330)

Pokorny: 2.k̂ew 'leuchten, hell' *as* k̂ew\dh (pg. 594-5) **Disposition:** =#495\dh

Remarks: Cp. ##495, 497.

497 W^R:175 √śu(m)bh 'beautify' (E:B/A)

Werba: k̂ewbh (#470) **LIV:** k̂ewbh (pg. 330)

Pokorny: 2.k̂ew *as* k̂ew\bh (pg. 594) **Disposition:** =#495\bh

Remarks: Cp. ##495, 496.

498 W^R:175 √1.śuṣ 'dry' (G:A)

Werba: saws (#198) **LIV:** $h_2$sews (pg. 285)

Pokorny: s(a)ws (pg. 880-1) **Disposition:** saws

Cognates: *αὔω* 'trockne, dörre'; *αὖος* ['dry'] < *hauhos cp. Lith. *saũsas* (P:881; Fr.i:189).

Remarks: Original */s/ > /'s/ / _.../ṣ/ (Burrow:99)

499 W^R:175 √śū, -v$^{ā}/_{i}$ 'swell' (RV:A)

Werba: k̂ewh$_1$ (#355) **LIV:** k̂weh$_1$ (pg. 339)

Pokorny: 1.k̂ew(ə), k̂ū, k̂wā (pg. 592-4) **Disposition:** 1.k̂ew(ə)

Cognates: *κυέω* 'schwanger sein' (P:593; Fr.ii:42)

500 W^R:176 √1.śr̥ 'crush' (AV:A)

Werba: k̂erH (#356) **LIV:** k̂erh$_2$ (pg. 327)

Pokorny: 4.k̂er(ə), k̂rē (pg. 578) **Disposition:** 4.k̂er(ə)

Cognates: *κεραΐζω* 'verwüste' (P:578; Fr.i:822)

Remarks: Cp. #65.

501 W^R:176 √śr̥dh 'be defiant' (G:C)

Werba: II ćardh (#199) **LIV:**

Pokorny: **Disposition:** NE

Cognates: Unclear beyond Indoiranian (KEWA.iii:309).

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502 W^R:177 √ścut 'drip' (B:C)

Werba: II s$\frac{k}{\check{c}}$awt ; XRF (#471) **LIV:**

Pokorny: **Disposition:** NE

Cognates: No good etymology

(KEWA.iii:380).

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503 W^R:177 √śnath 'pierce' (G:C/A)

Werba: II ćnathH (#606) **LIV:** k̂neth$_2$ 'stoßen, stechen' (pg. 337); also k̂ent 'stechen' (pg. 326).

Pokorny: - **Disposition:** k̂ent *as* k̂netə

Cognates: *κεντέω* 'stachle, steche' (KEWA.iii:380) shows the root in its 'Theme I' variant; Fr.i:820 and LIV:326 «k̂ent» give no Sanskrit, but Latv. *sīts* 'Jagdspieß'.

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504 W^R:177 √ś$^{y\bar{a}}/_{\bar{i}}$ 'coagulate' (G:C)

Werba: II ćyaH (#522) **LIV:** k̂yeH (pg. 331)

Pokorny: - **Disposition:** NE

Cognates: Unclear beyond Indoiranian; suggested: *κιέλλη·πάχνη, ὀμίχλη* ['cloud'] (KEWA.iii:383).

Remarks: Accepted form extrapolated from LIV to non-laryngeal form.

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505 W^R:177 √ś$\frac{l}{r}$ath 'slacken' (RV:A)

Werba: **LIV:** k̂reth$_2$ (pg. 338)

Pokorny: 2.kret 'schütteln' (pg. 620) **Disposition:** 2.kret

Cognates: *κροτεῖν* 'klatschen, klopfen, schlagen (P:620*f*), but Fr.ii:26 says this has no cognates beyond Gk.

Remarks: Skt. form not in Pokorny; identification of root is by OE āhreddan, OHG retten, appearing in both LIV«k̂reth$_2$» and at P. *loc cit*; in addition, Apte:564 defines the root as 'to hurt, injure, kill', also 'to untie, loosen, liberate, relase'. Pokorny says his 2.kret is probably identical with his 1.kret.

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506 W^R:178 √śram 'be weary' (RV:X)

Werba: k̂remh$_2$ (#358) **LIV:** k̂remh$_2$ (pg. 337)

Pokorny: klĕm (pg. 602) **Disposition:** =#76

Remarks: See #76 for a discussion of the controversial relationship with that root.

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507 W^R:178 √śrambh 'trust' (G:B)

Werba: **LIV:**

Pokorny: k̂re{ē,o,em}bh (pg. 617) **Disposition:** k̂rembh

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508 W^R:178 √śr$^{ā}/_{ī}$, 2.ś$\underset{\circ}{\text{r}}$ 'boil' (G:A)

Werba: II ćar, ćraH (#583, 607) **LIV:**

Pokorny: k̂erə, k̂rā (pg. 582) **Disposition:** k̂erə

Cognates: *κεράννυμι* ['mix'] (P:582); which Fr.i:825 gives as cognate of √śīr, #510, q.v.

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509 W^R:179 √śri, 3.ś$\underset{\circ}{\text{r}}$ 'resort' (RV:A)

Werba: k̂ley (#201) **LIV:** k̂ley (pg. 332)

Pokorny: 2.k̂el 'stechen' *as* k̂le\y 'neigen, lehnen' (pg. 545, 600-2) **Disposition:** 2.k̂el *as* k̂le\y

Cognates: *κλίνω* < *k̂l$_\circ$ $\frac{\text{n}}{\text{Λ}}$y- (LIV:332)

Remarks: Identity of root in Werba per Apte:565. Cp. #69; 3.kel 'schlagen, hauen' (P:545), 1.(s)kel 'schneiden' (P:923), 4.(s)kel 'biegen (P:928); 2.k̂el = 'neigen'.

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510 W^R:179 √1.śrī, śr̥ 'mix' (RV:X)

Werba: k̂erh$_2$ (#357) **LIV:** 2.k̂erh$_2$ (pg. 328)

Pokorny: k̂er(ə), krā (pg. 582) **Disposition:** =#508

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511 W^R:179 √śru 'hear' (RV:A)

Werba: k̂lew (#203) **LIV:** k̂lew (pg. 334)

Pokorny: 1.k̂lew(ə), klū (pg. 605-7) **Disposition:** 1.k̂lew(ə)

Cognates: κλύω 'höre, vernehme' (KEWA.iii:373).

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512 W^R:180 √ślāgh 'extol' (C:X)

Werba: XRF (#659) **LIV:**

Pokorny: **Disposition:** NE

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513 W^R:180 √ś$\frac{l}{r}$iṣ 'clasp' (B:C/A)

Werba: II ćLayš; XRF (#202) **LIV:** k̂leys (pg. 333)

Pokorny: - **Disposition:** =#509\s

Remarks: Cognate with #509 (We).

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514 W^R:181 √śvas, suṣ 'blow' (E:B)

Werba: k̂wes (#537) **LIV:** k̂wes (pg. 341)

Pokorny: k̂w(e)s (pg. 631-2) **Disposition:** k̂wes

Remarks: Cp. 2.k̂wey 'zischen, pfeifen' (P:628).

515 W^R:181 √ṣṭīv 'spew' (B:A)

Werba: **LIV:** sptyewH (pg. 583)

Pokorny: (s)p(h)yēw, (s)pyū, (s)pīw (pg. 999) **Disposition:** (s)ptyewə

Cognates: *πτύω* 'spuckt' (P:999; Fr.ii:617)

Remarks: /t/ for */p/ by dissimilation from following /w/ (P).

516 W^R:182 √sagh 'be equal to' (G:X)

Werba: II sagh (#207) **LIV:**

Pokorny: **Disposition:** =#523

Remarks: "Doubtless" the same as #523 (W^R).

517 W^R:182 √sac 'accompany' (RV:A)

Werba: sek̑ (#208) **LIV:** sek̑ (pg. 525)

Pokorny: 1.sek̑ (pg. 896-7) **Disposition:** 1.sek̑

Cognates: '*ἕπομαι* ['follow'] (P:896; Fr.i:545)

518 W^R:182 √sa(ñ)j 'hang' (B:B)

Werba: se(n)g (#210) **LIV:** 1.seg (pg. 516)

Pokorny: 2.se$\underset{\wedge}{\text{n}}$g (pg. 887-8) **Disposition:** 2.se(n)g

519 W^R:183 √sad 'sit' (RV:A)

Werba: sed (#211) **LIV:** sed (pg. 513)

Pokorny: sed (pg. 884-7) **Disposition:** sed

Cognates: '*ἕζομαι* ['sit'] (P:885)

520 W^R:183 √san, sā 'gain' (RV:A)

Werba: **LIV:** $senh_2$ (pg. 532)

Pokorny: $sen^e/_\partial$ (pg. 906) **Disposition:** senə

Cognates: ἀνύω 'vollende' (P:906; Fr.i:115)

521 W^R:184 √sap 'serve' (RV:A)

Werba: sep (#212) **LIV:** sep (pg. 534)

Pokorny: sep (pg. 909) **Disposition:** sep

Cognates: ὁπλέω 'schirre an';'ἕπω 'besorge...' (P:909; Fr.ii:405, 546)

522 W^R:184 √sas 'sleep' (G:B)

Werba: ses (#213) **LIV:** ses (pg. 536)

Pokorny: - **Disposition:** ses

Remarks: Hittite *ses* shows that this form is not connected with Skt. *svap*, Gk. ὕπνος (KEWA.iii:449).

523 W^R:184 √sah 'prevail' (B,RV:A)

Werba: seǵh (#214) **LIV:** seǵh (pg. 515)

Pokorny: seĝh(y,w) (pg. 888-9) **Disposition:** seĝh

Cognates: 'ἔχω ['hold'] (P:888; Fr.i:603)

524 W^R:185 √sā 'bind' (RV:B/A)

Werba: sah_2 (#361) **LIV:** seh_1(y) (pg. 518)

Pokorny: 2.$s^{\bar{e}}/_\partial$(y) (pg. 889) **Disposition:** seə

Cognates: ἱμάς 'Riemen', ἱμάω show the root with an /m/-element (P:891; Fri:725).

Remarks: W^Rconsolidates with #525. Lat. *sinere* determines identification of roots in LIV and P; Skt. perfect in W^R is *sasau*.

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525 W^R:185 √si 'bind' (RV:B)

Werba: **LIV:** sh_2ey (pg. 544)

Pokorny: 3.s$^{\bar{e}}/_{\partial}$(y), sey (pg. 891) **Disposition:** =#524\y

Remarks: W^Rconsolidates with #524. Skt. perfect in $W^R$is *siḍāya*; this determines identification of roots in LIV and P. Skt. *sĭ* is < *Z√#524; Skt. *sī* is < *syə metathesized < *Z√səy.

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526 W^R:185 √s̆ādh 'succeed' (G:A)

Werba: sEHdh (#215) **LIV:** seHdh (pg. 517)

Pokorny: s$^{\bar{e}}/_{\partial}$(y)dh, s̆ī dh (pg. 892) **Disposition:** seədh

Cognates: ἰθύς 'gerade, gerecht' shows a secondary form of the root, with *ī (KEWA.iii:456; Fr.i:716; LIV:517 n.1; P:892). This item shows loss of /h/ due to Grassmann's Law (Sihler:143§188): *sīdh- > *sīth- > *hīth- > īth- .

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527 W^R:186 √sic 'pour out' (RV:A)

Werba: seyk̑ (#217) **LIV:** seyk̑ (pg. 523)

Pokorny: seyk̑(pg. 893-4) **Disposition:** sey\k̑

Cognates: ἰκμάς 'Feuchtigkeit' (P:893; Fr.i:717)

Remarks: Possibly an extension of √s$^{e}/_{o}$y 'tröpfeln, rinnen ...' (P:889); cp. sey$\frac{p}{b}$ 'ausgießen ... rinnen' (P:894).

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528 W^R:186 √1.sidh 'repel' (RV:C)

Werba: seydh (#218) **LIV:** seydh (pg. 522)

Pokorny: (pg. 892) **Disposition:** seydh

Cognates: Apparently only Indoiranian (KEWA.iii:466, LIV).

Remarks: To be separated from ##526, 529 (KEWA *loc cit*).

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529 W^R:186 √2.sidh 'succeed' (RV:X)

Werba: **LIV:** seHdh (pg.517)

Pokorny: **Disposition:** =#526

Remarks: Same as #526 (W^R); so LIV and KEWA.iii:466, interpreting √sidh as < *sH ̥dh, the zero-grade of #526 *seHdh. To be separated from #528, W^R's "1.sidh" = KEWA's "$sidh_2$" (KEWA *loc cit*).

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530 W^R:187 $\sqrt{s^{\bar{i}v}/_{y\bar{u}}}$ 'sew' (G:A)

Werba: syuH (#437) **LIV:** syewH (pg. 545)

Pokorny: syū, s¯īw, sū (pg. 915-6) **Disposition:** syū

Cognates: ὑμήν 'dünne Haut, Sehne' (P:916; Fr.ii:964)

Remarks: Probably cognate with 3.sey 'binden' (P:891), which cognate with sĭ 'bind' #525.

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531 W^R:187 √su 'press out' (RV:A)

Werba: sew (#219) **LIV:** sew (pg. 537)

Pokorny: 1.sew(ə), sū (pg. 912) **Disposition:** 1.sew(ə)

Cognates: ὕει 'regnet' (P:912; Fr.ii:979)

Remarks: Perhaps related to #532 (W^R).

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532 W^R:188 √sū 'generate... impel' (RV:B)

Werba: $sewh_1$ (#363) **LIV:** $sewh_1$ (pg. 538)

Pokorny: 3.sew(ə), sŭ̄ (pg. 914) **Disposition:** 3.sew(ə)

Remarks: Perhaps related to #531 (W^R); or with √swey 'biegen, drehen, schwingen' (P:1041).

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533 W^R:188 √sūd 'put in order' (RV:A)

Werba: suh$_2$d (#660) **LIV:** sweh$_2$d (pg. 606)

Pokorny: swād (pg. 1039-40) **Disposition:** swād

Cognates: ἡδύς ['sweet'] (P:1039)

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534 W^R:189 √sūrkṣ 'heed' (G:B)

Werba: s̥rHgh\s (#586) **LIV:** swergh (pg. 613)

Pokorny: swergh (pg. 1051) **Disposition:** swergh

Remarks: Pokorny gives basic meaning of the root as 'sorgen; sich worum kümmern; krank sein'; perhaps connected with 4.swer (P:1050) 'schneiden, stechen, schwären, eitern' > *inter alia* OIr *serb*, Welsh *chwerw* 'bitter'; OHG *sweran* 'schmerzen'; pSlavic *ṣwara 'kränkisch' > Russian *xvoryj* ['sickly'] (Author). Long /ū/ is "irregular" (LIV:316).

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535 W^R:189 √s̥r 'flow' (RV:A)

Werba: ser, s$^a/_e$l (#220) **LIV:** 1.sel (pg. 527)

Pokorny: 1.ser (pg. 909) **Disposition:** 1.ser

Cognates: ὁρμάω 'treibe an' (P:909; Fr.ii:420)

Remarks: Cp. ##536, 537, 567. There is some disagreement about what to do with this root. The range of meanings (Apte:612) includes 'go; assail; flow'.

LIV recognizes √1.sel (pg. 527) and √serh$_3$(pg. 535). With the former goes Skt √s̥r, together with some Greek, Tocharian, and Latin forms which very often mean "jump", e.g. Lat. *saliō*, Gk. ἅλλομαι 'spring, hüpfe'. With the latter go Gk. ὁρμή ['onrush'], also Hit. *sarhieddu* 'soll angreifen, soll überfallen".

Pokorny and Frisk *locc. cit.* put √s̥r together with ὁρμάω ['rush']. This is the view followed here, as it results in a root with /l/ frequently meaning "jump", containing Gk.

ἅλλομαι ; and another root with /r/ meaning "rush, flow, attack", containing ὁρμή and Skt. √sr̥. This /r/-root is furthermore easily connected with *√srew 'fließen, strömen', LIV:588, #567 in this list. Note also, perhaps reflecting this /r/-root, Hittite *sarhana* 'Flüssigkeit, die zu unbekanntem Zweck in den Ofen geschüttet wird' (Tischler 2001:144).

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536 W^R:189 √sr̥j 'send forth' (RV:B)

Werba: selǧ[ǧ, sic] (#222) **LIV:** selĝ(pg. 528)

Pokorny: selĝ(pg. 900-1) **Disposition:** selĝ

Remarks: Cp. ##535, 537.

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537 W^R:190 √sr̥p 'creep' (B:A)

Werba: serp (#223) **LIV:** serp (pg. 536)

Pokorny: serp (pg. 912) **Disposition:** serp

Cognates: 'ἕρπω 'schleiche...' (P:912)

Remarks: Cp. ##535, 536; also perhaps 199: Pokorny's √*5.sel is 'schleichen, kriechen'.

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538 W^R:190 √sev 'attend upon' (E:B)

Werba: **LIV:** sh_2ey (pg. 544)

Pokorny: **Disposition:** i.sey

Remarks: LIV references P:891-2 but Pokorny gives no etymology for the subject Skt. word at that place. Contrast 3.sey 'bind' #525.

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539 W^R:190 √skand 'leap' (RV:B)

Werba: skand (#224) **LIV:** 1.skend (pg. 554)

Pokorny: - **Disposition:** skend

Cognates: Perhaps σκάνδαλον ['trap' (LS)] (K.iii:506; Fr.ii:717); but the semantics are poor.

540 W^R:191 √ska(m)bh 'prop' (RV:B)

Werba: **LIV:** skebhH (pg. 549)

Pokorny: ska(m)bh (pg. 916) **Disposition:** skabh

Remarks: Cp. #545 (W^R). Pokorny suggests the original form was without the nasal, which was inserted under the influence of #545.

541 W^R:191 √sku 'tear' (G:B/A)

Werba: skEw (#225) **LIV:** skewh$_2$ (pg. 561)

Pokorny: 6.skēw (pg. 895*f*, 954) **Disposition:** 2.sek (cp. #146*f*) *as* skēw

Cognates: *σκυτάλη* 'Keule, Stock' (P:954) shows this item, apparently with a /t/-extension, cp. Lith. *skutù / skùsti* 'rasieren, schaben, schälen' (Fr.ii:744)

Remarks: (See McDowell:429 for identification of root.) Cp. #60.

542 W^R:191 √skhal 'stumble' (E:B)

Werba: sk̑h$_2$al(H) (#474) **LIV:** (s)ǵhh$_2$el (pg. 543)

Pokorny: skhel (pg. 929) **Disposition:** 4.(s)kel *as* skhel

Remarks: "Expressive Bildung" of 4.(s)kel 'biegen, anlehnen, krumm ...' (P:928). Cp. (s)k̂el 'springen' (P:929).

543 W^R:191 √stan 'thunder' (G:A)

Werba: sten (#475) **LIV:** sten 'stöhnen' (pg. 596)

Pokorny: - (pg. 1021) **Disposition:** sten

Remarks: $W^R$and Pokorny do not distinguish from #544; see note to same.

544 W^R:191 √stan 'thunder' (same as the preceding)

Werba: stenh$_2$ (#367) **LIV:** stenh$_2$ 'donnern' (pg. 597)

Pokorny: (s)ten (pg. 1021) **Disposition:** (s)ten

Cognates: *στένω* 'dröhne...' (P:1021)

Remarks: $W^R$and Pokorny do not distinguish from #543. Since the perfects recorded by Whitney are *grammarians'* forms it is likely that it is meaningless to ask to which of the original roots they belong; they are assigned here more-or-less arbitrarily, on the basis of Whitney's gloss.

545 W^R:192 √sta(m)bh 'prop' (RV:B)

Werba: stembh(H) (#476) **LIV:** stembh(H) (pg. 595)

Pokorny: stĕ(m)⌊bh, b, p⌋ (pg. 1012-3) **Disposition:** stembh

Cognates: Proposed connection with *ἀστεμφής* 'unerschütterlich' (P:1012; Fr.i:170); but poor semantic match precludes acceptance here; so LIV *loc cit* n. 1.

Remarks: Cp. #540 (W^R).

546 W^R:192 √stigh 'mount' (G:A)

Werba: steygh (#227) **LIV:** steygh (pg. 593)

Pokorny: steygh (pg. 1017-8) **Disposition:** steygh

Cognates: *στείχω* 'schreite, gehe' (P:1017; Fr.ii:785)

547 W^R:193 √1.stu 'praise' (G:A)

Werba: stew (#228) **LIV:** stew (pg. 600)

Pokorny: 2.stew (pg. 1035) **Disposition:** 2.stew

Cognates: *στεύται* 'verspricht prahlend' (P:1035; Fr.ii:794; KEWA.iii:520)

548 W^R:193 √stubh 'praise' (G:C/A)

Werba: II stawbh (#229) **LIV:**

Pokorny: stew\bh (pg. 1035) **Disposition:** =#547\bh

Cognates: KEWA.iii:517 gives nothing outside Indo-Iranian.

Remarks: Variant of #547 (W^R, We).

549 W^R:193 √str̥ 'strew' (RV:A)

Werba: $sterh_3$ (#368) **LIV:** $sterh_3$ (pg. 599)

Pokorny: 5.ster(ə), strē (pg. 1029-30) **Disposition:** 5.ster(ə)

Cognates: *στόρνῡμι* 'bestreue...' (P:1030; Fr.ii:803)

550 W^R:194 √str̥h 'crush' (G:B)

Werba: sterĝh (#231) **LIV:** (s)terĝh (pg. 598)

Pokorny: tele⌈ĝh, k⌋ (pg. 1062) **Disposition:** (s)teLĝh

Remarks: Variant of #190, q.v. with refs (W^R).

551 W^R:194 √st$^{y\bar{a}}/_{\bar{i}}$ 'stiffen' (G:A)

Werba: $styoh_3$ (#524) **LIV:** styeH (pg. 603)

Pokorny: stāy, stĭ, styā (pg. 1010-1) **Disposition:** styā

Cognates: *στέαρ* 'stehendes Fett' (P:1010; Fr.ii:780)

552 W^R:194 √sthā 'stand' (RV:A)

Werba: $stah_2$ (#369) **LIV:** $steh_2$ (pg. 590)

Pokorny: st$^{\bar{a}}/_{\partial}$ (pg. 1004-8) **Disposition:** stā

Cognates: '*ἵστημι* ['stand'] (P:1004)

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553 W^R:195 √snā 'bathe' (C:A)

Werba: $snah_2$ (#370) **LIV:** $(s)neh_2$ (pg. 572)

Pokorny: $sn^{\bar{a}}/_{\partial}$ (pg. 971-2) **Disposition:** snā

Cognates: *νήχω* 'schwimme' shows the root with an extension; unextended is *νέω* ['swim' (LS)] (K.iii:533; Fr.ii:310, 319)

Remarks: Cp. #555.

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554 W^R:195 √snih 'be sticky' (G:A)

Werba: sneyǵh (#232) **LIV:** sneyǵh (pg. 573)

Pokorny: sneyǵh (pg. 974) **Disposition:** sneyǵh

Cognates: *νείφει* 'erschneit' (P:974; Fr.ii:298)

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555 W^R:195 √snu 'distil' (G:A)

Werba: II snaw (#233) **LIV:** snew (pg. 574)

Pokorny: $sn^{\bar{a}}/_{\partial}$\w (pg. 971-2) **Disposition:** snew

Cognates: *νάω* (Aeolic *ναύω*) 'fließe' (P:972; Fr.ii:295)

Remarks: Cp. #553.

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556 W^R:196 √spand 'quiver' (G:A)

Werba: II spand (#477) **LIV:**

Pokorny: sp(h)e(n)d 'zucken ... glänzen' (pg. 989) **Disposition:** spe(n)d

Cognates: *σφαδάζω* 'zucke, zapple' (P:989; but this is "ohne überzeugende Erklärung" Fr. ii:825)

Remarks: Cp. sp(h)eng 'glänzen' (P:989).

557 W^R:196 √sp̥rdh 'contend' (RV:A)

Werba: sperdh (#236) **LIV:** sperdh (pg. 580)

Pokorny: sperdh (pg. 995-6) **Disposition:** sper(ə)\dh

Cognates: *σπυρθίζειν* 'aufspringen, zappeln, heftig bewegt sein' (P:995; Fr.ii:773)

Remarks: Cp. (s)p(h)⊣er, re⊢$\frac{n}{\Lambda}$dh 'zucken, springen'; (s)pher⊣ĕ,ə⊢(n)h 'zucken, schnellen' (P:996);

sp⊣er, re⊢(n)ĝh 'sein hastig, bewegen, eilen, springen' (P:998); 1.sp(h)er(ə) 'zucken, mit dem fuße wegstoßen' (P:992).

558 W^R:196 √sp̥rś 'touch' (RV:A)

Werba: sperk̂ (#237) **LIV:**

Pokorny: **Disposition:** sperk̂

Cognates: Uncertain outside Indo-Iranian. Suggestions include Gk. *σπαράσσω* 'zerre, reiße' (An acceptable if not incontestable cognate. The Gk. would be from a pre-form *sparak-jo (Sihler:516§465.2).); pSlavic *pr̥kati* 'betatten'; Go. *faurhts* 'Furcht' (KEWA II:539; Fr.ii:757).

559 W^R:197 √sphuṭ 'burst' (C:A)

Werba: **LIV:**

Pokorny: 1.(s)p(h)el (pg. 985) **Disposition:** =#302

Cognates: Hes. *σφαλάσσεῖν·τέμνειν*, *κεντεῖν* ['cut'] (P:985)

560 W^R:198 √spūrj 'rumble' (G:A)

Werba: sp(h)r̥h_2g [sic] (#661) **LIV:** spherh_2g (pg. 586)

Pokorny: sphereg (pg. 996-7) **Disposition:** spherg

Cognates: *σφαραγέομαι* 'strotzen ... prasseln, zischen, mit lauten Knalle zerplatzen' (P:996; Fr.ii:828; KEWA.iii:546).

Remarks: Cp. (s)p(h)⌊er, re⌋$\frac{n}{\Lambda}$dh 'sucken, springen'; (s)pher⌊ĕ,ə⌋(n)h 'sucken, schnellen' (P:996); sp⌊er, re⌋(n)ĝh 'sein hastig, bewegen, eilen, springen' (P:998); 1.sp(h)er(ə) 'zucken, mit dem fuße wegstoßen' (P:992).

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561 W^R:198 √sphr̥, -ul 'jerk' (G:A)

Werba: sperh$_1$ (#372) **LIV:** spherH (pg. 585)

Pokorny: 1.sp(h)er (pg. 992-3) **Disposition:** 1.sper(ə)

Cognates: (ἀ)*σπαίρω* 'zucke, zappele' (P:992; Fr.ii:756)

Remarks: Cp. (s)p(h)⌊er, re⌋$\frac{n}{\Lambda}$dh 'sucken, springen'; (s)pher⌊ĕ,ə⌋(n)h 'sucken, schnellen' (P:996); sp⌊er, re⌋(n)ĝh 'sein hastig, bewegen, eilen, springen' (P:998); 1.sp(h)er(ə) 'zucken, mit dem fuße wegstoßen' (P:992).

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562 W^R:198 √smi 'smile' (RV:B/A)

Werba: smey (#239) **LIV:** smey (pg. 568)

Pokorny: (s)mey (pg. 967) **Disposition:** (s)mey

Cognates: *μειδιάω* 'lachen' shows the root with a /d/-extension, also attested in Latvian (P:967; Fr.ii:194; LIV *loc cit* n.1).

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563 W^R:199 √smr̥ 'remember' (E:A)

Werba: smer (#240) **LIV:** 1.(s)mer (pg. 569)

Pokorny: (s)mer (pg. 969) **Disposition:** (s)mer

Cognates: *μεριμνάω* 'sorge...' (P:969; Fr.ii:210)

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564 W^R:199 √sya(n)d 'move on' (AV:C)

Werba: II syand (#241) **LIV:**

Pokorny: **Disposition:** NE

Cognates: Suggested variant of *syed 'gehen', in turn connected to *sed ['sit'], thence to ὁδος ['road'] (K.iii:550 + Fr.ii:349 + LIV:513 esp. n.1). But the relationship between *syed and *sed is not entirely systematic (but see Burrow:100), so the connection is not adopted here.

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565 W^R:199 √sra(ṁ)s 'fall' (B:C)

Werba: II sLans (#242) **LIV:**

Pokorny: **Disposition:** NE

Cognates: A proposed cognate is ῥαίω 'zerschlage, zerscmettere' (KEWA.iii:552); but Fr.ii:640 merely notes this proposal, and gives no explanation of the Greek word.

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566 W^R:200 √srīv 'fail' (G:C)

Werba: II sLawH < sLyawH (#478) **LIV:**

Pokorny: **Disposition:** NE

Cognates: Etymology unclear (KEWA.iii:556).

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567 W^R:200 √sru 'flow' (AV:A)

Werba: srew (#244) **LIV:** srew (pg. 588)

Pokorny: srew (pg. 1003) **Disposition:** =#535 *as* sre\w

Cognates: ῥέω ['flow'], ῥεύσομαι [future of same] (P:1003; Fr.ii:651*f*)

Remarks: Cp. #535.

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568 W^R:200 √sva(ñ)j 'embrace' (RV:B)

Werba: sweng (#245) **LIV:** sweng (pg. 610)

Pokorny: swe(n)$\frac{g}{k}$ (pg. 1047) **Disposition:** 3.sew *as* swe$\frac{\mathrm{n}}{\Lambda}$\g

Remarks: Pokorny gives basic meaning of root as 'biegen'; cp. 3.sew 'biegen' (P:914), swē

˘y 'biegen' (P:1041).

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569 W^R:201 √svā́d 'sweeten' (C:X)

Werba: swad (#505) **LIV:** $sweh_2d$ (pg. 606)

Pokorny: swād (pg. 1039-40) **Disposition:** =#533

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570 W^R:201 √svan 'sound' (E:B/A)

Werba: **LIV:** $swenh_2$ (pg. 611)

Pokorny: swen (pg. 1046-7) **Disposition:** swe- *as* swen

Remarks: Cp. #572

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571 W^R:201 √svap 'sleep' (RV:A)

Werba: swep (#538) **LIV:** swep (pg. 612)

Pokorny: 1.swep (pg. 1048-9) **Disposition:** 1.swep

Cognates: ὕπνος ['sleep'] (P:1048)

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572 W^R:201 √svar 'sound' (RV?,G:A)

Werba: swer (#479) **LIV:** swer (pg. 613)

Pokorny: 2.swer (pg. 1049-50) **Disposition:** swe- *as* swer

Cognates: ὕραξ 'Spitzmaur' (P:1049)

Remarks: Cp. #570.

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573 W^R:202 √svid 'sweat' (RV:A)

Werba: **LIV:** 1.sweyd (pg. 607)

Pokorny: 2.sweyd (pg. 1043) **Disposition:** 2.sweyd

Cognates: (ϵ)ἴδος 'Schweiß' (P:1043)

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574 W^R:202 √had 'defecate' (G:A)

Werba: ĝhed (#247) **LIV:** ĝhed (pg. 172)

Pokorny: ghed (pg. 423) **Disposition:** ĝhed

Cognates: χέζω 'scheiße' (P:423)

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575 W^R:202 √han 'smite' (RV:A)

Werba: ǵhen (#248) **LIV:** ǵhen (pg. 218)

Pokorny: ǵhen(ə) (pg. 491-3) **Disposition:** ǵhen

Cognates: θειίω ['strike...' (LS)]; φόνος ['murder...' (LS)] (P:492)

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576 W^R:203 √har 'be gratified' (G:A)

Werba: ǵher(H) (#588) **LIV:** 1.ǵher (pg. 176)

Pokorny: 1.ĝher (pg. 440-1) **Disposition:** 1.ĝher

Cognates: χαίρω (P:440; Fr.ii:1064)

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577 W^R:203 √has 'laugh' (E:C)

Werba: II ǰhas ; XRF (#480) **LIV:** 2.Ǵes (pg. 199)

Pokorny: - **Disposition:** Ǵes

Cognates: No etymology given beyond Indoiranian (KEWA.iii:587).

Remarks: Note also 2.jakṣ W^R:51, its reduplicated variant.

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578 W^R:204 √1.hā 'leave' (RV:A)

Werba: ĝheh$_1$ (#374) **LIV:** ĝheh$_1$ (pg. 173)

Pokorny: 1.ĝhē(y) (pg. 418-9) **Disposition:** =#580\ə

Cognates: *κιγχάνω* 'erreichen...', *χάζομαι* 'dränge zurück, weiche' (P:418; Fr.ii:1061)

Remarks: ≠ #580 (P).

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579 W^R:204 √2.hā 'go forth' (AV:X)

Werba: (#475) **LIV:**

Pokorny: **Disposition:** NE

Remarks: This is simply the middle of #578 (W^R, We).

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580 W^R:205 √hi 'impel' (B:B)

Werba: **LIV:** ĝhey (pg. 174)

Pokorny: 1.ĝhĕ(y) (pg. 424-5) **Disposition:** ĝhey

Remarks: Related to ##578, 579? (W^R); but ≠##578 (P).

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581 W^R:205 √hiṁs 'injure' (AV:B)

Werba: **LIV:** ĝheys (pg. 174)

Pokorny: 1.ghĕy 'antreiben, lebhaft bewegen, ... bewegt sein' *as* ghey\s (pg. 424-5)

Disposition: gheys

Remarks: Desiderative of #575? (W^R). Pokorny lists extended form also as independent root (pg. 427); this is adopted here, on account of the poor semantic match with #575. Same as #584 (P).

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582 W^R:205 √hikk 'sob' (G:X)

Werba: **LIV:**

Pokorny: **Disposition:** NE

Cognates: Onomatopoeia; cp *hiccup* (KEWA.iii:592). But hardly a *lautgesetzlich* connection!

583 W^R:205 √hiṇḍ 'be empty' (G:X)

Werba: **LIV:**

Pokorny: **Disposition:** NE

Cognates: Unclear (KEWA.iii:594).

Remarks: Actually means 'goes, wanders, runs' (KEWA *loc cit*).

584 W^R:206 √hīḍ, hel 'be hostile' (RV:B)

Werba: ĝheys\d (#481) **LIV:** ĝheysd (pg. 175)

Pokorny: 1.ĝhĕy 'antreiben, lebhaft bewegen, ... bewegt sein' (pg. 424) *as* ĝhey\s 'verwunden' (pg. 424-5) *as* ĝheys\d (pg. 424) **Disposition:** =#581\d

Remarks: Same root as #581 (P); for the same reasons as given under #581, Pokorny's further derivation from 1.ĝhey (#578), is not adopted here. For the different phases of Pokorny's derivation, note *1.ĝhey > Skt. *hinóti* 'treibt an'; *ĝheys > Skt. *hésas* 'geschoß'; *ĝheys\d > Av. *žaizda* 'Wunde' (P *locc cit*; also pg. 427, with *ĝheys treated as separate root, and its extension *ĝheys\dh.)

585 W^R:206 √hu 'sacrifice' (RV:A)

Werba: ĝhew (#251) **LIV:** ĝhew (pg. 179)

Pokorny: ĝhew (pg. 447-8) **Disposition:** ĝhew

Cognates: χέ(ϝ)ω ['pour'] (P:447; Fr.ii:1092)

586 W^R:206 √hū, hvā 'call' (RV:A)

Werba: ĝhawH (#376) **LIV:** ĝhweH (pg. 180)

Pokorny: ĝhaw(ə) (pg. 413) **Disposition:** ĝhewə *as* S√ĝhweə

Cognates: καυχάομαι 'rühme mich, prahle' (P:413; Fr.i:804)

587 W^R:207 √hūrch 'fall away' (G:C/A)

Werba: **LIV:** ĝhwer (pg. 182)

Pokorny: ǵhwel (pg. 489) **Disposition:** ǵhwel

Remarks: Perhaps originally = ĝhw-el ← ĝhew (for which no independent entry) 'schief' (P). LIV *loc cit* n.1 remarks that the /r/ could as easily be from */l/; in favor of */r/ is Tok *kur-/kwr-* 'altern, gebrechlich werden'; for */l/ can be cited Lith. *pa-žvìlti* 'sich neigen', Latv. *zveļu / zvelît* 'wälzen, umwerfen, fortbewegen'. Apte:641 gives the meaning as 'to be crooked'. On semantic grounds the Baltic cognates seem more persuasive, so I cite the pIE with /l/. This makes it possible to accept the proposed connection with ##597, 598 *qqv*, for which Greek cognates with /l/ have been proposed.

588 W^R:207 √1.h̥r̥ 'take' (AV:A)

Werba: II ʃhaL (#252) **LIV:** 2.ĝher (pg. 177)

Pokorny: 4.ĝher (pg. 442) **Disposition:** 4.ĝher

Cognates: *χόρτος* ['feeding-place' (LS)] (P:942; Fr.ii:1114)

Remarks: Apparently a variant of #322 (W^R, We).

589 W^R:208 √h̥r̥ṣ 'be excited' (RV:B)

Werba: ĝhers (#482) **LIV:** ĝhers (pg. 178)

Pokorny: ĝher(s) (pg. 445-6) **Disposition:** ĝher(s)

Cognates: *χέρσος* 'Festland' (P:445); but *χέρσος* is "ohne sichere Etymologie", though a connection with the present Sanskrit verb has been proposed (Fr.ii:1089). But comparing the entries for these items in Apte and LS, I find *no* plausible semantic connection. LIV and KEWA.iii:583*f* list no Greek cognate for this Sanskrit root, but both do list Lat *horrēre* 'starren' as cognate with the Sanskrit.

Remarks: Evidently related to 3.gher 'hervorstechen' (P:440).

590 W^R:208 √heṣ 'whinny' (C:X)

Werba: ONO (#662) **LIV:**

Pokorny: **Disposition:** NE

Cognates: Onomatopoeia (KEWA.iii:610).

591 W^R:208 √hnu 'hide' (G:C)

Werba: II ʃhnaw (#253) **LIV:** ĝhnew (pg. 180)

Pokorny: - **Disposition:** NE

Cognates: Unclear (KEWA.iii:613).

592 W^R:208 √hras 'shorten' (G:C/A)

Werba: ĝhres (#483) **LIV:**

Pokorny: 6.gher(ə), ghrē 'kurz' *as* ĝh(e)r(e)\s (pg. 443) **Disposition:** 6.gher(ə) *as* ĝher\s

Cognates: *χείρων* 'schlechter' (P:443; but doubts about relationship expressed, KEWA.iii:615, Fr.ii:1084) shows the root without the /s/-extension.

593 W^R:209 √hrād 'make a noise' (G:A)

Werba: ĝLah$_2$d (#663) **LIV:**

Pokorny: ĝhlād (pg. 451) **Disposition:** ĝhlād

Cognates: *καγχλάζω* 'klatsche, plätschere' (P:451; KEWA.iii:615); but no etymology given for this (Fr.i:751, 804).

Remarks: Cp. √ghel 'rufen, schreien' P:423. Seems onomatopoeic but a derivation from *ĝhlād produces the proper Sanskrit and Greek forms.

594 W^R:209 √hrī 'be ashamed' (C:B)

Werba: II ʃhLayH (#377) **LIV:** ĝreyH (pg. 180)

Pokorny: - **Disposition:** ĝreyə

595 W^R:209 √hreṣ 'neigh' (G:X)

Werba: **LIV:**

Pokorny: **Disposition:** NE

Cognates: Onomatopoeia (KEWA.iii:617).

Remarks: < *s√G̈hers 'sich (er)freuen' LIV:198 = P:445-6? (Author)

596 W^R:209 √hlād 'refresh' (G:B)

Werba: **LIV:**

Pokorny: **Disposition:** ghlaəd?

Cognates: Suggested cognates: OCS *chladŭ* 'Kälte'; pCeltic ***gladsi-*** 'pool' (KEWA.iii:614, 618). A *glaəd would produce the proper forms (Author).

597 W^R:209 √hval 'go wrong' (G:X)

Werba: **LIV:** (pg. 182)

Pokorny: **Disposition:** =#598, 587.

Cognates: *φηλός* ['knavish' (LS)], though Fr.ii:1008 lists this as "nicht sicher erklärt".

Remarks: Specialized form of #598 (W^R; so LIV:182).

598 W^R:210 √hvr̥, hru, hur 'make, be crooked' (G:A)

Werba: ĝhwer (#255) **LIV:** ĝhwer (pg. 182)

Pokorny: ĝhwel (pg. 489) **Disposition:** =#587

Cognates: *φολκός* 'krummbeinig' (P:489; Fr.ii:439), but meaning uncertain (Fr): "found onliy in the description of Thersites, either (from *φάεα*'*ἕλκειν*) *squint-eyed*; or more probably (akin to '*ἕλκω*, *ὁλκός*) *bandy-legged*, Lat *valgus*" (LS:765). **Remarks:** LIV considers the same as #587, which see for a discussion of the form of the root.

Chapter 6

Correlations between pIE Roots, Greek Prothesis, and Sanskrit Long-Reduplicant Perfects

The tables which follow list each proto-Indo-European verbal root with a documented Sanskrit perfect, as established in Chapter 4 above. Obviously, roots listed in Chapter 4 for which no etymology can be established - this includes roots found only in Indo-Iranian, listed in that chapter with a dialect-attestation code "C" - are simply omitted here. One exception is when an extended root ranked "C" is included when a version without that extension is encountered outside of Indo-Iranian. With each root is listed any Greek form showing prothesis, or long-reduplicant Sanskrit perfect, which seems cognate. The information in this will be used for the statistical analysis. The column headers are as set forth on the following page:

Nr	Serial number of the pIE root
√	The pIE root itself
Ref	Reference number for that root, as given in Chapter 4
Rnk	Rank; composed of the following two items separated by "/":
	(1) Earliest attestation of the root in Sanskrit:
	RV = Rig Veda
	AV = Atharva Veda
	V = other Vedic
	B = Brāhmaṇa
	A = Āraṇnyaka
	U = Upaniṣad
	E = Epic
	S = Sutra
	C = Classical
	G = Grammarians
	(2) Attestation of the root within the Indo-European dialects:
	A = Gk & Indo-Iranian
	B = Indo-Iranian and anything else
$\bar{\sigma}$&	Skt Long-reduplicant Perfect
Ref	Reference number for that perfect form, as given in Chapter 2
Rnk	Rank of that perfect form, as given in Chapter 2:
	1 = long-reduplicant form is clearly old
	2 = long-reduplicant form may be old
	3 = long-reduplicant form seems new
ProV	Greek forms with prothetic vowel
Ref	Reference number for the above, as given in Chapter 3
Rnk	Rank of apparently prothetized form, as given in Chapter 3:
	1 = form clearly has prothesis
	2 = modest doubts about prothesis
	3 = severe doubts about prothesis

Ordinarily, roots are numbered with integers. But groups of roots which are related by root-extension schwebeablaut, or nasal infixation are distinguished from each other by

a decimal extension to the number, so that the integer portion of the serial number is the same for the whole group. The plain version of the root is numbered .0 .

Even when there is no reflex of an unextended root in the material here, it is listed for reference purposes under a number ending in .0, and its dialectical attestation is given when it exceeds that of any of the extended forms. Rarely, the converse occurs, and an unextended root in the list is attested more widely with an extension not represented here. This is noted in a subjoined entry for a generic extended form in "-\X".

In most cases root extensions are added onto an actually or potentially extant root: √al + dh = al\dh. Rarely, though, the element common to a family of roots has a phonologically impossible shape. In these cases the "impossible" ultimate root is listed with a following hyphen, and the actual forms follow it: ka-, ka\ə, ka\m, ka\n.

Sometimes a Greek form with prothesis is obviously related to a Sanskrit root, but has an extension not found in Sanskrit. In these cases, an appropriately extended root is set up (including if necessary a header-root whose number ends in .0); these forms are marked with a preceding asterisk.

In a few cases, two roots are consolidated as one is an obvious late variant of another; these will have two entries in the third column. The first "Rnk" column applies to the *consolidated* items; i.e., the earlier chronological, and wider dialectical, attestations will be entered.

The Sanskrit long-reduplicant perfects (which were summarized above in §2.1) are listed here in the column headed "$\bar{\sigma}$&", except for the two items which were given a rank of '0', and two items (##15, 16) which are without etymology.

The Greek words with an apparent prothetic vowel (which were set out in §3.3) are listed here in the column headed "ProV", when they seem to be derived from the proto-Indo-European forms which form the basis of this listing. Words not so derivable - i.e., those not cognate with anything having an attested Sanskrit perfect - are irrelevant for purposes of computation, but are briefly listed below. Greek words given a rank of '0' are silently ignored.

The collating order is based on Sanskrit:

a ā i ī u ū e ē o ō k̑ k̑h ĝ ĝh k kh g gh k̂ k̂h ĝ ĝh t th d dh n p ph b bh m y r l w s þ ð ə

Extended or otherwise variant forms of roots are always entered under the base form of the root (which will be numbered .0), even when the base and variant forms begin with different

letters. "Movable" /s/ , "(a)" and "(n)" or "(m)" are ignored in alphabetization, except when the previous item is otherwise identical. Cover-symbols (K, $\hat{K}$, L, etc.) come before the first member of the series to which they refer.

Nr	√	Ref	Rnk	σ̄&	Ref	Rnk	ProV	Ref	Rnk
1	1.ak̂(ō)	13	RV / A						
2	2.aĝ	4	RV? / A						
3	at	5	G / B						
4	2.ank	3	B / A						
5	an(ə)	7	RV / A						
6	1.ap	17	RV / B						
7.0	4.ay		RV /A						
7.1	ayndh	20	RV / A						
8	3.ayg	46	G / A						
9	ayĝh	29	G / A						
10	1.ays	22	B / B						
11.0	2.ays		RV /A						
11.1	aysd	25	RV / A						
12.0	2.al		RV /A						
12.1	aldh	44	RV / A						
13	alǵh	10	RV / A						
14	7.aw(e)	11	RV / A						
15	awd	35	AV / A						
16	ed	6	G / A				*ὀδύνη*	164a	2
"							*ὀδών*	164b	2
17	edh	47	C / B						
18.0	ey		RV / A						
18.1	ey	19	RV / A						
18.2	yā	371	RV / A						
18.3	eys	23; 28	RV / A						
19	eyk	27	RV? / B						
20	eyl	21	G / B						
21.0	3.er		RV /A						
21.1	3.er	26; 41	RV / A						
21.2	erd	43	G / A				*ἀράζουσι*	204	3
21.3	rey(ə)	393	G / A				*ὀρίνω*	195	2
21.4	rews	407	G / B						
22	1.eres	45	A / B						
23	erḱ	9	RV / B						
24	ewgh	40	RV / A						
25	ews	38	B / A						
26	i.es	14	RV / A						
27	ii.es	15	RV / B						
28	ēs	18	B / A						
29	oḱ	24	B / A						
30	omə	8	RV / A						
31	ub	36	G / B						
32	i.K̂sewd	89	E / B						
33	ii.K̂sewd	90	G / B						
34	kās	57	G / B						
35.0	ḱek̂		RV /A						
35.1	ḱek̂	56; 98; 128	RV / A						
35.2	ḱek̂s	129	RV / C						
36	ḱep	139	G / A						

Nr	√	Ref	Rnk	σ̄&	Ref	Rnk	ProV	Ref	Rnk
37	k̆em	132	E / A						
38.0	1.k̆ey		RV /A						
38.1	k̆ey	137; 135	RV / A						
38.2	k̆eyt	138	RV / B						
39	2.k̆ey	136	RV / A						
40	1.k̆er	63	RV / B						
41.0	k̆el(ə)		AV /A						
41.1	k̆el(ə)	133; 134	AV / A						
41.2	k̆els	68	B / C						
42	k̆rey	72	S / A						
43	ǧadh	107	S / A						
44	ǧey	154	RV / A						
45	ĝyeH	163	B / C						
46	gVng	108	G / A						
47.0	ǧa-		RV /A						
47.1	ǧam	100	RV / A						
47.2	ǧā (=ǧaə)	105	RV / A						
48.0	3.ǧey(ə)		RV /A						
48.1	ǧiəw	156	B / A						
48.2	ǧinw	155	RV / C						
49	1.ǧer(ə)	113	RV / A						
50	4.ǧer(ə)	110; 112	RV / A						
51.0	2.ǧel(ə)		G / A						
51.1	ǧel(ə)	103	G / A				*ὄβελος*	162	2
51.2	ǧleə	119	G / C						
52	ǧow	109	RV / A						
53	(s)ǧes	153	RV / A						
54	Ǧher	125	G / B						
55	ǧhen	575	RV / A						
56	ǧhwer	587; 597; 598	G / A						
57	ǧhrē	127	C / A						
58	ǧhðey(ə)	86	G / A						
59	ǧhðer	84	C / A						
60.0	ka-		RV /A						
60.1	kā (=kaə)	50	RV / A						
60.2	kam	51	RV / B						
60.3	kan	49	RV / C	kan	1	2			
61.0	kam		E /A						
61.1	kamp	52	E / A						
62.0	(s)kay		G /B						
62.1	(s)kayd	97	G / B						
63	kars	53	G / B						
64	2.kenk	55	E / A						
65	(s)keng	93	G / A						
66.0	key		RV /A						
66.1	kyew	143	RV / A						
66.2	kyewəs	142	E / C						
67.0	4.(s)ker		RV /A						
67.1	kert	65	RV / B						

Nr	√	Ref	Rnk	σ̄&	Ref	Rnk	ProV	Ref	Rnk
67.2	k̂er(ə)	500	AV / A						
68.0	ii.(s)ker		RV / A						
68.1	kerp	66	RV / B						
69.0	i.(s)ker(ə)		C /A						
69.1	(s)kerəd	62	C / A						
70	2.(s)kerə	64	E / A						
71.0	3.(s)ker(ə)		AV /A						
71.1	ker(ə)t	141	AV / A						
72	kerk̂	67	AV / B						
73.0	4.(s)kel		E /B						
73.1	skhel	542	E / B						
74.0	6.kel		RV /A						
74.1	klemd	70	RV / C						
75	(s)kelp	69	RV / B	kl̥p	2	3			
76.0	2.kew		C / A						
76.1	kewk	58	C / B						
77.0	kewp		U / A						
77.1	kewp	59	U / B						
78.0	kew(ə)		C / A						
78.1	kewəg	61	C / B						
79.0	kes		G /A						
79.1	ksnew	92	G / C						
80.0	keəw		G / A						
80.1	keəws	60	G / C						
81	ko	48	G / A						
82	kLawdh	74	B / B						
83	2.kret	505	RV / A						
84	kreysd	73	B / B						
85	krewk	75	E / A						
86	K̂lem(ə)	76; 506	RV / A						
87	kleyk̂	78	C / B						
88.0	(s)kLeyd		G / B						
88.1	kLeyd	77	G / C						
89	kwat	80	G / B						
90	kseyb	87	E / B						
91	3.ksew	88	B / B						
92	ksewbh	91	AV / B						
93.0	Glebh		E / B						
93.1	Gl̥mbh	160	E / C						
94.0	2.gal		E / A						
94.1	galgh	102	E / B						
95.0	2.ger		E / A						
95.1	gerg	101	E / B						
96.0	3.ger		G / B						
96.1	grent(h)	115; 120	G / B						
97	geəy	106	B / B						
98	gras	117	RV / A						
99.0	i.ghey		G /B						
99.1	gheyĝh	161	G / B						

Nr	√	Ref	Rnk	σ̄&	Ref	Rnk	ProV	Ref	Rnk
100.0	gheys		RV /B						
100.1	gheys	581	AV / B						
100.2	gheysd	584	RV / B	hiḍ	34	3			
101.0	2.gher		C /A						
101.1	ghers	126	C / C						
102.0	6.gher(ə)		G /A						
102.1	ĝh(e)rs	592	G / C						
103	gheldh	114	RV / B	gr̥dh	4	2			
104	ghelbh	104	C / B						
105	ghewĝh	111	E / B						
106	ghes	122; 149	RV / B						
107	gheə	33	C / A						
108	ghrebh	116; 118	RV / B						
109	ghlaəd	596	G / B						
110	K̂was	140	E / A						
111	k̂ak	479	RV / B						
112	1.k̂ad	482	B / B						
113	k̂ed	481	RV / A	śad	27	1			
114	k̂as	488	G / B						
115	k̂ās	491	RV / B						
116	k̂enk	480	G / B						
117.0	k̂ent		G / A						
117.1	k̂netə	503	G / C						
118	k̂ens	478	B / B						
119	k̂ep	483	RV / B						
120	k̂em	484; 485	RV / A						
121	1.k̂ey	494	RV / A						
122	k̂er	487	G / A						
123	i.k̂erə	508; 510	RV / A						
124.0	2.k̂el		RV /A						
124.1	k̂ley	509	RV / A						
124.2	k̂leys	513	B / C						
125.0	2.k̂ew		RV /A						
125.1	k̂ewk	495	RV / A						
125.2	k̂ewdh	496	G / C						
125.3	k̂ewbh	497	E / B						
126	1.k̂ew(ə)	499	RV / A	śū	39	1			
127.0	k̂es		RV / A						
127.1	k̂es	489	E / A						
127.2	k̂sed	81	RV / C						
128	1.k̂ēy	490	AV / A						
129	k̂rembh	507	G / B						
130	1.k̂lew(ə)	511	RV / A						
131	k̂wes	514	E / B						
132	k̂þen	82	G / A						
133	k̂þey	85	G / A						
134.0	2.ĝen(ə)		RV /A						
134.1	ĝnō	162	RV / A						
135	1.ĝenə	150	RV / A						

Nr	√	Ref	Rnk	σ̄&	Ref	Rnk	ProV	Ref	Rnk
136	ĝer(ə)	159	RV / A						
137	ĝew(ə)	158	RV / B	jū	35	1			
138	ĝews	157	RV / A						
139	ĝLey	164	G / B						
140	ĝreyə	594	C / B						
141	ĝwer(ə)	165; 166	B / B						
142.0	ĝhe-		RV /A						
142.1	ĝhey	580	B / B						
142.2	ĝheə	578	RV / A						
143	ĝhed	574	G / A						
144	1.ĝher	576	G / A						
145	4.ĝher	588	AV / A						
146	ĝher(s)	589	RV / B	h̥rṣ	43	3			
147	ĝhew	585	RV / A						
148.0	ĝhewə		RV /A						
148.1	ĝhweə	586	RV / A						
149	ĝhlād	593	G / A						
150	taws	185	E / B						
151	tek̑	171	G / B						
152	tek̑þ	172	E / A						
153.0	1.ten		RV /A						
153.1	ten	175; 179	RV / A						
153.2	tens	170	RV / B						
154	(s)ten	543; 544	G / A						
155	teNk	173	G / B						
156	tep	176	RV / B						
157	2.tem	177	B / B						
158	terǵ	178	G / A						
159.0	(s)tey		B /A						
159.1	(s)teyg	180	B / A						
160.0	1.ter		E /A						
160.1	tres	193	E / A						
161.0	3,4,6.terə		RV /A						
161.1	terə	186	RV / A						
161.2	terd	187	RV / B						
161.4	treə	194	RV / C						
162	terp	188	RV / B	tr̥p	5	2			
163	ters	189	RV / A	tr̥ṣ	6	2			
164	(s)telĝh	190; 550	AV / B						
165.0	(s)tew		RV /A						
165.1	(s)tewg	183	RV / A	tuj	37	2			
165.2	(s)tewd	184	RV / B						
166	tewk	196	G / C						
167	tewə	182	RV / A	tu	36	1			
168	tyeǵ	191	RV / A						
169	2.trep	192	G / A						
170.0	2.twey		RV /A						
170.1	tweys	198	RV / A						
171	1.twer	197	E / A						

Nr	√	Ref	Rnk	σ̄&	Ref	Rnk	ProV	Ref	Rnk
172	dā(y)	203; 208; 209	B / A						
173	dāw	218	G / A						
174	1.dek̂	201; 210; 214	RV /A						
175	denk̂	200	RV / A						
176	i.deyk̂	211	AV / A						
177.0	1.dey(ə)		RV /A						
177.1	dey(ə)	213	RV / A	dī	30	2			
177.2	dyut	225	AV / A						
177.3	deyp	215	C / C						
177.4	deyw	217	G / A						
178	2.deyə	168	G / A						
179.0	der		AV /A						
179.1	derk̂	223	AV / A						
180.0	3.der		RV / A						
180.1	drā	226	RV / A						
180.2	drew	228	B / B						
181	der(ə)	221, 204	RV / A						
182	dews	219	G / A						
183	dō	207	RV / A						
184	2.drewgh	229	RV / B						
185	drē	227	C / A						
186.0	dwey		B / A						
186.1	dweys	230	B / C						
187.0	dheǵh		B / A						
187.1	dheǵh	206	B / A						
187.2	dhweks	240	G / B						
188	dhem(ə)	233	E / B						
189	dhebh	202	RV / A						
190.0	1.dhen		RV /A						
190.1	dhen	231	RV / B						
190.2	dhenw	232	RV / B						
190.3	dhew	236; 237	C / A						
191	dheyĝh	212	E / A						
192	dheyə	239; 245	RV / A	dhī	31	1			
193.0	2.dher(ə)		RV / A						
193.1	dher	243	RV / A	dh̥r̥	8	3			
193.2	dherĝh	224	RV / B	dr̥h	7	2			
194	dhers	244	RV / A	dh̥r̥ṣ	9	2			
195	dhewgh	220	RV / A						
196.0	4.dhew(ə)		RV /A						
196.1	dhew(ə)	241	RV / A						
196.2	dhwens	246	RV / B						
197	2.dhē	234	RV / A						
198	i.dhē	235; 238	RV / A						
199	dhwen	247	C / B						
200	dhwer(ə)	242; 248	G / B						
201.0	i.nek̂		RV /A						
201.1	enk̂	1; 12	RV / A						
201.2	nek̂s	249	RV / B						

Nr	√	Ref	Rnk	σ̄&	Ref	Rnk	ProV	Ref	Rnk
202	ii.nek̂	255	RV / A						
203	neTh	256	G / B						
204	ned	250	E / C						
205	nebh	252	G / B						
206	2.nem	253	RV / B	nam	10	2			
207.0	i.neyǵ		G / B						
207.1	neyǵ\s	259	G / B						
208	ii.neyǵ	260	G / A						
209	1.neyd	261	RV / A				ὀνείδος	184	1
210	2.neyd	266	G / B						
211	1.neyə	262	RV / B						
212.0	2.(s)ner		E /B						
212.1	nert	265	E / C						
213	1.new	263	C / B						
214	newd	264	RV / B						
215	nes	258	G / A						
216	paǵ	268	RV / A						
217	pek̑	267	RV / A						
218	2.pet(ə)	271	RV / A						
219	ped	273	RV / A						
220	pent	272	G / A						
221	1.peyk̂	280	RV / A						
222	1.peys	281	RV / A						
223	pey(ə)	278; 279	RV / A	pi	32	2			
224	1.perk	289	RV / B						
225.0	4.perk̂		B /B						
225.1	prek̂	290	B / B						
226.0	1.per(ə)		G / A						
226.1	prewt(h)	295	G / B						
226.2	i.prews	296	G / B						
227.0	pel		RV /A						
227.1	plet	291; 269	RV / A						
228	1.(s)pel	302, 303, 559	E / A				ἄσπαλον	205	1
229.0	1.pelə		RV /A						
229.1	pelə	288	RV / A						
229.2	pleə	292	RV / A						
229.3	plew	297; 294	B / A						
230	(s)pelə	270	G / B						
231.0	1.pew		RV /A						
231.1	pews	284	RV / A						
232	2.pew(ə)	287	G / A						
233	i.pew(ə)	285	RV / A						
234	1.pōy	277	G / A						
235	2.pōy	276	RV / A						
236	(s)ptyewə	515	B / A						
237	prayə	293	RV / A						
238	ii.prews	298	G / B						
239	brengh	462	C / A						
240	1.bhag	308; 315	RV / A						

Nr	√	Ref	Rnk	σ̄&	Ref	Rnk	ProV	Ref	Rnk
241.0	1.bhā		E /A						
241.1	bhā	312	E / A						
241.2	bhās	314	E / A						
242.0	2.bhā		B /A						
242.1	bhā	310	C / A						
242.2	bhās	313	B / C						
243	bhe(n)g	309	RV / B						
244	bhendh	304	AV / A						
245	bheyd	316	RV / B						
246.0	2.bher		E /A						
246.1	bherĝ	323	G / A						
246.2	bhrem	326	E / B						
246.3	bhres	329	G / B						
247.0	3.bher		G / A						
247.1	bhrēy	328	G / B						
248	bherĝh	307	RV / B						
249	1.bherə	322	RV / A						
250.0	bherəĝ		E /B						
250.1	bhreəĝ	327	E / B						
251.0	6.bhel		G / B						
251.1	bhels	311	G / C						
252	3.bhewg(h)	318	RV / B						
253	4.bhewg	319	RV / B						
254	bhewdh	306	RV / A						
255.0	bhewə		RV /A						
255.1	bhewə	320	RV / A						
255.2	bhewəs	321	G / C						
256.0	1.bhes		G /A						
256.1	psāy	299	G / A						
257	bheəĝ	449	G / B						
258.0	bheəy		RV /B						
258.1	bheəy	317	RV / B	bhī	33	3			
258.2	bhəyes	324	G / B						
259	2.bhēdh	305	RV / B						
260	bhrenk̂	325	G / B						
261	magh	330	RV / A	maṁh	11	1			
262	mad	333, 251	RV / A						
263	masd	360	G / A						
264.0	3.men		RV /A						
264.1	men	334	RV / A						
264.2	mneə (=mneə)	361	G / A						
265	1.me(n)th	332	AV / A						
266	1.mey	339	RV / B						
267.0	2.mey		RV /A						
267.1	meyt(h)	341	RV / B						
*267.2	meyg̈						ἀμείβω	48	2
268	5.meyə	345	RV / A	mī	41	3			
269.0	ii.mey		C / B						
269.1	meys	343	C / C						

Nr	√	Ref	Rnk	σ̄&	Ref	Rnk	ProV	Ref	Rnk
269.2	meysd	346	C / C						
270.0	(s)mey		RV / A						
270.1	(s)meyd	562	RV / B						
271.0	meyk̂		RV /A						
271.1	meyk̂	342	C /A						
271.2	meyk̂s	340	RV / C						
272	meyĝh	344	G / A				ὀμείχω	179	1
273.0	6.mer		RV /B						
273.1	mers	359	RV / B						
273.2	mersd	356	RV / C						
274	(s)mer	563	E / A						
275	merk̂	358	RV / A	mr̥ś	13	3			
276	1.merĝ	355; 354	RV / A	mr̥j	12	2	ἀμέργω	53	3
"							ὀμόργνυμι	182	1
277	4,5.mer(ə)	352	RV / A						
278.0	1.(s)mel(ə)		RV? / A						
278.1	(s)mel(ə)	353	RV? / A				ἀμαλός	43	1
278.2	meld	357	E / A				ἀμαλδύνω	41	1
"							ἀμέλδω	51	1
278.3	mlē (= mleə)	364	E / A				ἀβληχρός	1	2
279	2.mewk	347	RV / A						
280	mewd	348	RV / B						
281.0	mew(ə)		C / A						
281.1	mews	349	C / B						
*281.2	mew\n						ἀμύνω	54	3
282	1.mesg	331	E / A						
283	2.mē	335; 336	RV / A						
284	yag	366	RV / A						
285	yebh	368	G / A				ὀίφω	170	3
286	yem	369	RV / B						
287	yet	367	RV / B						
288.0	2.yew(ə)		RV /A						
288.1	yew(ə)	373	RV / B						
288.2	yewg	374	RV / A						
289	yewdh	375	RV / A	yudh	38	3			
290	yes	370	G / A						
291	yeək	372	B / B						
292	rās	387; 392	E / B						
293.0	raə		RV /A						
293.1	raədh	391	RV / B						
294	1.(s)reg	379; 411	G / A						
295	1.reĝ	42; 390	AV? / A				ὀρέγω	193	1
296	rem(ə)	386	B / A				ἠρέμα	207	2
297.0	1.rey		B / A						
297.1	reys	399	G / B						
297.2	reyk(h)	418	B / B						
297.3	reyk̂	420	B / A				ἐρείκω	140	1
298.0	3.rey		RV /B						
298.1	reybh	398; 397	RV / B						

Nr	√	Ref	Rnk	σ̄&	Ref	Rnk	ProV	Ref	Rnk
299	(s)reygh	394	G / A						
300.0	1.rew		E /A						
300.1	rew	401	E / A				ὠρύομαι	209	2
*300.2	rewg						ἐρεύγομαι	144	1
300.3	rewd	404	E / A						
301.0	2.rew(ə)		E /A						
301.1	rewp	406; 425	G / B						
301.2	rewk	423	E / A						
302	reəd	381	RV / B						
303	lembh	385; 413	RV / A	rabh	17	3			
304	las	416; 415	C / A						
305	lā	389	G / A						
306	lek	378	RV / A	rakṣ	42	3	ἀλέξω	31	1
307	lengʰh	377; 410	RV / A	raṁh	14	2			
308	2.lendh	382	RV / B	rendh	16	2			
309	1.lep	412	E / A						
310.0	le(m)bh		E / A						
310.1	lembh	414	E / B						
311.0	i.ley		RV / A						
*311.1	ley						ἀλίνω	30b	1
"							ἐλάια	119	3
311.2	1.leyp	419; 396	RV / A						
*311.3	leybh						ἀλείφω	30a	1
*311.4	leyb						ὀλιβρός	172	1
*311.5	s·leydh						ὀλισθάνω	174	2
312	leyk	395	RV / A						
313	(s)leyĝh	421; 400	RV / A						
314	3.leyə	422	B / A						
315.0	2.lew(ə)		RV / A						
315.1	lew(ə)	427	C / A						
315.2	lewĝ	403	RV / A						
316	lewk	402; 428; 429	RV / A						
317	i.lewdh	405	RV / B						
318	1.lewdh	408	RV / A				ἐλεύσομαι	125a	1
"							ἐλεύθερος	125b	1
319	lewbh	426	S / A						
320.0	we-		RV / A						
320.1	weə	446	RV / C						
320.2	webh	37	G / A						
321.0	10.(a)we		B /A						
321.1	wē	445	B / A				ἄημι	11	3
322.0	(a)weg		RV /A						
322.1	wegs	32; 430	RV / A				ἀέξω	13	2
323	wek̑	431	RV / A						
324.0	weǵ		G /A						
324.1	weǵs	31	G / B						
325	we(n)k	432	RV / B	vañc	18	3			
326	wek̂	440	RV / A	vaś	24	1			
327	weĝh	39; 444	RV / A						

Nr	√	Ref	Rnk	σ̄&	Ref	Rnk	ProV	Ref	Rnk
328.0	we(n)d		RV / A						
328.1	wed	433	RV / A				ἀείδω	8	3
328.2	wend	435	RV / C						
329	1.wen(ə)	434; 447	RV / B	van	19	2			
330	2.wep	436	RV / B						
331	wem(ə)	437	B / A						
332.0	1.wey(ə)		RV /A						
332.1	weyg	451	RV / A				ὀίγνυμι	165	3
332.2	weyp	454	RV / B						
332.3	weys	457	G / B						
332.4	wyek	469	RV / B						
332.5	wyeə	473	RV / B						
333	1.weyk	450	RV / B						
334	weyḱ	455	RV / A						
335	2.weyd	452; 453	RV / A				ἐεισάμενος	102	1
336.0	weydh		RV /A						
336.1	wyedh	471	RV / A				ἠϝίθεος	206	3
337	3.weys	456	RV / A						
338.0	we-		RV / A						
338.1	3.wey(ə)	458	RV / A						
338.2	wen	468	G / B						
339.0	3.wer		RV / A						
339.1	werg	463	RV / B	vr̥j	20	3	ἐέργω	106	2
339.2	wert	464	RV / A	vr̥t	21	3			
340.0	7.wer		RV / A						
340.1	werĝh	467	RV / C						
340.2	wrek	475	RV / A						
341	werdh	465	RV / A	vr̥dh	22	2			
342	wers	466	RV / A	vr̥ṣ	23	2	ἄρδω	70	2
"							ἐέρση	107	1
343.0	2.wel(ə)		RV / A						
343.1	wel(ə)	461	RV / A						
*343.2	weld						ἐέλδομαι	103	2
*343.3	welp						ἐέλπομαι	104	1
344.0	7.wel(ə)		RV /A						
344.1	wel(ə)	438; 460	RV / A				ἐέλσαι	105	1
"							εἰλίσσω	112	2
"							εἰλέω	116	1
344.2	welg	439	E / B						
345	i.wes	441	RV / A						
346	ii.wes	443	RV / A				ἀέσα	15	1
347	5.wes	442	RV / A	vas	25	2			
348	wyeth	470	E / B						
349	wreg	474	RV / B						
350.0	wrey		G / B						
350.1	wreys-d	476	G / B						
350.2	wreyə	477	G / C						
351	saws	498	G / A						
352	1.sek̑	517	RV / A						

Nr	√	Ref	Rnk	σ̄&	Ref	Rnk	ProV	Ref	Rnk
353	seĝh	523; 516	B (RV?) / A	sah	28	1			
354.0	2.sek		B /A						
354.1	sḰē(y)	146	G / A						
354.2	sḰeyd	147	B / A						
354.3	skēw	541	G / B						
355	2.se(n)g	518	B / B						
356	sed	519	RV / A						
357	senə	520	RV / A						
358	sep	521	RV / A						
359.0	sey		RV /A						
359.1	seyḱ	527	RV / A						
360	i.sey	538	E / B						
361	seydh	528	RV / C						
362.0	1.ser		RV /A						
362.1	ser	535	RV / A						
362.2	srew	567	AV / A						
363	serp	537	B / A						
364	5.sel	199	RV / B						
365	selĝ	536	RV / B						
366	1.sew(ə)	531	RV / A						
367.0	3.sew(ə)		RV /B						
367.1	sew(ə)	532	RV / B						
367.2	sweng	568	RV / B						
368	ses	522	G / B						
369.0	seə		RV /A						
369.1	seə	524	RV / B						
369.2	seəy	525	RV / B						
370	seədh	526; 529	RV / A						
371	stembh	545	RV / B						
372	steygh	546	G / A						
373	5.ster(ə)	549	RV / A						
374.0	2.stew		G /A						
374.1	stew	547	G / A						
374.2	stewbh	548	G / C						
375	stā	552	RV / A						
376	snā	553	C / A						
377	sneyǵh	554	G / A						
378	snew	555	G / A						
379	styā	551	G / A						
380	skabh	540	RV / B	ska(m)bh	29	3			
381	skend	539	RV / B						
382.0	sker		C / A						
382.1	skerd	148	C / B						
383	spek̂	275	RV / A						
384	spe(n)d	556	G / A						
385.0	sper(ə)		RV /A						
385.1	sperdh	557	RV / A						
386	spherg	560	G / A						
387	sperk̂	558	RV / A						

Nr	√	Ref	Rnk	σ̄&	Ref	Rnk	ProV	Ref	Rnk
388	1.sper(ə)	561	G / A				ἀσπαίρω	85	1
389	syū	530	G / A						
390	swād	533; 569	RV / A						
391.0	swe-		RV / A						
391.1	swen	570	E / B						
391.2	2.swer	572	RV (G?) / A						
392	1.swep	571	RV / A						
393	2.sweyd	573	RV / A						
394	swergh	534	G / B						

6.0.1 Evaluation of the Correlations

There are two ways, both valid, in which this collection of forms can be analyzed. One is to take a conservative view of what constitutes a root, counting each form with an extension or schwebeablaut pattern as a single item. So (for instance), *wer\g and *wer\t would be counted separately. The other way is to take a liberal view of the relationships between such forms, and consolidate them; in this case *wer\g and *wer\t would be treated as variants of a single item *wer. According to the conservative enumeration, there are 269 pIE verbal roots which have an attested Sanskrit perfect. The table in addition includes nine items (marked in the first column of the table with an asterisk) which are established not on the basis of a direct Sanskrit reflex, but on the basis of a related Greek prothetized form which shows an extended form absent in Sanskrit. For example, ἀμείβω implies *mey\ǵ, a form without a direct cognate in the list of Sanskrit verbs, but which is evidently related to the *mey\t(h) which underlies Sanskrit √mith. Since the conservative method of enumeration treats a root extension as a defining part of an item, this Greek form and its pIE antecessor *meyǵ cannot be counted as matching the *mey\t(h) which appears in the list of pIE verbal roots; and as that list is by definition a list of pIE verbal roots with attested Sanskrit perfects, this *meyǵ cannot be counted in computing the total number of items in that list. Nonetheless, items such as *meyǵ are assigned an (asterisked) serial number, as they *can* be counted under the liberal method of enumeration, to which we now turn. Counted liberally, that is, with apparently related forms consolidated, the list shows 274 pIE roots with attested Sanskrit reflexes in the perfect. Eight are derived from the *same* root as some other (e.g. ὀδών and ὀδύνη, both from pIE *ed); these cases are marked with a ditto (") in the first column. Since these instances merely represent differentiations from a single root form, they should be counted as a *single* item. From the table of pIE roots showing the correlation of prothesis and lengthened reduplication, there are four roots showing *both* a long reduplicant in Sanskrit *and* prothesis in Greek; these are:

276	1.merĝ	(two Greek reflexes, a "ditto" case)
306	lek	
339.1	wer\g	
342	wers	(again, two Greek reflexes)

The Four pIE Roots developing Gk Prothesis and Skt Long-Reduplication

Number 339.1 requires some special remarks. The meaning of the Greek reflex ἐίργω / ἐέργω is consistently 'ward off' *vel sim* (LSJ), while Sanskrit *vr̥j* is glossed by Whitney 1889 as 'turn'. This does not seem to make a legitimate semantic match; but Grassmann:1326 gives 'abwenden' as one of the meanings of *vr̥j*; similarly, Apte:528 'turn away, avert', and Lanman:250 'divert or keep away'. So the two items ought to be counted as cognate after all. The issue mentioned in Chapter 3 #106, whether the Greek form reflects one or two pIE roots, does not seem to be critical; Tichy gives *vr̥nakti* as cognate with ἐέργε .

The statistical issue can now be stated simply: given the present list of roots, what is the probability that four items would have *both* long reduplication and prothesis? This is a standard situation for chi-square or the Fisher's Exact analysis. The test has been done in three different ways: first, by using a conservative, maximally differentiated definition of roots; second, by grouping together roots which differ in extension, nasal-insertion, or schwebeablaut; and finally, by limiting the survey to roots beginning with a resonant. This last technique must be done with the roots grouped conservatively, since schwebeablaut effects produce root families which are not internally consistent in whether an item begins with a resonant. It is included because it has long been recognized,and is apparent from an inspection of the tables, that prothesis in Greek is correlated with words having an initial resonant (Beekes:19). *In all cases, we should use only roots which have both an attested Sanskrit perfect and an attested Greek reflex (ranked "A" in Chapter 4).*

The calculations were performed by Chris Wiesen of the Odum Institute, and by the Fisher's Exact test calculator at Øyvind Langsrud's web-site at the Norwegian Food Research Institute. The results follow:

	Prothesis	No Prothesis	Total
Long Reduplicant	4	21	25
Short Reduplicant	24	220	244
Total	28	241	269

P (One-Tailed, Right): 0.25349

Fisher's Exact Test Results, Case I - Conservative Definition of Root

	Prothesis	No Prothesis	Total
Long Reduplicant	4	21	25
Short Reduplicant	25	224	249
Total	29	245	274

P (One-Tailed, Right): 0.26401

Fisher's Exact Test Results, Case II - Liberal Definition of Root

	Prothesis	No Prothesis	Total
Long Reduplicant	4	10	14
Short Reduplicant	19	43	62
Total	23	53	76

P (One-Tailed, Right): 0.67371

Fisher's Exact Test Results, Case III - Resonant Initials Only

In Cases I and II, there is a very modest correlation; but in III - when only resonant initials are considered, there is no significant pattern.

It may be of interest to see how vulnerable the P-figures are to changes in the data that would result from making different judgements about cognacy, correcting the outright errors which I have no doubt allowed in, etc. So the following types of altered figures were run; the results are reported in Appendix 1.

1. Reducing the overlap between prothesis and long-reduplication (upper-left cell). This is of particular interest in view of the matter of ἐίργω discussed above. There are, in fact, *two* ways that this reduction can be carried out:

   (a) Assume that ἐίργω is not cognate with √vr̥j, and that the latter has no Greek cognate; this would result in #339.1 being deleted from the study entirely.

   (b) Assume that ἐίργω is not cognate with √vr̥j, but that the latter does have a Greek cognate, and is kept on the list.

2. Reduce the number of items in the lower-right cell with accepted Greek cognates cell, eliminating them from consideration. This is done by reducing the figure in that cell by 10% (rounded down).

3. Assume more pIE roots with prothetized Greek reflexes and Sanskrit long reduplication; i.e., increase the overlap group. This is modelled in a mild and more severe way:

   (a) Transfer 1 item from the upper-right cell to the upper-left cell.

   (b) Transfer 3 items from the upper-right cell to the upper-left cell.

4. Assume fewer pIE roots with prothetized Greek reflexes. This is calculated by moving 10% (rounded up) of the lower-left cell to the lower-right cell.

5. Assume more pIE roots with prothetized Greek reflexes. This is calculated by moving 1% (rounded up) of the lower-right cell to the lower-left cell.

In addition, a **sixth** and **seventh** category are supplied for reference: these are respectively the result of using the actual figures with the computer simulation, set to run 100,000 iterations, and the result of using the actual figures under the *two-tailed* variant of the Fisher's Exact test. Note that this seventh figure is provided only to illustrate the superior match between the one-tailed figures quoted above, with the computer simulation results.

The overall conclusion of these imaginary test runs is that varying the number in the upper-left cell - the cell representing roots showing both Sanskrit long-reduplication and Greek prothesis - is the only alteration to the data to which the test procedure seems highly sensitive.

What conclusions are to be drawn from these results? Two facts need to be addressed: the statistical significance of the overlap, and the paucity in absolute terms (only four cases) of the overlap.

The purpose of this investigation is simply to test one of the predictions of the current standard form of the Laryngeal Theory: that Greek prothesis and Sanskrit lengthened reduplication should be correlated. And this prediction has been borne out, though weakly. But can we go further and specify the nature of this correlation? The claim that prothesis and lengthened reduplication are connected statistically can be stated with greater clarity: *In at least some cases, the same root has developed prothesis in Greek and lengthened reduplication in Sanskrit under circumstances which are not random but causally linked.* Now there are two ways that this could happen: one phenomenon (or its antecessor) causes the other; or, both phenomena result from the same state of affairs.

Is there any way to derive the prothetic vowel from lengthened reduplication? One can imagine that the long vowel of such a reduplicant was reanalyzed as a sequence of a short vowel belonging to the reduplication, and a vowel belonging to the stem, which vowel spread through the paradigm: Tē&TeRT > Te&eTeRT. But of course this will not work in the real world, since the long reduplicant of the perfect (and also of the intensive) does not seem to exist outside Indo-Iranian (LIV:21#3, pg.24#6; Burrow:357; also Jackson:193*f*§703.1; Whitney 1889:363§1002).

The converse possibility, that a prothetic vowel had developed already in the dialect-group ancestral to Greek and Indo-Iranian (and Armenian!), is more attractive. This prothetic vowel would have developed before roots with some given phonotactic makeup, when they were initial, later being reanalyzed as a part of the root and spreading through all the forms of the word. In reduplicating forms, this would place the newly introduced prothetic vowel right after the vowel of the reduplicant. The resulting cluster could yield a long vowel by contraction or loss of the prothetic vowel with compensatory lengthening. Thus:

		Simple		Reduplicated
0	Initial State:	ReC	:	Re&ReC
1	Epenthesis:	$^{\partial}$ReC	:	Re&ReC
2	Spread through Paradigm:	$^{\partial}$ReC	:	Re&$^{\partial}$ReC
3	Lengthening:	$^{\partial}$ReC	:	Rē&ReC

At this stage, the prothesis would have to be phonemically distinct from all other vowels in the language, in order that it should vanish outside of Greek and Armenian, but become an ordinary vowel in those languages; presumably it would be something like the sub-syllabic [ĭ] of Czech *jdu*.

This view is in fact rather close to standard Laryngealist doctrine. It is often felt (Meier-Brügger:114§L324) that the so-called 'vocalization' of laryngeals in fact proceeded by epenthesis (HC > H$^{\partial}$C > VC) rather than by direct syllabification of the laryngeal (HC > H̥ > VC).Consequently, the issue is whether the environment for epenthesis can be expressed under a pre-laryngealistic reconstruction (ReC > $^{\partial}$ReC, as above), or whether it requires an additional segment, a "laryngeal" (HReC > H$^{\partial}$ReC).

If prothesis and long-reduplication are derived not by one causing the other, but from a common state of affairs different from both, then this cause would have to be some feature of the root; the following possibilities come to mind: (1) an independent segment (the laryngealist view, of course), (2) a supersegmental feature of some type, (3) some phonotactic property of the root, or (4) some peculiarity in the use of the root. Of these, (2) is attractive in the abstract, but suffers from the absence of *any* evidence that such features existed in pIE. Furthermore, development into a vowel, and lengthening of a preceding reduplication-syllable, are more appealingly attributed to a segment than to a supersegmental feature. Regarding (3), there seems to be no important commonality in the four cases we have found showing both prothesis and long-reduplication, nor in the makeup of roots

with long-reduplication. But note that this explanation is implicit in the suggestion put forth above, that prothesis produced lengthened reduplication - provided we assume, with Wyatt, that this prothesis is governed by the phonotactics of the root. There is a further, quite important point: the decrease in the *significance in association* between prothesis and long-reduplication which is seen when the test is limited to resonant initials is consistent with an explanation of these phenomena as an effect of the resonant initial. (4) should be dismissed as entirely speculative, though one might *imagine* that certain roots tended to be used in contexts favoring expressive lengthening, *vel sim.*

So it appears that both prothesis and long reduplication result, as standard Laryngeal Theory predicts, at least in part from a common condition which involves epenthesis, with or without a 'laryngeal' segment being included in the defining environment for such epenthesis. There seems to be no way within the limits of this study to distinguish between these possibilities. But assuming the existence of such "extra" laryngeal segments, we can speculate a bit about their likely phonetic character. Saussure's original proposal involved vocoid segments of some type, and this view has recently been revived by Reynolds *et al.* Such a view will account nicely for lengthening in reduplication, and the Greek prothetic vowel can be derived directly from such proposed segments; but the resulting protolanguage, with "metrically weak vowels", as Reynolds *et al* call them, is unusual either in its development or its typology. Either these segments are ordinary vowels in a special unstressed position (VRéG, or such; but it is odd that these should disappear everywhere but in Greek and Armenian); or they form a series of phonemically distinct (extra-short) vowels, an unusual though not unknown situation, e.g. Hebrew, or Tokharian with its "$\frown_u$". Since these hypothetical segments disappear in most branches of Indo-European, a type of sound is implied which is particularly liable to loss. The glottal stop, uvular trill, and similar back-throat sounds, and fricatives, are the best candidates; at least plosives, liquids, and nasals do not seem promising. Assuming that the Hittite /ḫ/ continues these segments - and this really requires a separate investigation - the above conjecture is considerably strengthened.

Now we turn to the other notable result of our analysis, the fact that only four roots show both prothesis and long-reduplicant reflexes. This is only about ten percent of the etymologizable cases of prothesis, and the same percent of the long-reduplication cases. The *weakness* of the correlation deserves an explanation just as much as its existence does. There are two possibilities to consider: first, that the correlation between prothesis and long reduplication was originally perfect, and has been drastically disturbed by either extension

of these phenomena to other roots or loss from roots originally showing them; or second, that the correlation was imperfect from the beginning, with one or both of these phenomena having several causes, one being held in common. Krisch argues (Krisch:30*ff*, 31 n.62, 58, 110) that the Sanskrit reduplicated perfect has undergone *extension*; and it is easy, though by no means necessary, to imagine that Wyatt's rules for prothesis before /#R/ took effect concurrently with or subsequent to a similar rule affecting /#HR/.

The possible interaction of Wyatt's rules for epenthesis to resonants and epenthesis after laryngeals (or their vocalization) constitutes an interesting issue. Note that all four of the cases of ovelap begin in resonants (but then most cases of prothesis do). It is possible that /H̥/, whether it is analyzed as vocalization or as epenthesis, was preserved preferentially before /R/, but a hybrid between laryngealist doctrine and Wyatt's analysis suggests itself.

The complexity of Wyatt's environmental formulation for vowel-epenthesis before /#R/, taken together with the existence of prothetized and non-prothetized doublets, hints that prothesis may have developed rather like the High German sound-shift: as an ultimately simple process which manifested itself gradually, with different environments or even individual words being affected at different times and places according to a complicated set of environmental rules. If we assume that the environment #_HR (or #H_R ?) was one of the most susceptible to prothesis, then we can explain why there is a correlation of that phenomenon with Sanskrit long reduplication (< *CV&HC), and also why the prothetic vowel is found outside environments with laryngeal.

To sum up: the Greek prothetic vowel and the long reduplication-syllable of Sanskrit are in fact correlated (as the modern Laryngeal Theory predicts), but to a degree which is well below that required in most statistical hypothesis-testing. There is, additionally, the possibility that this correlation can be explained (as Wyatt suggests) by reference to the phonetic structure of the affected words, without introducing any novel element such as laryngeals. It would be worthwhile to conduct tests similar to the present investigation of *all* of the major assertions of the Laryngeal Theory, not only to test the outlines of the theory itself, but to test the reliability of individual phenomena as indicators of laryngeals. In any case, it is clear that there is so little overlap between prothesis and long reduplication that reconstruction of a laryngeal on the basis of only one of these is extremely hazardous. This observation has a further practical effect of some importance, and relevance to the misgivings about the typological implications of the Laryngeal Theory which inspired this study. If the number of *over*-reconstructions based on not-entirely-reliable indicators of the

presence of laryngeals is reduced, the resulting protolanguage may be, overall, much less peculiar looking than otherwise.

Appendix 1 - Altered Data Sets

Below are reported the results of using imaginary, altered data sets to ascertain the effect of sampling (and other) errors on our data. The various types of alteration are:

1. Reducing the overlap between prothesis and long-reduplication (upper-left cell). This is of particular interest in view of the matter of ἐίργω discussed above. There are, in fact, *two* ways that this reduction can be carried out:

   (a) Assume that ἐίργω is not cognate with √vr̥j, and that the latter has no Greek cognate; this would result in #339.1 being deleted from the study entirely.

   (b) Assume that ἐίργω is not cognate with √vr̥j, but that the latter does have a Greek cognate, and is kept on the list.

2. Reduce the number of items in the lower-right cell with accepted Greek cognates cell, eliminating them from consideration. This is done by reducing the figure in that cell by 10% (rounded down).

3. Assume more pIE roots with prothetized Greek reflexes and Sanskrit long reduplication; i.e., increase the overlap group. This is modelled in a mild and more severe way:

   (a) Transfer 1 item from the upper-right cell to the upper-left cell.

   (b) Transfer 3 items from the upper-right cell to the upper-left cell.

4. Assume fewer pIE roots with prothetized Greek reflexes. This is calculated by moving 10% (rounded up) of the lower-left cell to the lower-right cell.

5. Assume more pIE roots with prothetized Greek reflexes. This is calculated by moving 1% (rounded up) of the lower-right cell to the lower-left cell.

In addition, a **sixth** and **seventh** category are supplied for reference: these are respectively the result of using the actual figures with the computer simulation, set to run 100,000 iterations, and the result of using the actual figures under the *two-tailed* variant of the Fisher's Exact test. Note that this seventh figure is provided only to illustrate the superior match between the one-tailed figures quoted above, with the computer simulation results. (N.b. the coincidence in the first five digits of the P-value in I.2 and I.7; not a typographic error.)

I. Conservative Definition of Root:

1a - Decrease Overlap

	+PV	-PV
+LR	3	21
-LR	24	220

P = .44473

1b - Decrease Overlap

	+PV	-PV
+LR	3	22
-LR	24	220

P = .47081

2 - Fewer Greek Cognates Found

	+PV	-PV
+LR	4	21
-LR	24	198

P = .309271

3a - Increase Overlap

	+PV	-PV
+LR	5	20
-LR	24	220

P = .11463

3b - Increase Overlap

	+PV	-PV
+LR	7	18
-LR	24	220

P = .01467

4 - Fewer Roots with Prothesis

	+PV	-PV
+LR	4	21
-LR	21	223

P = .19013

5 - More Roots with Prothesis

	+PV	-PV
+LR	4	21
-LR	27	217

P = .32124

6 - Computer Simulation

	+PV	-PV
+LR	4	21
-LR	24	220

P = .25366

7 - Two-Tailed

	+PV	-PV
+LR	4	21
-LR	24	220

P = .309274

II. Liberal Definition of Root:

1a - Decrease Overlap

	+PV	-PV
+LR	3	21
-LR	25	224

P = .45717

1b - Decrease Overlap

	+PV	-PV
+LR	3	22
-LR	25	224

P = .48352

2 - Fewer Greek Cognates Found

	+PV	-PV
+LR	4	21
-LR	25	201

P = .32285

3a - Increase Overlap

	+PV	-PV
+LR	5	20
-LR	25	224

P = .12110

3b - Increase Overlap

	+PV	-PV
+LR	7	18
-LR	25	224

P = .01593

4 - Fewer Roots with Prothesis

	+PV	-PV
+LR	4	21
-LR	22	227

P = .20096

5 - More Roots with Prothesis

	+PV	-PV
+LR	4	21
-LR	28	221

P = .33090

6 - Computer Simulation

	+PV	-PV
+LR	4	21
-LR	24	220

P = .26512

7 - Two-Tailed

	+PV	-PV
+LR	4	21
-LR	24	220

P = .31713

III. Resonant Initials Only:

1a - Decrease Overlap

	+PV	-PV
+LR	3	10
-LR	19	43

P = .80791

1b - Decrease Overlap

	+PV	-PV
+LR	3	11
-LR	19	43

P = .84451

2 - Fewer Greek Cognates Found

	+PV	-PV
+LR	4	10
-LR	19	38

P = .74010

3a - Increase Overlap

	+PV	-PV
+LR	5	9
-LR	19	43

P = .46987

3b - Increase Overlap

	+PV	-PV
+LR	7	7
-LR	19	43

P = .14337

4 - Fewer Roots with Prothesis

	+PV	-PV
+LR	4	10
-LR	17	45

P = .58370

5 - More Roots with Prothesis

	+PV	-PV
+LR	4	10
-LR	17	45

P = .71447

6 - Computer Simulation

	+PV	-PV
+LR	4	21
-LR	24	220

P = .67206

7 - Two-Tailed

	+PV	-PV
+LR	4	21
-LR	24	220

P = 1.0

Appendix 2 - A Computer Simulation

This program is written in the Icon programming language, on which see Griswold 1993. Information and free software are available from *http://www.cs.arizona.edu/icon*.

Results are reported in Appendix 1.

```
### simfisher.icn ##############################################################
#
# Source language: Icon v.9.4.2
#
# This program empirically determines a P number corresponding to the
# P value yielded by a right-hand one-tailed Fisher's Exact test
# run on the same data. These data are entered on the program's
# command line as its first four arguments. These four arguments
# respectively represent the upper-left, upper-right, lower-left,
# and lower-right cells in a 2x2 table, of which the upper-left
# cell represents the intersection of the factors which (according
# to the hypothesis being evaluated) should be positively correlated.
# For example: if it is suspected that treatment with Compound X
# causes recovery from the otherwise fatal Disease Y, then the number
# of test subjects who were given Compound X *and* who recovered from
# the disease should be assigned to the upper-left cell, and entered
# as the first command-line argument to the program.  The other cells
# can be assigned in either of the two ways which define a table with
# column and row headers consistent with the data their cells hold.
#
# The program assumes a series of items representing the totality of the
# items in the table.  (N.b. this series is merely *conceptual*; it is
# not implemented directly by the program as a variable or other structure.
# See the program text for the details of implementation.  Note that the
# comments in the program text refer not to the imaginary example
# used in this introduction, but to the actual situation for which this
# program was written.)  The items which score "positive" along the
```

```
# vertical axis of the table - i.e. those in the first row -
# are imagined to occupy the lowest positions of this series.
# So, using the example above, we can imagine a clinical trial with
# results as follows:
#
#
#              +Treated with Compound X   -Treated
#              ------------------------   -----------------
#   +Recover |  39 (=argument 1)          0  (=argument 2)
#   -Recover |  11 (=argument 3)          50 (=argument 4)
#
#
#   and these 100 test subjects can be arranged in a series with those in
#   the upper-left cell at the beginning:
#
#
#  These represent all the subjects in the 2x2 table.
#    /-------------------^--------------------\
#    1 2 3 4 5 ... 39 40 41 42 43 44 45 ... 100
#    \______________/ \_______________________/
#           |                      |
#  These represent the    These represent the
#  subjects in the first  remainder of the subjects
#  row, i.e. the          in the table.
#  upper-left and
#  upper-right cells;
#  these are all the
#  subjects who recovered.
#
#
#  The program determines from the command-line parameters how many
#  subjects appear in the first column of the table, i.e. in the
#  upper-left or lower-left cells. This is the number of subjects
```

```
#  who were treated with Compound X.  The program then *randomly* marks
#  this number of members of the entire list of 100 subjects
#  (in other words, each member of the entire list is *randomly*
#  assigned to the treatment or no-treatment category),
#  and records the number of marked subjects who fall into the lowest area
#  (here, the first 39 members) of the 100-member list.
#  This recorded number will reflect the number of subjects expected to
#  appear *by mere chance* in the upper-left cell, *if there is no actual
#  correlation* between treatment and recovery.
#
#  This entire procedure is repeated as many times as specified by the
#  fifth command-line argument.  Through all repetitions, a running total is
#  kept of how many times the number of randomly-marked subjects
#  in the low area of the total range equals or exceeds the number found
#  in the upper-left cell of the actual data.  This running total,
#  divided by the number of repetitions, empirically displays the
#  frequency with a correlation equal or greater than that seen in the
#  actual data, is obtained by mere chance.
#
#  A sixth command-line argument is the option -r, which reinitializes
#  the random-number generator at the beginning of the program.  This keeps each
#  run of the program with identical data from producing absolutely identical
#  results, on account of drawing on the same sequence of "random" numbers.
#
#  Run with the single command-line argument -h, the program displays a
#  simple help screen and terminates.
#
################################################################################


link random


procedure main(args)
```

```
# === HELP =====
if (args[1]=="-h") | (*args<5) then
{
 write("==============================================================================");
 write("simfisher: simulation of Fisher's Exact Test");
 write("usage    : simfisher a b c d {ITERATIONS} (-r); where the cells are:");
 write();
 write("    +X  -X"); # X = +/- Gk prothesis
 write("+Y  a   b");  # Y = +/- Skt long reduplication
 write("-Y  c   d");
 write();
 write("example  : simfisher 6 32 43 142 1000 -r");
 write();
 write("-r resets the random-number generator at the beginning of the program;");
 write("   this gives different results each run.");
 write();
 write("For more information please refer to the source file, simfisher.icn");
 write("==============================================================================");
 exit(0);
}



# === INIT =====
a:=args[1]; b:=args[2]; c:=args[3]; d:=args[4];
DesiredIterations:=args[5];
if args[6]=="-r" then randomize();

ABCD:=a+b+c+d; # number of *all* the pIE roots with attested Skt perfect reflexes
AB:=a+b;       # number of Skt perfects with long reduplication
AC:=a+c;       # number of Skt perfects with Gk cognates showing prothesis
```

```
# === BODY =====
icounter:=0; # keeps track of how many iterations produce a result >= the
             # quantity in cell 'a', i.e. +PV & +LR

# repeat the randomization function per se 'DesiredIterations' times:
every i:=![1 to DesiredIterations] do
      {
         # initialize the set of "serial numbers" of all pIE roots which have
         # been randomly marked as cognate with prothetized Gk words:
         MarkedRoots:=set();

         jcounter:=0; # keeps track of how many marked roots are in the
                      # "long-reduplicant" area of the total "root-space",
                      # which is defined as the lowest part of that area,
                      # roots numbered 1 to 'AB'.

         # randomly mark 'AC' number of pIE roots as cognate with prothetized Gk:
         every j:=![1 to AC] do
             {
                 # can't just mark a root - it might be marked already.
                 # instead, keep trying 'till we choose one that's *not* marked:
                 repeat{
                         n:=randrange(1,ABCD);
                         if not member(MarkedRoots,n) then
                               {
                                 insert(MarkedRoots,n);
                                 break;##repeat
                               }##end if
                        }##end repeat
                 if n<=AB then jcounter+:=1;
             }##end every j

         if jcounter>=a then icounter+:=1;
```

```
         write("Iteration ",i,", overlap = ",jcounter);
      }##end every i


# display results:
P:=(icounter)/(1.0*DesiredIterations);
write("for ",a,"/",b,"/",c,"/",d,": ",icounter," case(s) at or above ",a,
      " in ",DesiredIterations," iterations, P = ",P);
end##program
```

Appendix 3 - Residue of Prothetized Forms

Following are tables of all Greek words with prothesis which have no cognate Sanskrit perfects; first, verbal forms, next, all others:

Verbs:

Nr	Item	Gloss
10	ἀείρω	hang
24	ἀκούω	hear
27	ἀλέγω	to care
35	ἀλινδέω	to roll
47	ἀμάω	reap
50	ἀμέλγω	milk
52	ἀμέρδω	deprive
56	ἀμύσσω	scratch
63	ἀπειλή	boast
73	ἀρήγω	aid
84	ἀσκαρίζω	jump
97	ἐάω	allow
98	ἐγείρω	awaken
110	ἐθέλω	wish
114	εἰρύομαι	drag
122	ἐλέγχω	disgrace
123	ἐλελίζω	shake
141	ἐρείπω	dash down
142	ἐρέπτομαι	feed
144	ἐρεύγομαι	spit out
145	ἐρεύθω	redden
146	ἐρευνάω	search
147	ἐρέξθω	rend
148	ἐρέφω	cover
186	ὀνίνημι	to profit

Others:

Nr	Item	Gloss
2	ἀγαθός	good
5	ἀγοστός	flat of hand
6	ἀγρεῖφνα	harrow
9	ἀέλιοι	brothers in law
38	ἄλοξ	furrow
40	ἀλώπηξ	fox
46	ἀμαυρός	dark
50	ἀμέλγω	milk
60	ἀνεψιός	cousin
61	ἀνήρ	man
63	ἀπειλή	boast
68	ἀράχνη	spider-web
87	ἀσταχύς	ear of corn
89	ἀστήρ	star
91	ἀστραλός	starling
92	ἀσφάραγος	throat
93	ἀτρακτος	spindle, arrow
99	’έγχος	spear
100	’έεδνα	wedding gifts
101	ἐείκοσι	20
111	ἐίλη	sun’s warmth
113	ἐίρερον	slavery?
115	εἰκῆι	in vain
117	ἐΐση	equal
120a	ἐλαφρός	light
120b	ἐλαχύς	"
129	ἐμέ	me
131	’ένερθε	below
134	ἐννέα	9
137	’έρεβος	darkness
143	ἐρέτης	rower
152	ἐροή	quick motion
153	εὔληηρα	reins
156	εὐρύς	wide
157	ἐχθές	yesterday
178	ὄμβριμος	strong
180	ὀμίχλη	mist
187	ὄνομα	name
189	ὄνυξ	nail, hoof
199	ὄτλος	suffering
202	ὀφρύς	eyebrow

Appendix 4 - Families of Roots

The tables which follow summarize families of superficially similar roots; though many of these may in fact be related, the purpose of these charts is simply to set forth the facts in a convenient way, and *not* to make any claims about actual relationship. Nonetheless, junctural and similar notations have been used *as though* the apparent relationships were real; this is simply a device to make similarities in structure evident. It should be noted that in many cases, the acceptance of the hypothesis of actual relationship would imply the acceptance of one of several controversial or undemonstrated suppositions about pIE phonology or morphology:

- Interchange between /l/ and /r/ (h_2·mer\ĝ: h_2·mel\ĝ);
- Interchange between /w/ and labiovelar plosive (wel\h_1 : ǵelh$_1$);
- A system of prefixation (or dropping?) of initial consonants, or at least of laryngeals (wer\g : h_2·wer\g).

The first line in each item shows the main sources. ⋆ shows items with individual entries above.

√mel

mel\dh: LIV:431 1.meldh 'ablassen von, im Stich lassen' = P:719; Watkins 1.mel 'soft' III.

Skt *mr̥dh* 'ablassen'; English *mild*; Gk *μαλθακός* 'weich' < Z√*ml̥dh-

mel\d: LIV:431 meld 'weich werden' = P:718; Watkins 1.mel 'soft' I, II.

English *melt, smelt*; Lat *mollis* 'soft' < Z√ml̥d-wi; Gk *μέλδω* 'lasse schmelzen', ⋆ *ἀμέλδειν* (Hesychius); Skt *vi·mradate* 'wird weich'; Gk ⋆ *ἀμαλδύνω* < Z√*ml̥d- (Beekes:142), *βλαδυρός* also < Z√*ml̥d- (Fr «*αμαλδύνω*»; Skt *mr̥dú* (ibid.)

mel\h_2: LIV:432 melh_2 'zerreiben, mahlen' = P:433 *also* LIV:433 melh_2w (u-present of the same, reanalyzed as a root); Watkins mel$ə_2$ 'crush' *also* 1.mel V.

Lat *molere* 'mahlen'; Cuneiform Luvian *mālhūta* 'brach', Hittite *mallanzi* '[sie] mahlen'; Gothic *malan* ['grind']; Gk *μυλη* 'mill' < Z√*ml̥h_2, *μαλακός* < Z√*ml̥h_2-k-; Skt *mlā́yati, mr̥ṇā́ti* (KEWA).

h_2·mel: Watkins 1.mel VII = P:716

Gk ⋆ *ἀμβλύς* 'blunt, dull, dim' < Z√h_2-ml-u-; *ἀμαλός* 'soft, weak' < Z√h_2-ml̥- (Beekes:42; KEWA).

Just possibly related, through the semantic chain 'crush':'rub':'swipe off':'to milk':

h_2·mel\ĝ: LIV:279 'melken' = P:722-3:

Gk *ἀμέλγω* ["to milk"].

With /r/:

h_2·mer\ĝ: LIV:280 'abstreifen, (ab)wischen' = P:738.

Skt *mr̥jánti*, Gk. ⋆ *ἀμέργω*, ⋆ *ὀμόργνῡμι*

√weL 'turn'; 'surround'

'Turn'; with /l/:

wel: LIV:675 2.wel 'drehen, rollen' = P:1140-2; Watkins 3.wel 'turn, roll'

German *waltz*; Lat *volvere, vallum*; Gk *ἕλιξ*, ⋆ *εἰλέω* $_2$ 'roll', ⋆ *εἰλίσσω* 'turn', *ἕλμις* 'worm'; Skt √*val* (Frisk, *εἰλέω* $_2$)

wel\w: Watkins 3.wel II

English *wallow*; Lat *volvere, valva* < Z√*wl̥wā; Gk *ἅλυσις* < Z√*wl̥u-ti-, *ἕλυτρον* < *welu-tro-

S√wle\r:

Gk ⋆ *εὔληρα* 'reins' ('*twisted* rope'?)

wel\g: LIV:676 1.welg 'sich rollend bewegen' = P:1144

Skt *válgati*

Possible variant in /k^w-/ (cp. "worm" infra):

k̑el(h_2): LIV:386 k̑elh_2 'eine Drehung machen, sich umdrehen, sich (um-, zu-)wenden' = P:639-40; Watkins 1.k̑el(ə)

Gk *τέλος* 'completion of a cycle'; English *wheel* < *R√k̑e&k̑l-o- 'wheel'; Dutch *hals* < *O√k̑ol-so- 'that on which the head turns, neck'; Gk *πάλιν* 'again'

With /r/:

wer\t: LIV:691 'sich umdrehen' = P:1156-8; Watkins 2.wer.I 'turn, wind'

Skt *vártate*; Gothic *wairþan*

wer\b: Watkins 3.wer.VII 'turn, bend'

h_2·wer\g: LIV:290 'sich umdrehen, sich wenden' = P:1154, 1168; Watkins 3.wer.IV

Lat *vergere*; Skt *vr̥nákti*

wer\gh: Watkins 3.wer.III 'turn'

wer\p: LIV:690 'hin- und herdrehen' = P:156; Watkins 3.wer.IIX 'turn, wind'

S√ wre\y\t: Watkins 3.wer.II 'turn'

S√ wre\y\k: Watkins 3.wer.V 'turn'

Possible variant in /k^w-/:

{k̑, w}er\m: Watkins 3.wer IX

English *worm*

'Surround'; with /l/:

wel: LIV:674 1.wel 'einschließen, verhüllen' = P:1138

Skt *vṛnóti* (see LIV«1.wer»n.2); Gk ⋆ *εἰλέω* $_2$; ⋆ *ἁλής* < *Z√$w_{\mathring{l}}$-

With /r/:

wer: LIV:684 1.wer 'aufhalten, (ab)wehren' (see n.1) = P:1160-2; Watkins 5.wer 'cover'

Skt *várate*; Gothic *warjan*; Gk ⋆ *ἐίρῡω*

wer\g: LIV:686 1.werg 'enschließen, absperren' = P:1168

Gk ⋆ *ἐίργω* (see LIV«$h_2$werg» n.5)

H·wer: LIV:227 Hwer 'einschließen, stecken, hineintun' (see n.3) = P:1150, 1160

Lat *aperīre*

√wel 'wish'

wel\d:

⋆*'ἑλδομαι* 'wish'

wel\p: LIV:680 'Hoffnung schöpfen' = P:138

⋆*'ἑλπομαι;* Lat. *volup-*

wel\h_1: LIV:677 'wählen' = P:1137

Doric *λῆν* < S√wle\h_1 (Ch, Benveniste:155); Lat. *velle*, Gothic *wili*, Skt. *vṛnite*

With /ǵ/:

ǵel\h_1: LIV:208 'wünschen, wollen' = P:472

βούλομαι 'wish'

h_1·ǵhel: LIV:246 'wünschen' = P:489

⋆ *ἐθέλει*

√ley 'pour ... glide'

ley, ley\H: LIV:425 2.leyH 'gießen' = P:664-5 Watkins «ley» 'flow'

s·ley\b: LIV:566 'schleifen, gleiten' = P:663

⋆ *ὀλιβρός;* OHG *slīfan*

h_1·s·ley\dh: LIV:307 'ausgleiten, fehlgehen' = P:960-1

⋆ *ὀλισθάνω;* OE *slīdan*; Lith *slýsti*; NIr *slaod* (Fr)

s·ley\ĝ: LIV:566 'schmieren, glatt machen' = P:663-4

ley\p: LIV:408 'kleben bleiben' = P:670-1; Watkins «leyp»

Skt *limp'ati*; Gk λίπα (Chantraine«αλείφω»)

h_2·ley\bh: 'anoint' Watkins «leyp»

⋆ ἀλείφω

h_2·ley\H: LIV:277 = P:661

Lat. *līno*; Skt *lináti*; Gk (Hesychius) ἀλίνειν

NOTE ALSO:

ley\ĝh: LIV:404 'lecken' = P:668

slenk̑: LIV:567 'gleiten' = P:961

slewbh: LIV:567 'gleiten, schlupfen' = P:963-4

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