THE SOUND OF INDO-EUROPEAN 2

PAPERS ON INDO-EUROPEAN PHONETICS, PHONEMICS AND MORPHOPHONEMICS

Roman Sukač & Ondřej Šefčík (eds.)
Luvo-Lycian Dorsal Stops Revisited

H. Craig Melchert

1. Introduction

There is a broad consensus that at some prehistoric stage the Indo-European stop system had only a two-way phonological contrast of labialized velars (traditionally 'labiovelars') and non-labialized velars; thus schematically /Kʰ/ versus /K/. The latter had two conditioned allophones, palato-velars or front velars (traditionally 'palatals') in fronting environments and non-front velars (traditionally 'velars') elsewhere: [K'] and [K]. Formulations of just what constituted a 'fronting environment' can differ markedly (one may compare among many Meillet 1934: 94 and Lipp 2009: 1.7&53). Nevertheless, the highly skewed—that is, non-random and largely complementary—distribution of traditional 'palatals' and 'velars' strongly supports this fundamental premise.

The major point of dispute for more than a century has been whether or not a partial loss of conditioning environment, analogy, and other factors led to a so-called phonemic split in PIE (that prehistoric stage that we reach by direct comparative reconstruction). The result would have been a three-way contrast /Kʰ/, /K/ and /Kʰ/, albeit very likely in a limited number of examples and with much of the previous complementary distribution preserved, as is typical for such splits. I contend that the answer to this question is yes, regardless of the facts of Luvo-Lycian (likewise Kümmel 2007: 312).

The typological objection of Sihler (1995: 152-3) and Lipp (2009: 1.316) that the presupposed backing of palatal stops to velars in the 'centum' languages is unattested is a straw man. There is no compelling evidence that the PIE stops conventionally labeled 'palatals' were true palatal stops (IPA [c] and [ç]). Evidence from all attested languages is fully compatible with front velars.1 There is in any case no necessity to assume that the phonological merger of /Kʰ/ and /K/ in the centum languages even took place by phonetic backing of front velars. Since the place of articulation of /K/ in the older centum languages is indeterminate, we may rather assume the more likely generalization of [Kʰ] in fronting environments (along with other factors leading to an allophonic distribution).

No explanation is offered by Sihler, Lipp or others for the contrasting data cited in the appendix below. Constructs such as *krueh₂r beside *kruh₂r 'gore, bloody flesh' (with a supposed front allophone before *r + front vowel) or *kuw-on- 'dog' (with wholly unattested root full grade) as a variant of the root generally cited as * soo keuhr₂ - 'perceive, notice' (Lipp 2009: 1.55&79) are plausible enough, but they are totally unsupported for Proto-Indo-European as reached by direct comparative reconstruction. They are rather the result of internal reconstruction based on PIE and thus by definition represent pre-PIE.2

---

1 Compare Kümmel 2007: 318. I also regard as fully viable his alternative solution (2007: 318-27) of an original contrast of velar, uvular, and labialized velar stops.

2 Sihler (1995: 154) dismisses such evidence as 'an artifact of the method'. This is methodologically unacceptable: by definition all of PIE is an artifact of the comparative method. One may always legitimately argue that the method has been incorrectly applied in a
2. Luvo-Lycian Evidence I

The question at hand is thus not whether PIE had a three-way phonemic contrast in its dorsal stops, but whether Luvian and Lycian truly offer further support for that contrast. In Melchert 1987 I claimed that Luvian reflexes of voiceless dorsal stops show a triple contrast before front vowels. Morpurgo Davies and Hawkins 1988 independently reached the same conclusion (as noted in the epilogue to my article, Warren Cowgill had already made this analysis many years before, on the basis of far less evidence). The issue was left open as to whether this contrast was unconditioned or reflected a conditioned palatalization of *k but not *g. However, in Melchert 1989: 23-31 (see especially page 30), I argued for an unconditioned three-way contrast based on further putative evidence from Lycian. This analysis had the important implication that Anatolian had merged neither the PIE ‘labiovelars’ and ‘velars’ nor the ‘velars’ and ‘palatals’. It was thus neither ‘centum’ nor ‘satem’, but was, as often, more archaic. This formulation has met wide acceptance (e.g. Fortson 2004: 168, Kloekhorst 2008: 17-18), but occasional rejection (Sihler 1995: 154, Woodhouse 1998, Lipp 2009: 1275-302).

The crucial Lycian evidence I cited then for *k > ts before *o (i.e., in a non-fronting environment) has not withstood scrutiny. Contra Melchert 1989: 29-30 the suffixes Lycian -(i)as- and Luvian -azza- are not cognate, reflecting *i(s)ko-. Lycian -(i)s- forms abstracts and names for topographic features: e.g., wazis- ‘ship’ (an office) or Trimmis-‘Lycia’ (with Berehard Eichhor 1997 99: 82 3). The true equation is Luvian -zaa- = Lycian -za- < *jaHWM: e.g., CLuvian wasHajza- ‘sanctified, holy’ = Lycian wasaza- (kind of priest), Hluvian ku-ma-za- = Lycian kumaza- ‘priest’, as seen by Hajnal (2003: 193). The Hluvian ethnic adjectives seen in /Karkamisat/asa/- of Carchemish and /nimu:wi/‘+asa/‘child’ (i.e. *of /nimu:wi/‘un-manhood’) likewise show the same PIE suffix *yo- seen in Lycian Patarazei/- of Patta and nelez/‘of the agora’ (for the Lycian suffix see Gusmani 1961 and Hajnal 1995: 82 with n. 96). With removal of the supposed Lycian evidence showing *k > ts before back vowels, my claim of an unconditioned three-way contrast in Luvo-Lycian reflexes of voiceless dorsal stops cannot be upheld. The purported unconditioned palatalized treatment of voiceless *k had always been suspect, due to the appearance of voiced *g(h)- as Luvo-Lycian *k- before back vowels (see below), as per the opposite remarks of Woodhouse (1998: 40) and Lipp (2009: 1.297).

3. Luvo-Lycian Evidence II (voiceless stops)

We must reexamine all available evidence anew. Data for the voiceless stops is summarized in Table 1.4

---

3. Lycian -(i)s- in my view continues *-shko- (cf. Luvo-Hittite -(a)šša- in tarišša- ‘exertion, exhaustion’, hupitša- ‘marshland’, etc.), but this is an entirely separate issue. The key point is that it does not match Luvian -(i)zaa-, as I had mistakenly claimed.

4. Examples listed above the solid horizontal line in each column I regard as indisputable etymologies, while those below it are merely possible or probable.
Table 1: Summary of Evidence for the Voiceless Series \((C=CLuvian; \text{H}=HLuvan)\)

<table>
<thead>
<tr>
<th>Stem</th>
<th>Cumbria</th>
<th>Lycian</th>
<th>Hittite</th>
</tr>
</thead>
<tbody>
<tr>
<td>*k̂</td>
<td>k̂</td>
<td>*k̂</td>
<td>*k̂</td>
</tr>
<tr>
<td>zi-yarti ‘lies’ ((C))</td>
<td>Lyc. sijoñi</td>
<td>(\text{H} \text{Luvan})</td>
<td></td>
</tr>
<tr>
<td>(&lt; \text{*k̂yo-})</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>zūr- (za)/zur- ‘heart’ ((C/H))</td>
<td>(&lt; \text{*k̂ṿṛ}/\text{*k̂yḍ-})</td>
<td>(&lt; \text{k̂ṇṭi})</td>
<td></td>
</tr>
<tr>
<td>(-s) ((\text{iter.}) \text{(C/H)})</td>
<td>Lyc.</td>
<td>(&lt; \text{*sk̂ẹṛ-})</td>
<td></td>
</tr>
<tr>
<td>(\text{za}(-ḷ)) ‘this’ ((C/H))</td>
<td>(&lt; \text{*kọ-}) (\sim) Lith. šis etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(&lt; \text{*kẹ-}) (\sim) Hitt. -k̃a</td>
<td>Lyc. ti-se ‘some/anyone’</td>
<td>(&lt; \text{*k̂pẹḥ-} \sim \text{Gmc.})</td>
<td></td>
</tr>
</tbody>
</table>
| | in kuēlka etc. | \(< \text{Hitt. karkid-
anti-\& Skt. śṛina-}\) | |
| \(\text{azu}(-ẉa)\) ‘horse’ \((H)\) | Lyc. esbe | \(< \text{Hitt. šausa}\) | |
| \(< \text{*k̂ẹẉ-}\) | | | |
| zu-wan(-i) ‘dog’ \((H)\) | \(< \text{*kẉon-}\) | | |
| \(< \text{Hitt. kattu-} \sim \text{weapon, talon}\) | \(< \text{*k̂ṛṇiḍ-} ‘horn’ \((H)\) | | |
| \(< \text{Hitt. karkid-
anti-\& Skt. śṛina-}\) | \(\text{Starke 1990: 406-7; Puhvel 1997: 89}\) | | |
| \(< \text{Hitt. šausa}\) | | | |
| waẓ- ‘request’ \((H)\) | \(< \text{*wẹk̂-ỵạ-}\) | | |
| \(< \text{*k̂eṛẉ-}\) | | | |
| zar-waniya- ‘of horn’ \((C)\) | | | |
| \(< \text{Hitt. šausa}\) | | | |
| zalma- ‘shield, protection’ \(< \text{*keḷṃṇ-ọ-}\) | | | |
| \((\text{Melchert 1988: 241-3; but cf. Lipp 2009: 1.275})\) | | | |
| \(\sim\) Lith. šausa ‘jump’ | | | |
| za-ḷa ‘trot’ \((C)\), ẓa-ḷa-ḷ ‘vehicle’ \((H)\) | \(< \text{Hitt. šausa}\) | | |
| \(< \text{*g̣ḷ̣ẹ-}\) | | | |
| \((\text{Riecken 1997})\) | | | |
| \(< \text{Hitt. šausa}\) | | | |
| \(\sim\) Grillmann’s ‘fertile’ \((H)\) | \(< \text{Lat. pṛọ-c̣ẹṛus}\) | | |
| \((\text{Riecken 2003: 45-50})\) | | | |
| versus | | | |
| \(\text{kattawatnalli-} ‘spiteful’ \((C)\) \& Hitt. | | | |

---

5 The stem also appears syncopated in the personal name element \(\text{-uzzi-} = \text{IR}\), but contra Zehnder \((2010: 102)\) the HLVn. noun \(\text{wazza-} ‘request’\) is not a cognate of Skt. \text{vāsa-} \(< \text{*wōko-}\), but a new creation among the productive deverbal action nouns in \(\text{*-ẉ-}\).
kaddawā(i): ‘become aggrieved’
(Puhvel loc. cit.), = HLuv. kata- ‘enmity’
in ka-ti-i CRUS (L. Younger, pers. comm.
vs. Morpurgo Davies 1986: 132-3)
~ Grk. kóroç ‘spite, anger’, Skt. sātu- ‘enemy’< *kot:-. Separate from katu- ‘fight’ contra
Morpurgo Davies (1986: 144), Melchert (1987: 189-90),
Puhvel (1997: 140), Woudhuizen (2010: 44)6

Runtuva- < K(u)runtuva- < *kru-ni: ‘horned’
(Watkins 1999: 15-18, Woudhuizen 2010: 44)7

kunma- ‘sacralized’ (C/H) -- Lyc. *kuma-
< *kumma- < *kwp-mo- ~ Av. spanda- ‘holy’
(Schindler apud Watkins 1987: 401)8

(477)ku-tu-pi-li- (H) ‘fire offering’
< *kua- (Woudhuizen 2010: 44)
(less Naomi but possible: katu- ‘talon’ < *kat: based on Skt. śatavā- ‘cut; cut down’ (Jamison 1983: 90) (cf. Germ. Schlauch for sense ‘fight’).]

There are three critical points to be drawn from the preceding data. First, all instances of *k ([k]) > ts are either in exclusively fronting environments or in paradigms with fronting environments. Second, the number of examples cited for *k > ts is immaterial; the crucial example is that of kisā(i): ‘to comb’ that shows *k > k in an exclusively fronting environment (more on this word below). Third, a dispassionate review of all the relevant evidence includes some very credible examples of Lyuo-Lycian k < *k in non-fronting environments.

Current available evidence therefore points to a conditioned palatalization of *k before front vowel (*e, *e, and *e), yod, and *w (not u). For *w as a fronting environment the note the

---
6 While one often fights one’s enemies, enmity or hatred is a mental state of existence, while fighting is a concrete action, and the two cannot simply be conflated, as I and many others have tried to do in this case.
7 I am much indebted to Heiner Eichner for calling my attention also to the name of Kubaba’s consort in Carnehim, namely Karuhu, whose name is written in KARKAMIŠ A11+12, §18 as (DEUS)CEVRUS24ra:hu-ha-ya and who surely also represents some form of a stag-god (see Hawkins 2000: 106-107). The initial k: would point to a preform *korhu:.
8 As Lipp (2009: 1293) correctly points out, my assumption of ‘Gutturalwechsel’ (Melchert 1994: 252) was egregiously ad hoc.
9 The interpretation by Carruba and others of kerut as a sacrificial animal is contradicted by the word order of the clause, which hardly allows kerut to be the direct object. I also am unaware of any evidence for the use of cervids as sacrificial animals in IE-speaking Anatolia. My own attempt to take it as a personal name (2004a: 97) was an act of desperation also effectively refulited by the context. The position of kerut in its clause (following ql:ebi, that is, ql: (a):ebi ‘this here precinct’) suggests rather that it names a recipient of the sacrifice. Given the prominence of the more common name for the stag-god in western Anatolia (reflexes of /Runtuva-), such a recipient does not seem to me impossible. My hesitation rests mainly on the less than clear morphology. In view of the tendency of h to be lost in Luvian in a sequence *Rh: (Melchert 1994: 258), it is not impossible that Lycian keru: reflects a virtual *korh: y:V, i.e. that its base contained a laryngeal like that of Karuhu (see note 6).
virtual complete absence of PIE sequences in *Kw (versus the well attested *Kw) and the strong tendency of labiovelars to be palatalized (Hock 2009). HLuv. zu:nid- ‘born’ < *kung-id- suggests that also *̄kR- > *j̄aR- > zVR- (see below on zanta ‘down’ < *km̄pt-).

Several points call for further comment. The existence of the stem kišša- ‘to comb’ in Hittite (P3Sg kišša’) suggests that Anatolian inherited a root present *kēs-ti, whose weak stem *ks- (ēnti) might in principle have provided a non-fronting environment for Luvian kišša-(i)-. However, whereas Hittite trivially leveled the strong stem,10 one cannot possibly derive the Luvian verb in -ā(t)- starting from the root present. Prehistoric *kēs-ks- could have led only to a Luvian *kas+, leaving the i-vocalism of kišša(i)- wholly unexplained. One can derive the latter with Cop (1970: 93) and Melchert (1994: 152) from a virtual *kēsê-hye/0- with lengthened grade like Latin cēlāre, and this is supported by CLuvian ilšâ(i)- ‘to wash’, whose first vowel can only reflect a long *ê. Less likely but not to be entirely excluded is *kēs-êh2- ye/0- with a short root vowel (if Luvian really does share with Hittite the change of pretonic short *e to i, for which see Melchert 1994: 240, with due caution). In either case, the Luvian verb requires a preform with fixed mid-front vowel, and the non-affrication of the initial *k retains its force.

Contra Lipp (2009: 1.273-5, 278 with note 36, 298) the reading zā for hieroglyphic sign 448 is assured. Despite the protestations of Hawkins (2000: 36) et. al., the alleged ‘interlocking’ evidence for a value su does not exist. The fact that sign 108 (CORNU), the drawing of a horn, has a phonetic value su proves absolutely nothing, since as Hawkins himself concedes, we find in KARATEPE the word ‘CORNU+RAY’ su-ra/i- meaning ‘plenty, abundance’ (where the use of ‘horn’ as the determinative reflects the notion of a cornucopia). It is quite clear that the value su for sign 108 is acophonemic to this word, which is based on the verbal root su- ‘fill’ and has nothing to do with the word for ‘horn’. If on the other hand the word for ‘horn’ truly began with su/i-, it is completely inexplicable why it was not spelled with the transparent 108 sign for ‘horn’, but rather with the opaque 448: (*CORNU)’zā+ray/i-ni. Further confirmation for the value zā is furnished by zā+ray-wa-ni (URBS) ‘of Tyre’ (i.e. Sîr) (thus Lipiński 2004: 115 and Yakubovich 2010: 66-7), with a predictable rendering of Semitic emphatic s as an affiliate ts (see the references given by Lipp 2009: 1.310).

The three HLuvian words for ‘horse’, ‘dog’, and ‘horn’ thus cannot be loanwords from Indic via Hurrian, since they show an affiliate /is/, not a sibilant /s/. The morphological match of HLuvian zu:nid- and Hitt. karkid- in karkidant- ‘horned’ also precludes borrowing. While the suffix -id- is very productive in Luvian, including in loanwords, it is decidedly not so in Hittite, and the word equation can only reflect a common preform *kung-id-, where a further suffix has been added to the base seen in Sanskrit śrāga- (see for this analysis of the Hittite already Pulcvel 1997: 89). Hittite, which retained the stop in what was now a sequence *karngi-, deleted the nasal. Loss of the stop in Luvian (see below) allowed the nasal to remain. As discomfiting as it may be, sporadic uR < *R beside aR in Anatolian is a fact (see Melchert 1994: 260), comparable to the situation for uR and iR in Baltic as described by Lipp (2009: 1.24-7).11

10 Since the Hittite verb is attested all of twice, only in New Hittite manuscripts, its i-vocalism before an s may easily be secondary and requires no special explanation (contra Kloekhorst 2008: 482). On the effective merger of /i/ and /e/ before /s/ in NH verbs see already Melchert 1984: 147-9.

11 Obviously, however, my consistent citing there of the root of giuwa- as beginning with a front
New evidence presented by Kloekhorst (2008: 34-50) for a spelling /o/ in Hittite versus ũ for /u/ offers welcome support for my rather tentative claim (Melchert 1994: 125) that the immediate result of *R in Hittite was *₉R: note an₉-u₉-ru₉-ya₉- ‘interior’ /ando:riya-/ < *andrwɔria- < *en-dkw-. If the same was true for Luvian, then the prehistoric result *₂R would have normally lowered to merge with /u/, but in some words rose instead to merge with /o/. That Luvian did share the same development is suggested by kumma- ‘sacralized’. Rather than assume an unmotivated resyllabification as given in Table 1 above (*kwmp-mo- > *kumno-), we should suppose rather a sequence *kwmp-mo- > *kwummo- > *kummo- (with dissipilatory loss of the *w before *₂o) and read the word as /kummo-. Lack of any ‘plene spellings’ in CLuvian precludes proof of this analysis, but other use of ũ and ũ in CLuvian confirms that Kloekhorst’s basic generalization holds also for it. That is, we must assume that Luvian also had both phonemic /u/ and /õ/.

The need to assume that syllabic sonorants acted as a fronting environment in a language where the anaptyxical vowel appears as either /a/ or /u/ is decidedly unwanted. However, we may be dealing with the kind of reciprocal effects seen in Greek κῶκλα ‘set of wheels, chariot’ < *K₉₉*K₉₁*λh₉₂, where the labiovelars rounded the anaptyxical vowel, which in turn caused delabialization of the preceding stop (see Eichner 1985: 139). Likewise, we are allowed to suppose that the front velar stop led to a palatal onset of the anaptyxical vowel, which then caused the palatalization (affrication) of the front velar, after which it was absorbed in the affricate, leaving only the non-front nuclear vowel: *K₉₉*ŋng-id > *K₉₉*j₉₉ng-id > *tsj₉₉ng-id > *tsorg₉₉ng-id > *zumid- (again really /tsomid/).

The recent demonstration by Goodegebure (2010) that CLuvian zantida means ‘down’ and equates to Hittite katta likewise requires that a syllabic sonorant act as a fronting environment. Her analysis rests on comparisons such as CLuvian zanta...kišnamman ḍedu with Hittite katta kišan ḍedu ‘let it be combed down’ and likewise zanda dąpaimmi- with katta GUL-ant- ‘struck down, afflicted’. She cites further the functional equivalence of CLuvian <zantalanana with Hittite tepnumansi ‘belittle’, persuasively interpreting the Luvian as ‘erniedrigen, humiliate’ < *zantala/i- ‘low’ (cf. šarla/i- ‘high’ and šarla(t)- ‘exalt’). As she correctly argues, there is no connection with Hittite katta, katti in the meaning ‘with, besides’ (cognate with Latin cum ‘with’, OCS ku ‘to’ etc.), so the only sure cognate is Greek καρτάκτω. This permits us likewise to start from front velar *K₉₉mgmtV and assume a development parallel to that sketched for ‘horn’ above: *K₉₉mgmtV > *K₉₉j₉₉mgmtV > *tsj₉₉mgmtV > *tsomtV > zantida. This ‘reciprocal effect’ scenario is manifestly hypothetical, and I do not insist upon it in the form presented. I offer it only to show that such behavior of syllabic sonorants following a sound that was itself already a front velar is by no means preposteros.

Palatalization of *K₉₉ before short *ɔ is undeniable. The attempt by Lipp (2009: 1.284-5) to eliminate short *ɔ conditioning is impossible: there simply is no conditioned change of posttonic *-es > Luvian -is, as he proposes. CLuvian ta-paš-ša ‘sky, heaven’ is to be read as ta-pašt-ša, as shown by tap- po-asiša (for paš, see Neu-Rüster 1989: 216 w/refs.). There is thus no way to derive iter. -za- from a non-existent preform *-skit(C). Lycian tisse ‘someone,

velar *g(h)- was wholly erroneous.

Lipp (2009: 1.53) assumes that a syllabic nasal served as a fronting environment in pre-PIE, in order to account for *dekmnt ‘ten’ with consistent front velar, but does not explain how it might have done so.
anyone' < *kʰis-ke also directly contradicts any alleged rule of posttonic *ê > i. We thus confront either a contrast of kisā(i)- < *kēsāye-o- versus -za- < *-ske- with short *ê or of kisā(i)- < *kēsāye-o- versus zar < *kēr (with vocalism from weak stem for *zêr) with long *ê. Luvian and Lycian must therefore have inherited a three-way contrast of *kʰ, *k, and *kʰ’/i, with conditioned palatalization of only *kʰ/’/i, but not *k, in fronting environments.

4. Luvo-Lycian Evidence III (voiced stops)

The picture for voiced dorsal stops (which include PIE voiced aspirated dorsal stops) is unfortunately much less clear, for two reasons. One is simply the lack of more than a handful of compelling etymologies for the velar set. Those available do not cover enough different environments to determine with confidence the conditioning for various reflexes. The second problem is that there is clear evidence for widespread medial loss of voiced stops (see Kimball 1994 and Melchert 2004b). This means that, for example, in /zurnid-/ ‘horn’ < *kʰenj-id- (NB with velar *g) it is impossible to determine whether the loss is due to a general loss of medial prevoicic *g(h) or results from palatalization to yod before *i and then absorption of the glide (as certainly is the case in /imrā/-i- ‘open country’ < *gʰemnu- cognate with Hittite girma-).

The evidence that we have available appears in Table 2.

<table>
<thead>
<tr>
<th>*kʰ(h)</th>
<th>*g(h)</th>
<th>*g’(h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>*kʰutassra/i- ‘orthostat’ (C/H)</td>
<td>gutsa- ‘citadel’ (C)</td>
<td>wawa/i- ‘cow’ (H)</td>
</tr>
<tr>
<td>~ Lyc.</td>
<td>&lt; *gʰh(o)ut- ‘wall’ &lt; ‘puri’</td>
<td>&lt; *ghyadho- ~ Skt. gṛha-</td>
</tr>
<tr>
<td>katarsha- ‘defecate’ (C)</td>
<td>t(a)whara/i- ‘daughter’ (H)</td>
<td>wāna- ‘woman’ (C)</td>
</tr>
<tr>
<td>~ *Throughout (V)r</td>
<td>&lt; *dhughtr-</td>
<td>&lt; *g”o-</td>
</tr>
<tr>
<td>kallar(a)- ‘unfavorable’ &lt; *ghalH- po- ‘get a share’ (H)</td>
<td>u- ‘to drink’ (C/H)</td>
<td></td>
</tr>
<tr>
<td>~ ON galli ‘flaw’ OIr. galar ‘illness’</td>
<td>&lt; *bhag- ~ Skt. bhaj- etc.</td>
<td>&lt; *g”h- ~ Lat. ebrius</td>
</tr>
</tbody>
</table>

Lith. žalò ‘damage, wound’

Melchert, 2004b

| t(i)yann(i)- ‘earth’ (C) | zurnid- ‘horn’ (H) | dakkua/i- ‘dark’ (C) |
| ~ *dh’hém(i)- (delocative) | &lt; *kʰŋ-id- ~ Skt. śṛṇga- | &lt; *dh’ŋ”a- ~ Fris. diunk |
| īśrā/i-, īstā/i-/ ‘hand’ (C/H) | ‘dark’ Welsh dew ‘fog’ |
| (?) | &lt; *g(h)esr- | qān- ‘slay’ &lt; *g”et- |

| *kʰ”anza- (REL-za-) | ‘incise’ (H) &lt; *g”hj-
| ~ ‘bent, curved’ (?) |

| /imrā/i- ‘open country’ (C/H) | nāna/i- ‘brother’ (C/H) ~ nēne/i- |
| ~ *gʰemnu- (~ ‘earth’) | &lt; *nēgno- ~ Hitt. negna- (?) |
| *(PES)*wata- ‘drive’ (H) | (CORN)ki-pu-tāra ‘horn’ (?) (H) |
| &lt; *weśk-ye/o- | &lt; *geibh- ‘bent, curved’ (?) |

212
ziwa- 'food' (C)
< *guvauHa- ~ OHG kuwan 'chew'
parray(a)- 'high' (C)
< *bhergoi- ~ Arm. basrj etc.
papparkawa- 'purify' (C)
< *bhylgw- ~ Av. brāzaiti 'shines'
haggam- 'land' (H)
< *dhēghôm ~ Hitt. tēkan etc. (?)
ruwan 'formerly' (H) < *ghrēw
~ Olcc. grīandž 'dawn', Lith.
žerėti 'gleam'

Decoulision of labiovelar *g'(h) > w except next to nasal seems assured. The case of Lycian qān- is still much debated. However, the recent demonstration by Kloeckhorst (2006: 97-101) that the one sure source of Lycian q is *h₂w effectively eliminates any comparison with Hittite hamma- 'judge' (thus still Puhrv! 1991: 82, with references to predecessors). The occurrences of the Lycian verb in any case demand a sense 'destroy, kill'. We would expect a singular *g′ənəti to lead to *wənəti with deocclusion, but in the plural *g′nənəti the following n could have preserved the stop. What is much harder to account for is the a-vocalism. I can only suggest that the immediate result of the third plural *qanəti led to a specifically Lycian anaptyxis, hence *qanəti (by chance untested), from which was back-formed a new singular qanəti. The number of required unverifiable steps in this derivation leaves the word of uncertain status.

However, if one accepts the plausible though not absolutely compelling etymology of HLuvian (CAPERE+SCALPRUM) REL-za- 'incise' from an iterative of *g′hen- 'strike', then one must likewise here assume that occlusion of the initial voiced labiovelar was blocked by the following nasal. Carruba (1978: 169) assumes a reading *kuenzza-, but in an e-grade form we would definitely predict deocclusion: compare CLuvian wā/val- 'stick' (*'striking instrument') < virtual *g′hên- (thus with Starke 1990: 313-5). We should rather assume *K′anza- (thus Hawkins 2000: 70 and passim), based on an iterative with zero grade of the root *g′hyn-s(ken)e/o-. It remains surprising to me that a syllabic nasal would have such a blocking effect on deocclusion.

Examination of Table 2 shows that available assured etymologies permit assumption of a conditioned treatment of just *g(h) > [j] > /∅ / _V̱mal, and *g(h) > /s/ *y, with preservation initially before back vowels, but a crucial contrasting example to prove that the first two changes did not apply also to velars are lacking! Although the determinative obviously is quite suggestive, we cannot be sure that HLuvian (CORN)ku-pu-ta-ru- (kipud(a)- or /kipud(a)-) refers to the crescent horn of the moon (see Hawkins 2000: 470 on the problem and Puhrv 1997: 188 on the questionable Hittite-context *kiput-). Even if it does, the derivation suggested above from a root meaning 'bent, curved' is a mere possibility and is not the sort of etymology on which one bases a sound law.

At least suggestive is the apparent contrast we find between palatalization of *K in HLuvian zurmūd- 'horn' < *Kŋng-id- and the lack thereof in CLuvian gurta- 'citadel' < *g′hdho-. I must insist on the latter etymology, against that from *g′r(h)to- (e.g. Bader 1991: 213.
127, Kimball 1999: 250). The problem is not formal (against Melchert 1994: 260), since the labiovelar could have been unrounded by the round anaptyctic vowel before being deoccluded: *g"r(H)to- > *g"orto- > *g"orto-. (read *gorta-). The insurmountable obstacle is the semantics: all reflexes of the root *g"ort- in question mean ‘mountain’ (Sanskrit gir-, Avestan gairi-, OCS gora) or refer to natural phenomena putatively associated with mountains, such as Greek βολτή ‘north wind’ < ‘wind off the mountains’. However, it is clear from the use of CLuwian gurta- in the Deeds of Suppiluliuma that the word refers to a man-made fortified enclosure, which is not necessarily on a high place: KBo 3.6 iii 33: šarrāzzi gurti ‘into the upper citadel/walled city’. If gurta- meant inherently ‘acropolis, high place’, it would be pointless to specify it as ‘upper’, which clearly implies the existence of a similar lower enclosure. The problem for our present inquiry is that the absence of palatalization in gurta- < *ghrdho- cannot prove that a sequence of voiced front velar *g(h) plus syllabic *r did palatalize. It is only such a direct contrast within the voiced series that would be probative, because even if there was conditioned palatalization of only front velar *g(h) and not non-front velar *g(h), we cannot simply assume that the conditioning matched precisely that of the voiceless series (especially in non-obvious environments such as *k).

As already noted above, the general treatment of medial voiced front velars and non-front velars is obscured by uncertainty about the precise conditions on the deletion or retention of both. Medial loss before vowel seems likely. See Melchert 2004b: 377 for HLuvian pa- ‘allocate; receive a portion’ < *bhag-. In the word for ‘daughter’ the unsyllabicfiable *dhughetr- received an anaptyctic vowel colored by the laryngeal, which was then lost regularly before stop. Loss of the prevocalic *g and then glide insertion led regularly to HLuvian /twatrai-/ : *dhughetr- > *dhu.g,h3,tr- > *du.gah,tr- > *du.gatr- > *du.a,tr- > *du.wa.tr-. Lycian syncope of the first vowel led further to kbatra-.14

Whether medial *g(h)/g(h) was lost medially before consonants is far less clear.13 Çop (1970: 91) reads HLuvian dat.-loc. sg. ta-ka-mi ‘in the country’ as /tagamn/, reflecting generalization of the strong stem *dhégöm, with the medial voiced *g being preserved due to its being geminated by Çop’s eponymous law (followed in Melchert 1994: 232). However, ta-ka-mi may alternatively be read /tagm/ (Lipp 2009: 1.297 et al.) and taken as a reflex of *dh₃ghm(w)-, with preserved voiced stop before nasal. Hittite negna- ‘brother’ is generally equated with Luvian nēna/- and Lycian nēnē/- (most recently by Kloekhorst 2008: 601). However, a clear etymology for the word remains to be found, and we cannot at present exclude that the Luvian and Lycian words are mere Lallwörter that resemble the Hittite purely by chance (see Puvel 2007: 108).15 I must not fail to mention one last nagging complication. We have seen that *w acted as a fronting environment and led to affrication of *k to ts.

---

13 This remains true whether one derives Hittite gušš- and Luvian guls- ‘inscribe’ from *guls- ‘pick’ (thus with Puvel 1997: 244 following Carruba) or from *guls- (Oettinger 1979: 204 et al.). As Puvel rightly insists, that choice must be made on other grounds.

14 Since we cannot know whether the HLuvian stem was /twatrai-/ or /twatrai-, *duatra- may alternatively have led directly to /twatra- with dnyllabification of the *u, producing /twatrai-/ and kbatra- directly.

15 For further consideration of this problem see Ofisch 1998: 426 with references.

16 Unfortunately, the very attractive etymology of Neumann (1991: 63-4), *ni-gah₃, -ó ‘inborn’, runs afoul of the already OS spelling ne-eg-na in KBo 20.31 Ro 6, whose e-vocalism cannot be derived from *ni-. The Luvian and Lycian obviously also exclude *ni-, if they are in fact cognate!
However, in the verb *papparkwa- 'purify', most likely from reduplicated *bhreḥjg- to the root *bhreḥjg- seen in *Av. ḫrāzalti 'shines', the *ḥ is preserved as a velar stop. Is this different treatment due to the difference in voicing of the stop, or did the preceding nonsyllabic r that developed in *bhreḥjg- > *park- block the palatalization? Strictly speaking, of course, we do not even control the outcome of *g(h)w- more generally, for lack of evidence.

5. Conclusion

The unconditioned three-way contrast I claimed in 1989 for the voiceless dorsals in Luvian and Lycian is to be rejected. Luvo-Lycian is rather the 'mirror-image' of Albanian: before the merger of the front and non-front velars, the voiceless front velar, but not the non-front velar, underwent conditioned palatalization. A similar conditioned palatalization of just voiced front velars is also possible, but cannot at this point be affirmed. Thus Anatolian is in terms of the traditional classification 'centum': it does show an eventual phonological merger of the front and non-front velars.
Appendix: Evidence for Three Sets of Dorsals in Contrasting Environments

Initial before *r:

*kręnhr- ‘become slack’: Skt. śram- ‘become weary’, Grk. krēmamai ‘hang down’
*kręnuhr- ‘bloody flesh, gore’: Skt. kravịś-, Grk. krēas ‘flesh’ etc.
*kʰreih₂- ‘obtain by exchange, buy’: Skt. krīṇāti, Grk. πριμαι ‘buy’ etc.

Initial before *l:

*klet- ‘lean, recline’ (intr.): Skt. śri- ‘recline’, Grk. klinō ‘lean’, etc.
*klep- ‘steal’: Lat. cōpō, Grk. kλεψō, TochB kālhpī- ‘steal’

Final after *l:

*weik- ‘enter’: Skt. viś- ‘enter’, Grk. oīkos ‘house’, Lat. INCTUS ‘clan’ etc.
*weik- ‘separate, select’: Skt. vivēkti ‘separate’, Lat. uīcīmā ‘victim’, Gothic weihan ‘consecrate’
*leik- ‘leave behind’: Skt. rinākti, Grk. leipō, Lat. linquō ‘leave behind’ etc.

*leig- ‘bind’: Lat. ligāre, Alb. lidhem ‘bind’, MLG līk ‘bend’
*weig- ‘give away’: Skt. vij- ‘flee’, OE wīcan ‘yield’, TochAB wīk- ‘disappear’
*neig- ‘wash’: Skt. niy- ‘wash’, Grk. nēnīpēi ‘is washed’ etc.

*leig³: ‘lick’: Arm. ίζεμ, Grk. leikhō, OIr. ligim ‘lick’ etc.
*steig²: ‘stride (upward)’: Skt. stigh-, Grk. στείχω ‘advance’, Goth. steigon ‘climb’ etc.
*snᵉig⁶: ‘to adhere’: Skt. snīhyati ‘love’, Grk. nēphei, Lith. sniega ‘snows’ etc.

Final after *r:

*dérk- ‘look at’: Skt. drś- ‘see’, Grk. dērkmai ‘look at’ etc.
*perk- ‘fill up’: Skt. prk- ‘fill’, OIr. ercraid ‘fills’
*terk- ‘turn’ (intr.): Hitt. tarku- ‘dance’, Lat. torqueō ‘turn’ (tr.), TochB tērku ‘turned’

*werg- ‘make’: Av. vṛza-iiti ‘does, makes’, Grk. éorge ‘has carried out’ etc.
*hweig- ‘turn’: Skt. vṛj- ‘turn’, Hitt. ḫurući- ‘wheel’ etc.
*erg- ‘threaten’: Skt. tarj- ‘threaten’, Grk. tārbos ‘fright’, Lat. torius ‘glaring’ etc.

*berg³: ‘high’: Av. bāra- ‘height’, Hitt. parku- ‘high’ etc.
*berg³: ‘guard, watch over’: Av. bārajania- ‘honor’, Goth. baīrgan ‘preserve’ etc.

Final after *l:

*Hmelk- ‘stroke’: Skt. mṛśati ‘touches’, Lat. mulcéō ‘stroke’
*selk- ‘pull, draw’: TochB sālkh-, Grk. hēlkō ‘pull, draw’

*hmelg³: ‘milk’: Grk. amēlgo, Lith. mėžu, OE melcan ‘milk’ etc.
*weīg- ‘roll’: Skt. vālgaṭti ‘looms up, leaps’, OE wǣcan ‘roll, press’ etc.

216
Final after *n:

*denk- ‘bite’: Skt. da(m)j-; Grk. dákno ‘bite’
*kenk- ‘hang’ (intr.): Skt. sánk- ‘be in doubt’, Hitt. kank- ‘hang’, Lat. cünctor ‘hesitate’

*ğ̣ engk- ‘walk’: Lth. žengi, Goth. gangan ‘walk’ etc.
*ğ̣ lęng-. ‘light, nimble’: Skt. rámhate ‘hurries, runs’, Grk. elaphrós ‘light, quick’, OHG grlit-lengan ‘succeed’

References

der Denkmäler mit lydischer Schrift. Anzeiger der philosophisch-historischen Klasse,
Österreichische Akademie der Wissenschaften, 134. Jahrgang, 11-96. Vienna: OAW.
Blackwell.
Goedemoebeure, P. 2010. The Luwian adverbs zanta ‘down’ and *añni- ‘with, for against’. In
A. Süel (ed.), Acts of the VIIIth International Congress of Hittitology. Çorum, August 25-
Gusmani, R. 1961. Il suffisso -jto- di aggettivi ‘locali’ e la sua diffusione nelle lingue
indo-europee. AION-L 3,41-58.
Hajnal, L. 2003. ‘Jungluwisch’ — eine Bestandsaufnahme. In M. Giorgieri et al. (eds.): Licia e
Lidia prima dell’ ellentizzazione, 187-205. Rome: CNR.
Gruyter.
Melchert and B. Vine (eds.), Proceedings of the 20th Annual UCLA Indo-European
Jamison, S. 1983. Function and Form in the -iwa-Formations of the Rig Veda and Atharva
———. 1999. Hittite Historical Phonology. Innsbruck: Institut für Sprachwissenschaft der
Universität Innsbruck.
und ihre Konsequenzen für die vergleichende Rekonstruktion. Wiesbaden: Reichert.
Heidelberg: Winter.
Meillet, A. 1934. Introduction à l’étude comparative des langues indo-européennes.7 Paris:
Hachette.


