

Loss and retention of voiced velars in Luvian: another look

1. Introduction¹

Loss of voiced velar stops in the Luvian branch of Anatolian is well known.² It is one of the significant innovations distinguishing the Luvian branch from Hittite; cf. e.g. CLuv. *issari-*, “hand”, HLuv. *istri-* id., Lyc. *izr-* id. : Hitt. *kissar* “id.” (IE. **ǵhesr-*); CLuv. *tiyammi-* “earth” : Hitt. *tēkan, taknās* “id.” (IE. **dheǵhōm, *dhǵhm-*); CLuv. *parray-* “high” : Hitt. *parku-* “id.”, *park(iya-)* “rise, grow” (IE. **bherǵh-*). This sound change, however, is obviously not exceptionless, unconditioned loss, since the Luvian languages offer a few examples in which an inherited voiced velar has been retained, e.g. HLuv. *tak(a)mi* “earth” (dat. sg.) : CLuv. *tiyammi-* id. (IE.

¹ Bibliographic abbreviations are those of Hoffner-Güterbock, Chicago Hittite Dictionary, except: Chettskij Jazyk = V.V. Ivanov, Chettskij Jazyk. Moscow, Akademia Nauk 1963; Head and Horn = A.J. Nussbaum, Head and Horn in Indo-European. Berlin and New York, de Gruyter 1986; Lautgesch. u. Etym. = M. Mayrhofer, M. Peters and O.E. Pfeiffer eds., Lautgeschichte und Etymologie. Wiesbaden, Reichert 1980; Norw.-dän. et. Wb. = H.S. Falk and A. Torp, Norwegisches-Dänisches etymologisches Wörterbuch. Heidelberg, Winter 1910; Studies ... Cowgill = C. Watkins ed., Studies in Memory of Warren Cowgill (1929-1985). Berlin and New York, de Gruyter 1987; SHHP. = H.C. Melchert, Studies in Hittite Historical Phonology. Göttingen, Vandenhoeck and Ruprecht 1984; Symbolae Kuryłowicz = W. Taszycki et al. eds., Symbolae Linguisticae in Honorem Georgii Kuryłowicz. Wrocław, Polska Akademia Nauk 1965; CLuvLex. = H.C. Melchert, Cuneiform Luvian Lexicon. Chapel Hill, 1993; and JAC. = Journal of Ancient Civilizations.

² Loss of velars in some Luvian cognates of Hittite words was first pointed out by Laroche, BiOr. 11 (1954) p. 123, RHA. 60 (1957) p. 28 n. 34, BSL. 59 (1963) p. 77-79. That the best examples involved loss of voiced velars was first noted by Čop, Linguistica 2 (1956 p. 42-5 and Linguistica 5 (1964) p. 27-8, Ivanov, Chettskij Jazyk (1963), p. 85, Symbolae Kuryłowicz (1965), p. 131-5 and by Scheller, IF. 69 (1964) p. 39-41.

**dheghōm*, **dh.g̃hm*-); CLuv. *katmarsyi*- “defecate” : Hitt. *kammars*- “id.”, IE. **g̃hed*-).³

Loss and retention of voiced velars have been explained in various ways in recent treatments. Oettinger, MSS.34 (1976) p.101, posits loss of PLuv. **g* (< IE. **g̃*, **g*, **g̃h* and **gh*) in initial and intervocalic position. Melchert, *Studies ... Cowgill*, p.186, noting that the conditioning for the change is not well understood, suggests that the retained velar in CLuv. *katmarsyi*- might be attributable to the affective value of the word. Tischler, IF.95 (1990) p.89–91, posits general loss in pre- and intervocalic position of PLuv. reflexes of **g̃*, **g*, **g̃h* and **gh*), and Starke, KZ.100 (1987) p.249 and StBoT.31 (1990[1], p.344 n.1219, 359, 426, 509), posits a general loss with retention of **g̃h* as **g* before consonants,⁴ and a change of PLuv. **g* (IE. **g̃(h)*, **g(h)*) to *z*-, -*zz*- before PLuv. **a*.⁵

³ Loss of the velar element of voiced and voiced aspirate labiovelars (e.g. HLuv. *wawa*- “cow”, Lyc. *uwa*-, *wawa*- id. < IE. **g̃ou*-, CLuv. *wana(tti)*-, *unatti*- “woman” < **g̃en(eh₂)*-, CLuv. and HLuv. *u*- “drink” < *(*h₁*)*eg̃h*-; see Melchert, *Studies ... Cowgill*, p.185 and Tischler, IF.99 (1990) p.63–8 w. refs.) can be an independent change. Weakening of voiceless velars to *h(h)* (Laroche, DLL. p.135) is highly dubious (Melchert, *op. cit.* p.187).

⁴ Cf. StBoT.31 (1990[1]), p.99, where HLuv. *tak(a)mi*- is derived from the oblique stem, PA. **dagm*- (e.g. in IE. gen. **dh.g̃hm-és*) while CLuv. *tiyammi*- is derived from acc. sg. *tiyammi*- < PLuv. acc. **tī(y)amman* < IE. **dhégh-om-n̄*).

⁵ Starke formulates this change as Pre-Luv. **ga* > Luv. /*za*/ (index, p.631 n.1 and p.679). The examples he cites, however, have other possible explanations. The CLuv. ethnic adj. suffix -*zza*-, -*i(z)za*- (e.g. *urazza*- “big”, URU *Taurisizza* “Taurisean”), which Starke derives from *-(*i*)-*gho*- (p.462–3 n.1684) can, along with its Lyc. counterpart -*is(e)*- (e.g. in acc. sg. *Trmmisñ* “Lycian (country)”, *Ijānisñ* “Ionian”), be derived from **-i̯ko*- or **-iskō*- (see Melchert, *Studies ... Cowgill*, p.194–5 and KZ.102 (1989) p.29–31). The verb *wizzai* “move, lead, impell” (in Hitt. contexts KBo. V 4 Rs 41, KUB. IV 8 Vs 8; DLL. 112), which Starke derives from **wēgh*- “convey”, can be from a stem /*wit̪s*-/ from **wēdh-ti*, and athematic acrostatic present beside reduplicated **wiwidāi* in KBo. V 4 Rs 29 and KUB. IV 8 Vs 5 (see Melchert KZ.93 (1979) p.265–8). CLuv. *zārza*, which Melchert, *Studies ... Cowgill*, p.197 identifies as “heart” < IE. *k̂(e)rd*-, is attested in broken contexts but the identification is supported by HLuv. *Za+ra/i-za* “heart” (CLuvLex. p.280) and Starke’s identification as “liver” (p.631 w. refs.)

A reexamination of the most certain examples of Luvian words with reflexes of IE. voiced and voiced aspirate plain and palatalized velars, however, suggests that loss occurred only before front vowels and inherited */y/ and involved palatalization of the velars (or their voiced reflex) to a palatal glide */y/ that was later lost except after stops. By contrast, reflexes of voiced velars were retained as a sound represented by velar stops before non-front vowels and consonants.

2. Loss

2.1. CLuv. *issari-* “hand”, HLuv. *istri-*, Lyc. *izr-* as well as Hitt. *kissar*, Gk. χείρ and Arm. *jeṛn* continue IE. **ĝhes-ōr*, **ĝhes-r-*. The Luvian and Hittite forms should reflect a PA. generalized stem **gessr-*.⁶

2.2. CLuv. *im(ma)ra-* “open field, steppe” (gen. adj. *im(ma)-ra-as-sa-* DLL.51), Lyc. PN. *Ipre-ziti* (= CLuv. *Immra-ziti* with *ipre* < **impre-* < **immra-*)⁷ and Hitt. *gim(ma)ra-* “id.” are from **ĝhem-ro-*, perhaps originally adjectival, “belonging to the earth”.⁸ These words are ultimately derivable from **dhĝhm-* (**dhĝhm-*) “earth” with simplification of the initial cluster already in IE. (cf. e.g. Lat. *humus* “soil”, Gk. χαμαί “on the ground”, Lith. *žmuõ* “man”, and Go. *guma* “id.”) and analogical reintroduction of the full-grade vowel **e* (cf. Lith. *žẽmẽ* “earth”, Lat *nēmō* “no one” (**ne hemō*)).⁹ The

will not work. Starke also (p.462–3 n.1684) derives the CLuv. and HLuv. dem. pron. *za-*, *zi-* and Hitt. and Pal. *kā-*, *kī-* from IE. **gho* (as in Lat. *ho-c*); for arguments for deriving it from IE. **ko-*, **ke-*, **kī-* (e.g. in Arm. *sa* “this”, Lith. *šis* id., Lat. *cis* etc.) see Melchert, *Studies ...* Cowgill, p.191–5.

⁶ For the original inflection, see Schindler, IF.72 (1967) p.243–9, and for PA. **gessr-* with gemination (also in Hitt. *ki-is-sa-ri-i*, *ki-is-ra-a* = [gissrī], [gisarāl] see Melchert, SHHP. p.90 n.24, and p.106 and Starke, KZ.100 (1987) p.264 w. n. 76.

⁷ Melchert, KZ.102 (1989) p.24 n.4.

⁸ Nussbaum, *Head and Horn* p.198, 222.

⁹ For loss of the dental, see Schindler, *Sprache* 13 (1967) p.200 and *Sprache* 23 (1977) p.31–2.

occasional spellings with doubled *mm* and dead vowel in the cuneiform script (cf. Hitt. *gi-im-ma-ra*- KBo. VI 3 II 10) point to a PA. **gemmro*- with gemination **mr* > *[*mmr*].¹⁰

2.3. In CLuv. *tiyammi*- “earth” (*ti-ya-am-mi/e*-, *ti-ya-mi* DLL. p.97) the spellings with *-am-me/i*, which are by far the more frequent, should continue **ém* with doubling of the nasal via Čop’s Law.¹¹ The one place in the original paradigm where an accented *e*-grade suffix surely occurred was the locative **dhêghém-i* (cf. Ved. loc. *kṣámi*)¹² and the CLuv. word for “earth” probably comes from a generalized locative stem.¹³ For other examples of generalized locative stems in Anatolian cf. Hitt. *witēn*- obl. stem of *wātar* “water” < **wéd-en*- for **ud-én*- (cf. Ved. loc. *udán*) and *pahhuen*-, obl. stem of *pahhur* “fire” < **p(e)h₂-wén*-.

2.4. Two other words showing loss are derivable from PLuv. *i*-stem adjectives and may be treated together.¹⁴

¹⁰ For the gemination see Melchert, KZ. 101 (1988) p.219.

¹¹ IF. 75 (1970) p.85–96. Čop himself (p.90–1) explains *tiyammi*- as a derived *i*-stem **dheghóm-i-s* from **dheghōm*, **dheghom*- with accent shift and HLuv. *tak(a)mi* from **takkam* < nom. sg. **dhêghōm*.

¹² On the original inflection of the IE. word for “earth” see Schindler, *Sprache* 13 (1967) p.191–205.

¹³ Čop originally formulated the sound change as doubling of **l*, **r*, **n*, **m* and the voiced aspirates **bh*, **dh*, **gh* (**gh*) after short, accented **e*. There seem to be no clear-cut examples of the CLuv. reflex of **m* after **ó* or unaccented **o*, but the single *r* of CLuv. *GIŠ ta-a-ru* “tree, wood” (KBo. XXIX 6 Rs 12; Starke, *StBoT*. 31 (1900[1]), p.428 n.1555) < **doru* (= Hitt. *ta-a-ru* id., Skt. *dāru* “wood”, Gk. *δόρυ* “spear”) beside *par-ra-an* “before, in front of” < **pérom* (= Hitt. *pe-e-ra-an*) and *sa-ar-ri* “above” < loc. **sér-i*, suggests that resonants were not doubled after **o* and that the acc. sg. **dhêghom-m* would have yielded a form with single *m*. A sequence **ōmV*, as in nom. sg. **dhêghōm*, would surely have given *amV* with single *m*; cf. *ādduwāl(i)*- “evil” < PA. *(*h*₁)*édwōl*-.

¹⁴ Since the gemination (or devoicing) of voiced stops before **h*₂ seems to be Proto-Anatolian (cf. the CLuv. 2 pl. midd. pres. ending *-dduwar* in *dā-dduwar* “come to stand” : Hitt. *-dduma* < **-dh₂uwe*; Melchert, SHHP. p.26), Melchert (*Studies ... Cowgill*, p.184 n.5) is probably right in rejecting the connection of CLuv. *māy*- “many, big”, gen. adj. *mayassi*-, HLuv. *man* “many”, *mia(n)t*- id. and Lyc. *miñtis* “council” with Hitt. *mekki*- “many”.

2.4.1. CLuv. *parray-* “high” (DLL. p.78) and Hitt. *parku-* “id.” ultimately continue the *u*-stem adj. **bhr̥gh-u-* seen also in Arm. *bargr* “high”. Although Starke (StBoT. 31, (1990 [1]), p.58) reconstructs an inherited **bhr̥gh-u-*, Luvian shows several other examples of inherited *u*-stem adjectives transferred to *i*-stem inflection early enough, as Weitenberg (U-Stämme, p.389–90) notes, for PLuv. *i*-stem paradigms to have retained an ablauting suffix (cf. e.g. CLuv. *ārray-* “long”: Hitt. *aru-* “high”, adv. *arumma* “very”). Accordingly, we can reconstruct a PLuv. **barg-i-*.

2.4.2. A CLuv. *harray(a)-* “silver” from an adj. **harray-* “white” is posited by Starke (KZ. 100 (1987) p.249–9 n.22 and StBoT. 31 (1990[1]), p.424 w.n.1532, 1533) on the basis of *ha-ra-an-za sa-ka-an-ta-ma-an-za* (nom.-acc. pl. n.) “appliquéd with *h*.”¹⁵ in KUB.II 1 III 30 (13th c. inventory text) and the HLuv. mountain name ^{DEUS}“MONS” *Haraharaisa* “The Snow-white Peak” (Mt. Argaeus/Ericiyas Dağl) with reduplication. The Luvian words and Hittite *harki-* “white, bright” would continue an *i*-stem **h₂r̥g̃-i-*, **h₂r̥g̃-oy-*.

2.4.4. Luvian *-i/-a[y]-* can continue IE. **-i/-ey-*, but the Hittite adjectival *i*-stem suffix *-a(y)-* (< PA. **-ay-V-* with analogical restoration of intervocalic /y/) surely continues *o*-grade **-oy-* parallel to the *u*-stem suffix *-aw-* < **ow-*. For the *o*-grade of the letter, cf. **-ew-V-* in Hitt. *nēwa-* “new” < **néwo*.¹⁶ It is possible that the *o*-grade was generalized in adjectival *i*- and *u*-stem inflection in PA. While a voiced velar would have been preserved before **-o[y]-* (i.e. PA. **br̥g-oy-* > CLuv. ***bargay-*) loss would have been regular before the suffix **-i-* in strong-case forms (e.g. nom. sg. c. **br̥g-i-s* > PLuv. **bary-is*) and the stem form with the palatal glide **bary-* (> **barr-*) could have been generalized to the oblique stem.

2.5. CLuv. *ipattar* “bend, bow” is identified and connected quite plausibly with Lat. *gibber* “hump-backed” and Lith.

¹⁵ For *sakantamanza* as “appliquéd” cf. Košak, THeth. 10, p.202 on *sakantatar* “appliqué”.

¹⁶ See Melchert, SHHP. p.22 for the *u*-stem suffix and ib. p.44–5 for the *i*-stem suffix.

geibùs “feeble, clumsy” (IE. **gei-* “bend” with various extensions, IEW. p.354–5) by Starke, StBoT.31 (1990[1]), p.504–9. A connection with CLuv. *ipala/i-* “left”, which Starke (ib. p.196) disavows, is possible in view of Dan. *keite*, dial. *kei* “left hand”, Norw. dial. *kjeve* “id.” beside Dan. *keikr* “bent back” and NNorw. *keika* “bend”, also from < **gei-*, **gei-d-*.¹⁷

2.6. HLuv. *hari-* “harvest” and Hitt. *halki-* “barley, grain” are derived by Melchert (KZ.101 (1988) p.220–4) from an *i*-stem, result noun **h₂o-lĝ-i-* with the prefix seen in Gl. ὀκέλλω “run around”, ὄζος “branch” and Hitt. *hasdwēr* “branches, brush” (which Melchert (ib. n.17) derives from **h₂o-*) and the root **leĝ-* “collect”. If this etymology is correct, it would provide one more case of palatalization of the voiced velar before a front vowel (**h₂olĝ-i-* > **halyi-* > *hari-* with rhotacism) or before **y* (in obl. stem **h₂olĝ-y-* > **harya-*; cf. Hitt. gen. *halkiyas*).

2.7. At first glance, CLuv. *duttarri-*, (*)*duwattri-* “daughter”, HLuv. *tuwat(a)ri-* id., Lyc. *kbatra* id. < IE. **dhugh₂-tér-*, **dhugh₂-tr-* (cf. Skt. *duhitar-*, Gk. θυγάτηρ etc.) seem to show loss of **g* before a non-front vowel¹⁸; but the vowel is the reflex of **h₂*. Apparently the laryngeal vocalized in PA. or PLuv. to a sound, perhaps **ə* or a schwa-like vowel with front or central articulation, that could cause palatalization. The *kb* of Lyc. *kbatra* points to earlier **dw* (cf. *kbi* “other, another” < **kw-i-* vs. **du* in *tupm̃me* “two-fold”)¹⁹ and suggests the following series of developments: IE. *[*dhugh_{2e}-tér-*], *[*dhugh_{2e}-tr-*] > PA. or PLuv. **dugātér-*, **dugatr-*, > PLuv. **duyatarr-*, **duyatr-* > **duatarr-*, **duatr-* > *[*duwatarr-*], *[*duwatr-*] with glide insertion. The reflex of **h₂*, although written with *a* in the attested languages, did not merge with IE. **a* until after palatalization, if *kallar* “something un-

¹⁷ Falk-Torp, Norw.-dän. et. Wb. p.506, 514, 517.

¹⁸ See Starke, KZ.100 (1987) p.243–69 on the Luvian words for “daughter”. The stem *duwattri-* is attested indirectly in the spring name ^{TUL}*Duwattrina-* (Starke, op. cit. p.249).

¹⁹ Starke, op. cit. p.248.

pleasant, unhealthy, or baneful” is truly Luvian and comes from **ġhal(H)-ro-* (below 3.4).

3. Retention

3.1. *katmarsyi-* “defecate” (3 sg. pres. *kat-mar-si-it-ti* DLL. p.55) and Hitt. *kammars-* “id.” clearly belong with Skt. *hadati* “defecates” and Gk. *χέζει* id. and Toch. B *kenmer* “dung” (IE. **ġhed-* IEW., p.423). Although the origin of the Anatolian *-s is obscure, Luv. *katmar-* and Hitt. *kammar-* can continue a nom.-acc. sg. **ġhód-mṛ*, while Toch. B *kenmer* “dung” is perhaps from a collective **ġhod-mér* with analogical *o*-grade root from the singular.²⁰ Neither Tocharian nor Anatolian preserves the original inflection, but the very isolation of the word in both branches guarantees that the *o*-grade root is old.

3.2. In HLuv. dat. *tak(a)mi* (hap. leg) “earth” the preservation of the velar suggests that *tak(a)mi* continues the inherited oblique stem **dh_eVġhm-* > PA. **dagm-*.²¹ Since the word is found only in the dative singular, the full details of its inflection remain unknown, but the Luvian languages generally leveled out stem alternations in nominal paradigms, and it is likely that Hieroglyphic Luvian generalized the oblique-stem while Cuneiform Luvian generalized the locative stem.

3.3. *kallar* (neut.) “something evil or unpleasant” and Hitt. *kallar* id., adj. *kallara-* “evil, unpleasant, unfavorable, unhealthy” are problematical. There is some uncertainty as to whether the word is genuine Luvian or Luvicized Hittite (DLL. p.42, CLuvLex. p.98; see Starke, StBoT. p.31 (1990[1], p.355–9 for a full discussion). Two seemingly plausible etymologies have been offered.²² Pedersen (Hitt., p.46) compared

²⁰ For the etymology, see Schmidt, Lautgesch. u. Etym., p.409. A double *o*-grade, **ġhod-mor-*, however, is unlikely. See Tischler, HEG.3, p.473–5 for various suggestions about the origin of the Anatolian *-s.

²¹ Oettinger, MSS.34 (1976) p.101, Melchert, Studies ... Cowgill, p.186 and Starke, KZ.100 (1987) p.249 and StBoT.31 (1990[1]), p.99 also derive *tak(a)mi* from the oblique stem.

²² Tischler, HEG.2, p.464.

OIr. *galar* (neut.) “disease” < substantivized adj. **gal-aro-* : IE. **ǵhal(H)-* in e.g. ON. *galli* “fault, flaw” and Lith. *žalà* “damage, wound” (IEW., p.411). If this etymology is correct, and if *kallar* is genuine Luvian, then *kallar* would provide another example of retention of **ǵh* before a non-front vowel. Goetze, however, (Lg.30 (1954) p.403) compared Att. Gk. κηλέω “charm, deceive”, Lat. *calvārī* “deceive”, *calumnia* “calumny” and Go. *hōlōn* “deceive” (**keh_il-*, **hoh_il-*, **kh_il-*, cf. IEW. p.551, **kēl-*). Given either etymology, the preform can be reconstructed with a non-front vowel following the velar: **ǵhal(H)-ro-* > [*gallra-*] or *koh_il-ro-* > [*kallra-*].

3.4. CLuv. ^{NA4} *ku-ut-ta-as-sa-ri* (hap. leg. dat. sg.) a stone object worked or decorated in some way and HLuv. *kut-tass(a)ri* “orthostat with inscription or relief work” (Starke, StBoT.31 (1990[1], p.425–30) are often connected with Hitt. *kūzza*, *kutt-* “wall”²³, which is commonly derived from **ǵheu-* “pour”.²⁴ If the semantic distance of the Luvian words can be explained²⁵, and if voiced velars were lost only before front vowels in Luvian, then there should be no obstacle to deriving PLuv. **gut-* from a PA. **gu-t-*.²⁶

²³ See Starke, loc. cit. for references.

²⁴ Tischler, HEG.4, p.676–8.

²⁵ Semantic objections to the derivation of Hitt. *kūzza* from **ǵheu-* can probably be resolved. Hittite interior walls were rubble-filled, and can conceivably be described as “poured”. Note that foundations are described as “poured” (e.g. KUB.XXIX 1 III 21 *mān-kan saman-us-ma ishuwanzi* “But when they pour the foundations”). It is also common for the word for an object to stay the same even though the technology for making it changes (cf. e.g. Eng. *wall* < OE. *weall*, borrowed from Lat. *vallum* “palisade of stakes” or Germ. *Wand*), originally made of woven branches (cf. Go. *wandus* “twig”, ON. *vǫndr* id.) < Gmc. **wandu* “twig, wickerwork” : **windan* “wind, weave”. The meaning of derivatives like the Luv. words might be even farther from the original. For the suffix *-ssar-* see Melchert, JAC. 8 (1993) p.107–8 w. note 7.

²⁶ A full-grade **ǵheú-t-* would have become PA. **g[h]ūd-* with monophthongization of the diphthong to **ū* and voicing of the stop after the long, accented vowel; cf. CLuv. *i-ti* “goes” = [*ídi*] < PA. **ídi* or **édi* < **h₁eí-ti*.

4. Apparent counter examples

4.1. CLuv. gen. adj. *hur-ki-la-as-si-* in acc. pl. *hurkilassinza* LÚ^{MEŠ}-*inza* “men of *hurkil*, criminals” KUB.XXXV 148 IV 18 = Hitt. LÚ^{MEŠ}*hu-ur-ki-la-as* in KUB.XII 63 I 21 with *hurkil* “perversion” < IE. **h₂werg̃h-* “twist, strangle” (cf. e.g. OE. *wyrgan* “strangle” and Lith. *veržiu* “constrict”) or **h₂werg̃-* “turn, twist” (cf. Skt. *vr̥jina-* “crooked, deceitful”) can be a loanword from Hittite (see Starke, StBoT.31 (1990[1]) p.343–5).

4.2. Melchert (Studies ... Cowgill p.185–6) suggests that HLuv. *a-sa-ta-ri-i* (hap. leg. = /astari-/) belongs with Hitt. *kāst-* “hunger” and that both can perhaps be derived from IE. **g̃es-* “be extinguished, be exhausted” (e.g. in Skt. *jasate* “id.”). But as Melchert himself notes, and etymology based on a single occurrence is far from certain (see also Starke, StBoT.31 (1990[1]) p.186 n.613).

5. Phonetic and phonological implications

The idea that loss of voiced velars in the Luvian languages involved palatalization before front vowels is not entirely new. As early as 1956, Čop (Linguistica 2, p.42–5) suggested that the loss of **g̃h* in CLuv. *tiyammi-* was the result of palatalization, reconstructing PLuv. **teyem* or **teyam*. Gusmani (Fs. Pagliaro, p.320–1) considered palatalization, but rejected it in favor of loss via weakening to a velar spirant */ɣ/, because loss seemed to occur before a non-front vowel in Lyc. *kbatra* “daughter”. It is important, however, to recognize that the *a* of *kbatra* and its CLuv. and HLuv. cognates is the reflex of a vocalized laryngeal and need not have been identical with PLuv. **a* at the time of palatalization. Laryngeals were inherently not very sonorant, and their vocalization is probably best understood as involving insertion of an epenthetic vowel with later deletion of the laryngeal.²⁷ While the reflex of this epen-

²⁷ See Melchert, SHHP. p.14 w.n.26, p.159 and Starke, StBoT.31 (1990[1]), p.116 w.n.339 a.

thetic vowel is realized as **a* in most IE. languages, it was apparently realized as a front vowel that eventually merged with inherited **i* in Indo-Iranian (cf. Skt. *duhitar-* “daughter” < **/dhugh₂-tér-/* or *pitar-* “father” < **/ph₂-tér-/*). Given the poverty of distinct signs for vowel in the writing systems in which the Luvian languages are written, it is even possible that *a* in the word for “daughter” stands for a low front vowel /æ/ (cf. e.g. [k^hyæt], a possible pronunciation of *cat* in some dialects of American English).

The Proto-Luvian palatalization may have entailed an initial spirantization of all prevocalic voiced velar stops to a voiced velar spirant **/ɣ/*, which was realized as a palatal glide **[y]* before front vowels. When **[y]* was later lost in some contexts, the change was phonemicized. This series of developments would be well paralleled (cf. e.g. the development of Gmc. **g* in Old English). It cannot be entirely excluded that the “retained” prevocalic velar of *katmarsyi-* (and of *kallar* if from **ghal(H)-* and *kuttass(a)ri-* if from **ghu-t-*) was realized phonetically as [ɣ].

The product of palatalization, **/y/*, was retained after the stop in CLuv. *ti-ya-am-mi-* < **dhghem-*; elsewhere **/y/* was lost. Between vowels, it simply disappeared (e.g. CLuv. *duwatarr-* “daughter” < **duyatarr-* < **dugátér-*). Initial **ye* became /i/, perhaps via an intermediate stage **yi* in PLuv. **issri-* “hand” (< **yissr-*) < **yessr-* and PLuv. **immra-* “field” (< **yimmra-*) < **yemmra-*. The sequence **ry* seems to have become [rr] with gemination (e.g. CLuv. *parray-* “high” < PLuv. **bary-ay-*). It is clear, however, that PLuv. **y* < **gh(h)*, **g(h)* did not merge with IE. **y*. PA. initial **ye-* became **e-* well before the specifically Luvian palatalization (cf. CLuv. *aggati-* “catch net” = Hitt. *ēkt-id.* < **yékt-* : IE. **yeg-* “hunt” in OHG. *jagōn* “to hunt”).²⁸ Inherited **/y/* seems to have remained after resonants (cf. e.g. CLuv. *annyi-* “do, make”, or *tatariyamman-* “malediction”). Loss of inherited intervocalic **y* between unlike vowels was not Common Anatolian.²⁹ Had loss been this early, the PA. denomina-

²⁸ See Melchert, SHHP. p.45 and 164.

²⁹ As proposed e.g. by Oettinger, *Stammbildung*, p.535. In view of CLuv.

tive suffix **-āyé-* in CLuv. *-āi-*, HLuv. *-ai-* and Lyc. *-ei-* would have become PA. **-āé-* and PLuv. **-āa-* > **-ā-* with lowering of **e* to **a*. There should, therefore, be no obstacle to positing merger of intervocalic **y* < **ġ(h)*, **g(h)* with inherited **y*.

The palatalization of **ġh* in CLuv. *tiyammi-* as opposed to its retention in *katmarsyi-* implies that **/e/* and **/o/* were phonemically distinct in Proto-Luvian, but such a distinction has to be posited anyway. It is implied by the development of postconsonantal **ye* to */yi/* in e.g. CLuv. *du-ú-pi-i-ti* "strikes" [dubyidi] = HLuv. [dubyidi] = Lyc. *tubidi* < **(s)tup-yé-ti* or **(s)teúp-ye-ti* as opposed to the lowering of **e* to **a* elsewhere. Similarly, the different treatments of **órV* in CLuv. *GIŠta-a-ru* "tree, wood" < **dóru* and **érV* in *par-ra-an* "in front of" < **pérom* (n.13) imply a distinction between **e* and **o* at the time when Čop's law took effect.

6. Conclusion

The widely held view that loss of voiced velars in the Luvian languages was independent of the quality of a following vowel leaves a stubborn residue of apparent exceptions that must be given ad hoc explanations. By viewing the loss as the final result of a PLuv. palatalization of voiced velars to **/y/* before front vowels and inherited **/y/*, we can explain the exceptions as having velars that remained unpalatalized before non-front vowels and consonants and reconstruct for Proto-Luvian a typologically common sound change.

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tiyammi- < **dhġhém-* his proposed raising of Pluv. **e* to **/i/* after velars and Melchert's PA. raising of **e* to **i* after velars (Studies ... Cowgill, p. 189 n.19) will not work, but the */i/* of *kīsā(i)-* "comb" can be from **ē* (see Melchert, loc. cit. w. refs.).