

## Genitive Case and Possessive Adjective in Anatolian

H. Craig Melchert  
University of California, Los Angeles

### 1. Introduction<sup>1</sup>

One of the most famous features of the Anatolian Indo-European languages is the widespread use of an inflected adjective (that agrees with its head noun in gender, number and case) in place of the genitive case. In some languages use of this adjective leads to total or near total loss of the genitive. Less well-known is the variety of exponents of the genitive case itself in Anatolian. The following reexamination of this topic was directly stimulated by the article of Hajnal (2000). His analysis has led me to revise radically my own previous views, but in a very different direction from the one he proposes.

I should make clear at the outset one fundamental difference in viewpoint. Hajnal argues (2000: 174ff.) that there was a consistent functional difference in PIE between the “individualizing genitive” and the “specifying” possessive adjective and (2000: 179ff.) that this difference is still discernible in the pattern of their use in Lycian and HLuvian. I cannot accept this claim for Lycian, where there is no functional difference between *leθθi qlā* “precinct of Leto” (adj.) and *wazzije kbatra* “daughter of Wazzije” (gen.), nor (pace Hajnal) between *tebeija* “of Tibe” (adj.) and *Hlah* “of Hla” (gen.), each of which respectively identifies the owner of the tomb. On the mixed syntax of possessive adjective and genitive in HLuvian see note 13 below. This artificial distinction has led Hajnal to what are in my view implausible historical derivations of some of the genitival endings. That the true denominative adjectives employed by some of the Anatolian languages originally meant merely ‘pertaining to’ or ‘having the quality of’ the base noun is not in question. However, the crucial innovation of the Anatolian languages (all those except Hittite) was precisely to use these adjectives interchangeably with and in some cases in place of the genitive case (thus with Mittelberger 1966: 99, 101 and 103).<sup>2</sup>

---

<sup>1</sup> This article represents a heavily revised version of item 121 listed in my bibliography as ‘to appear’. The original text has been withdrawn in light of the recent works by YAKUBOVICH 2008, ADIEGO 2010, GOEDEGEBUURE 2010, and SCHÜRR 2010. I am indebted to Ilya Yakubovich and Elisabeth Rieken for very helpful comments on a draft of this paper, but the usual disclaimer applies, and I am solely responsible for all analyses not explicitly attributed.

<sup>2</sup> It is far from clear that the contrast HAJNAL claims for the genitive and possessive adjective is valid even for PIE. See the very different characterizations of the genitive cited by NEUMANN (2001: 448). I thank Norbert Oettinger for this reference.

## 2. Genitive and Possessive Adjective in Anatolian—Synchrony

I must first briefly set forth the relevant data for the Anatolian languages. Old Hittite shows a genitive singular ending *-aš* and a genitive plural ending *-an*. Despite false claims to the contrary (e.g. Gamkrelidze and Ivanov 1995: 233ff. with wholly unjustified further implications), there are no assured examples of *-an* in Hittite with a singular meaning. Most examples must be, and all can be, interpreted as plurals (see Laroche 1965: 33-40). The exclusively plural function is confirmed by the Anatolian cognates cited below. In later Hittite the genitive plural ending in *-an* is replaced by *-aš*, which may reflect syncretism either with the genitive singular or the dative-locative plural. The latter is far more likely, since there is other evidence for case syncretism in Hittite, but none for a loss of contrast between singular and plural.

Hittite does not make productive use of an adjective to express possession. The suffix *-šša/i-* appears only in a few lexicalized substantives, such as *genušša/i-* “knee(-joint)” and <sup>d</sup>*šakuwašša-* “deity of the eye”. For *genušša/i-* as ‘knee-joint’ see Eichner 1979. As correctly argued by Eichner (esp. 1979: 46), all attempts to find the enclitic possessive adjective in the relevant forms are doomed (pace Puhvel 1997: 151 and Kloekhorst 2008: 467). Contra Puhvel (1997: 147) one must on the basis of the parallel *iškišitti* (dat.-loc. sg. of a stem in *-itti-*!) also read in KBo 12.33 iii 9 *genuššit[ti]* (cf. *antakitti-* beside *antaga-* ‘loins’). Examples of animate forms of *genu-* ‘knee’ are specially conditioned, all referring to the ‘walking knee’, where the animate gender is used to indicate that the knee is conceived of as an actor.

Palaic attests a genitive singular in *-aš* cognate with the Hittite ending and a few possessive adjectives in *-aša/i-*, such as <sup>d</sup>*Zaparwa<sub>a</sub>(ta)ša/i-* “of the god Zaparfa”.<sup>3</sup>

Cuneiform Luvian (CLuvian) has by most accounts entirely replaced the genitive case with a possessive adjective in *-ašša/i-* (for the inflection with so-called “*i*-mutation” see Starke 1990: 54ff.). However, see now the claim of Yakubovich (2008: 202-206) for CLuvian genitive singulars in *-ašša* and *-ašši* and discussion below. Hieroglyphic Luvian (HLuvian) has a genitive singular ending */-as/* (spelled *-Ca-sa*) matching the Hittite and Palaic ending. Genitive singulars of *i*-stems spelled *-Ci-(i)-sa* are also probably to be analyzed as */-is/* contracted from */-iyas/*. HLuvian also makes wide use of the possessive adjective in */-assa/i-/* seen in CLuvian, as well as one in */-i(ya)-/*. Finally, HLuvian also has examples of possessive forms spelled *-Ca-si-(i)* that do not show agreement with their head noun (e.g. *pa-si-i-’ a-ta<sub>5</sub>-ma-za* “his name” in ADIYAMAN 1, §8).

<sup>3</sup> Contra HAJNAL (2000: 165) this stem is attested as an adjective with the meaning given, not as a noun meaning “cake of Z.”. The example cited from KUB 35.165 Vs 7 does not exist: here read <sup>d</sup>*Zaparwa<sub>a</sub>š=an=pa=ti takkuwāti* “Zaparfa accepts it for himself”.

While it is conceivable that these spellings represent the ordinary genitive singular in /-as/, it is far more likely that we must assume a genuine alternate ending /-asi/, as first seen by Mittelberger (1966: 100).<sup>4</sup>

Lycian (A) displays the greatest number of ways of expressing possession among the Anatolian languages. First of all, for most appellatives it employs an adjective in *-a/ehe/i-* (appearing in Milyan/Lycian B as *-a/ese/i-*) cognate with Luvian *-assa/i-*.<sup>5</sup> Some personal names appear with a zero ending (e.g. *Epñuxa* in TL 127,1), first identified by Neumann (1970: 61), who argues correctly that these examples should not be emended out of existence by adding an *-h*! Personal names and place names do attest a genitive ending *-Vhe* or *-Vh*.<sup>6</sup> Occasional accusative singulars in *-Vhñ* that precede(!) their modified noun are also merely secondarily inflected examples of the genitive ending *-Vh(e)*, as per Hajnal (1995: 197ff.), following Mittelberger (1966: 104) and Adiego (1994: 18), against Melchert (1994: 324 et alibi). Finally, Lycian also has a genitive plural in *-ē* cognate with Old Hittite *-an*.

Lydian apparently attests a handful of cases of the ending *-av* functioning synchronically as a genitive plural (see Gusmani 1964: 130 & 202). For the most part, however, this ending has taken on the function of a dative-locative plural. For possession Lydian otherwise employs an adjective in *-Vl(i)-* (on its inflection, once again with the ‘*i*-mutation’, see Starke 1990: 85).

Possession is regularly marked in Carian by an ending *-ś*, with a palatal or palatalized value. Word order (all possessive forms in *-ś* precede their head noun) argues decisively for interpretation of this ending as that of a true genitive case with Schürr (2001: 117) against Melchert (2002: 310-312): see my concession in Melchert 2010: 178-179. There is a single instance of a secondary *accusativus genitivi* in anim. acc. sg. *pñmnsñ* (cp. Greek gen. sg. Πουνοωνου). Carian also shows an *inflected adjective* in *-s-* that *follows* its head noun: *otonosn* ‘of Athens’ (see Melchert 2010: 179). As per Frei and Marek (1997: 35), we must likewise restore in the same passage *lùsiklas[n]* ‘of Lysikles’ and *lùsikratas[n]* ‘of Lysikrates’. The absence of any trace of palatalization in the sibilant argues that its source is *\*-e/osso-* matching CLuvian *-ašša/i-* and Lycian *-ahe/i-* but without “*i*-mutation”, since even with eventual loss of the following vowel, the Carian

<sup>4</sup> Unfortunately, HLuvian orthography does not permit us to tell whether any examples of genitives spelled *-Ca-sa* and *-Ci-sa* represent yet another ending /-sa/ matching Lycian *-he* (thus BADER 1991: 138ff.), since they may all be interpreted merely as /-as/ and /-is/.

<sup>5</sup> There is also an isolated example of the possessive use of *-i(je)-*, matching HLuvian /-i(ya)-/: TL 100 *ebe xupa me tibeija* “This tomb (is that) of Tibe”. Pace HAJNAL (2000: 180) there is no basis for viewing the function of the adjective here as different from that of the genitive in the same use (e.g. TL 129 *Hlah*): as always, the inscription names the owner of the tomb.

<sup>6</sup> In appellatives this ending appears only in *terihe* “(the one) of three” = “third”. Milyan also shows a cognate ending *-Vse* (e.g. *Kuprllese*), with a few examples of secondarily inflected acc. sg. *-zñ* (*Wizttasppazñ*). I know of no examples of a shorter variant matching Lycian *-Vh*.

result of *\*-assis/n* would surely be *-š-*, not *-s-* (see Melchert 2002: 305-306). To be rejected is the derivation of Carian *-si-* (thus with fixed *-i-*!) in place-names and personal names from an “*i*-mutation” form *\*-e/ossī-* (thus Schürr 2001: 104-107 and Yakubovich 2008: 193). Carian *-si-* is cognate rather with the Lycian suffix *-ze/i-* (see Adiego 1995: 20 after Melchert), though the fixed *-i-* may reflect a further addition of *\*-iyo-* rather than “*i*-mutation”.

Whether any Carian words *ending* in *-s* are functioning as genitives remains uncertain. Some of them certainly have rather a dative function. See the discussion by Melchert (2010: 183-184) with references to the differing views of Schürr 1992: 153-154, 1996: 66, and *apud* Adiego 1998: 19 versus Adiego *ibid.* The southwestern Anatolian languages Pisidian and Sidetic, of very late and limited attestation, mark possession by means of a sibilant ending. For Pisidian *-s*, spelled with Greek sigma, see Brixhe 1988 and for Sidetic *-z* Nollé 2001: 632.

### 3. Genitive and Possessive Adjective in Anatolian—Diachrony

The prehistoric source of the genitive singular ending */-as/* of Hittite, Palaic and HLuvian and of the zero ending of Lycian personal names is straightforward: PIE *\*-os* (for the Lycian thus also Adiego 1998: 13).<sup>7</sup> The attempt of Schürr (2010: 120-121) to explain the Lycian zero ending as a mere variant of the ending *-Vh* is entirely unconvincing. Evidence for the loss of Lycian *-h-* is limited specifically to internal position between like vowels, as shown by all examples he cites (thus already Melchert 1994: 317). His claim of a weakness of word-final *-h* is thus entirely ad hoc and without any independent support, much less the even more ad hoc proposal that inflected *adjectives* like *arñnaha* and *zaxabaha* are “hypercorrect spellings for [-a]”. Since we know that Lycian inherited the ending *\*-os* for thematic stems, there is no justification for not taking the endingless genitives at face value, as examples of the inherited ending. That these might survive only marginally in personal names is entirely to be expected. Likewise, the genitive plural seen in Old Hittite *-an*, Lycian *-ē* and Lydian *-av* (the last mostly shifted to dat.-loc. plural) reflects PIE gen. pl. *\*-ōm*.

As per Adiego (1994: 14ff.), the usually uninflected genitive ending of Lycian in *-Vhe*, which is notably restricted to personal names, is best derived from the PIE thematic genitive ending *\*(e/o)so* (my earlier objections were ill-founded). The recessive pattern of the ending’s use is *prima facie* evidence for an archaism (contra Hajnal 2000: 177). The argument against this derivation by Hajnal (2000: 178, note 48) is entirely circular. Having declared (without argument) that the ending *-Vhe* must be an innovation, he then says that there is

<sup>7</sup> The PIE gen. sg. ending *\*-s* is preserved only in the relic *nekuz* < *\*nek<sup>w</sup>t-s* “of evening” in the set phrase *nekuz mehur* and in the genitive singular of the Hittite verbal noun *-waš* < *\*-wen-s*.

no evidence in Anatolian for the *\*(e/o)so* ending.<sup>8</sup> We may dispense with the complex scenario of Hajnal (2000: 177-178), whereby Lycian took a single inherited ending *\*-os*, which it kept while at the same time creating from it two new endings, for some reason restricting all of them only to personal and place names, at a time when it was adopting the inflected adjective in *\*-e/osso/i-* as its productive marker of possession.

Equally implausible is the attempt of Schürr (2010) to derive all the Lycian genitive endings from *\*-osyo*. He is quite correct in arguing that a sequence *\*-sy-* could appear in Lycian (A) as *-h-* and in Milyan as *-s-*, since we cannot exclude a prehistoric assimilation *\*-sy- > \*-ss-* (see further below). However, in attempting to equate specifically Lycian *-Vhe* with Carian *-ś* (which certainly does reflect *\*-osyo*, as discussed below), he has totally forgotten his own arguments in favor of the Carian ending *-s*, which in at least most cases functions synchronically as a dative, but which cannot represent anything diachronically except the old genitive singular ending *\*-e/oso*, with the same trivial functional shift as seen in Lydian dative-locative plural *-av* (see above). That Lycian and Carian each began to inflect their two respective genitive singular endings is a trivial parallel development which we will see over and over again in Anatolian. Contra Schürr (2010: 122) the Milyan *accusativus genitive wizttaspazñ* is not remotely an argument for a palatal quality of the sibilant in Lycian, since Lycian-Milyan *z* never marks a palatal quality, but either the dental affricate [ts] or (as in this case) voiced [z]. For the voicing of *\*s* before a sonorant compare Milyan *zri-* = Lycian *hri-* ‘above, upper’ < *\*sri-*.<sup>9</sup> As per Melchert (2002: 309), Carian *-s* and Lycian *-Vhe* are both to be derived from *\*-e/oso*. As indicated in note 4 above, we cannot affirm whether HLuvian has endings */-asa/* and */-isa/* also reflecting *\*(e/o)so*.<sup>10</sup>

Adiego (2010) has also finally solved the problem of genitive singular endings in *-Vh* beside *-Vhe*. As he points out, the synchronic distribution of the possessive ending *-Vhe* and *-Vh* is not random: the former is strongly preferred

<sup>8</sup> His further argument that *\*(o)so* is attested elsewhere in Indo-European only as a pronominal ending is, of course, falsified by Germanic languages (e.g. Runic *-as*, ON *-s*, OE *-æs* in *o*-stem nouns). The analogical spread of the ending from the *o*-stems to other stem classes is trivial.

<sup>9</sup> SCHÜRR offers no proof for his claim (2010: 122) that attested *s* before nasal in Milyan reflects historical *\*s* (and not *\*k̄*). His alleged examples (2001: 119) prove nothing: *tasñtu* ‘let them place’ reflects *\*-sñk-*, while the place-name *wes:ñteli* beside Lycian A *wehñtezi* need not reflect anything Indo-European. The form on a coin *wahñtezē* with *a*-vocalism eliminates the interpretation of NEUMANN apud HEUBECK, *Die Sprache* 31 (1985) 49, as from *\*wes-e/ont-* ‘having pastures’.

<sup>10</sup> Likewise it is impossible to determine whether the sibilant endings of Pisidian and Sidetic, which appear to function as genitive endings synchronically, continue the *\*-oso* ending or the */-assa/i-* adjective, reanalyzed due to loss of inflection. MELCHERT (1994: 44) and HAJNAL (2000: 182) assume the latter, but BRIXHE (1988: 52, note 29) and NOLLÉ (2001: 632) prudently entertain both possibilities.

when the head noun is in the locative case (most frequently with *ēnēxñtawata* ‘under the rule (of)’, as also noticed by Schürr 2010: 118<sup>2</sup>), while *-Vh* is much preferred when the head noun is a nominative. Since we must concede that Lycian had begun to secondarily inflect the true genitive ending *\*(e/o)so* in the animate accusative singular (e.g. *lusāñtrahñ* ‘of Lysandros’), we should likewise suppose that speakers had begun to secondarily inflect the ending also for the animate nominative singular: i.e., they replaced the genitive ending in *-Vhe* (which fit well for a locative singular) with endingless *-Vh*, which has the synchronic shape of an animate nominative singular (for the details of the development see Adiego 2010: 6-7).

The clear evidence for limited secondary inflection of reflexes of the *\*(e/o)so* ending in Lycian also supports the account of Bader (1991: 99) of the Palaic inflected adjectives in *-aša/i-*: they merely reflect the same process taken to its conclusion of a fully developed inflection. For reasons to reject the alternate account of Hajnal (2000: 166) see the discussion below on the adjective suffix */-assa/i-*. Whether or not the Palaic development (and those in Lycian and Carian) represents “case attraction” and an areal feature as argued for Luvian by Yakubovich (2008: 196-202), elaborating an idea of Luraghi’s, may be left open (see Yakubovich’s own discussion 2008: 201).

The presence of PIE genitive ending *\*-e/oso* in Anatolian supports the proposal made by several scholars that the HLuvian ending */-asi/* is likewise a reflex of the PIE thematic genitive ending *\*-osyo* (e.g. Szemerényi 1990: 195).<sup>11</sup> As per above, evidence that the *-ś* of the Carian possessive marker has a palatal quality (see Melchert 2002: 310 with refs.) and its order preceding the head noun suggests that it too reflects *\*-osyo* (thus Schürr 2001: 117 and 2010: 122).

Goedegebuure (2010: 59) objects to this derivation on the grounds that the required apocope of the final *\*-o* would be unparalleled in Anatolian, but this is false. While final short vowels are not lost after most consonants, it is clear that the result of *\*-k<sup>w</sup>e* with a preceding labiovelar is *-kku* (in both Palaic and Hittite). Nothing at all thus stands in the way of assuming likewise *\*-osyo# > \*-osi*, and this is in fact the most economical way to explain the Old Hittite gen. sg. *aši* ‘of that one’ (*pace* Goedegebuure).<sup>12</sup> Furthermore, absolutely nothing compels us to

<sup>11</sup> The assumption of a ‘reinforcing’ *-i* to a genitive in *\*-I/s* (BADER 1991: 139 and HAJNAL 2000: 178) is entirely unmotivated. GEORGIEV (1967: 161) also derived the HLuvian ending from *\*-osyo*, but in its older false reading as */-as(s)a/*. See further below.

<sup>12</sup> Although it may seem logical that all forms of the paradigm of far-deictic ‘that’ had the added *-i* of the nominative and accusative, nothing compels this. Attested OH *edi* ‘from there’ may be simply the dative-locative in its well-attested use to mean ‘from’. There is no basis for GOEDEGEBUURE’s listing (2010: 56) of a separate homophonous ablative-instrumental *edi*. And since the Hittites later clearly felt no compulsion to add the *-i* to the newer gen. sg. *ēl* or the new ablative *etez* (in the same paradigm as *aši, uni, i/eni!*), there is no basis for presuming that they felt any when creating the non-direct forms of the prehistoric paradigm.

assume that the respective attested forms even result from apocope. One may equally well assume a regular change of unaccented final non-high vowels to \*[ə] (which preserved *-a* after other consonants may of course easily represent). In the presence of a preceding glide or off-glide, it assimilated: thus  $*-k^w e > *-k^w ə > *-k^w u > -kku$  and perfectly parallel  $*-osyo > *-osyə > *-osyi > -aš(š)i$ . If one accepts (as I do not), the claim of Yakubovich (2008: 210-211) for a CLuvian genitive singular ending *-ašši* with a geminate, then one must in fact follow this alternative.

Goedegebuure's own alternative source for *-ašši* <  $*-ési$ , that is,  $*-és+i$  with the same *-i* as in Hittite *aši, uni* etc. (2010: 59) is doomed by the fact that there never existed a genitive singular ending  $*-és$  in the PIE thematic pronoun (only  $*-e/osyo$  and  $*-e/oso$ ). If we only had to account for a Luvian genitive singular */-assi/*, we could salvage her basic idea by supposing that the *-i* was added to  $*-éso$ , but it is clear that the possessive adjectives in *-(a)šša/i-* to be discussed below must reflect secondarily inflected forms of the genitive singular ending, and the geminate *-šš-* in Hittite *-šša-* (*genušša-*, *šakuwašša-*, etc.) cannot possibly reflect  $*-éso$ , since “Čop's Law” does not operate in Hittite. At least the HLuvian ending */-as(s)i/* and Carian *-ś* surely continue PIE  $*-osyo$ . More on the very complex problem of the possessive adjectives in *-(a)šša/i-* shortly.

We may derive the HLuvian possessive adjectives in */-i(ya)-/* without difficulty from PIE  $*-iyo-$ . For the remarkable HLuvian syntax that combines these adjectives with nominal genitives see Melchert (1990: 202ff.).<sup>13</sup> The Lydian possessive adjective in *-l(i)-* reflects PIE denominative  $*-(o)lo-$  (well attested in Hittite as a derivational suffix).

The prehistory of the suffix */-assa/i-* is far more problematic.<sup>14</sup> Two facts, however, are paramount. First, in the two languages where the orthography may show it (Hittite and CLuvian) this suffix has a consistent geminate */-ss-/*. Second, all attempts to explain the geminate starting from a preform  $*-eh_2so/i-$  and to relate the suffix (even indirectly) to Latin *-ārius* must be once and for all abandoned. The crucial counterarguments have been made by Yakubovich (2008:

<sup>13</sup> The attempt of HAJNAL (2000: 179ff.) to explain this usage in terms of “conjunction reduction” is ingenious, but cannot account for the overall pattern of use in HLuvian, where there is no prohibition against having a possessor and its apposition both appear in the genitive (see the openings of BOHÇA, BULGARMADEN, BOYBEYPINARI 1&2, etc.). Nor does it account for the usage in the long genealogy of MARAŞ 1, where personal names appear in the form of */-assa/i-* adjectives, while their appositions are in the genitive. Nor is the HLuvian usage of */-iya-/* adjectives as attested inherited, as claimed by Hajnal. What is remarkable about the HLuvian construction is not that a possessive adjective may occur conjoined with or in apposition to a nominal genitive, but rather that a genitive may *depend on* a possessive adjective in a “nested” construction, something not shown in the parallels he cites.

<sup>14</sup> For an excellent treatment of the syntax of this suffix in cases where it is used for a series of “nested” genitives see NEUMANN 1982.

194-195). As he indicates (see also Kloekhorst 2008: 216), my claim (Melchert 1994: 77) that *\*-h<sub>2</sub>s-* assimilated in Proto-Anatolian to *-ss-* intervocalically, but remained preconsonantally is phonetically implausible. Furthermore, it is directly contradicted by Hittite *paḥš-* ‘protect’. What I failed to understand in 1994 was that through Middle Hittite *paḥš-* is a transitive medio-passive with a third singular *paḥšari*, *paḥšaru*. The *mi*-conjugation active *paḥzi* is a late secondary creation of Neo-Hittite. Yakubovich also properly dismisses my positive evidence for *a*-vocalism: the alleged primacy of *-ahe/i-* over *-ehe/i-* in Lycian. A survey of all relevant Lycian examples confirms his claim that there are no compelling examples of an adjective in *-ahe/i-* from a noun with a stem other than in *-a-* (that the epithet *pñnutahi* in TL 43,2 is derived from the personal name *Pñnute* is very doubtful).<sup>15</sup>

We must therefore find some other source for the geminate in the possessive adjectives in CLuvian *-ašša/i-* and Hittite *-šša-*. Yakubovich (2008: 196ff.) suggests that this adjectival suffix represents secondary inflection of the inherited endings *\*-os-so* (with restored geminate) and *\*-os-yo*. In particular, he makes a strong case (2008: 198-200 and 208-212) that in HLuvian (*recte* Empire Luvian) the inflection of the ending */-assi/* < *\*-osyo* is still taking place in the historical period, under the influence of Hurrian. His evidence is that the inflection begins in the non-direct cases, spreading only belatedly to the accusative and finally the nominative. He suggests that the adjectival forms in *-ašša-* are derived in a similar fashion from secondary inflection of *\*-os-so*, which he finds still directly attested in CLuvian (*recte* Kizzuwatna Luvian) genitive singular *-ašša*.

The first part of this scenario is undeniably correct, though the evidence that the ending and eventual Empire Luvian adjectival suffix from *\*-osyo* had a geminate */-ss-/* is questionable (see Yakubovich’s own concession, 2008: 210-211). On the other hand, the parallel derivation of */-assa-/* from *\*-os-so* faces insurmountable difficulties. First of all, as Yakubovich concedes, Anatolian surely inherited the PIE rule that simplified underlying sequences of geminate *\*/ss/* to single *\*[s]*: he himself provides the crucial evidence in the form of Palaic present 2nd singular *muši* ‘you are satiated’ < *muš-*, clearly underlyingly */mus-si/* (2008: 195 with note 4). He attempts to circumvent this problem by supposing that the anaphoric/demonstrative stem *\*so-* which he takes to be the second part of *\*-os-so* could be restored by Anatolian speakers based on the continued existence of *\*so-* as a demonstrative (2008: 208). However, Jasanoff (2010) has now shown that the “particle” */-sa/* that came to be obligatory with Luvian neuter nom.-acc. singulars reflects a *possessive* use of *\*so-* in an original “split genitive” construction. There

---

<sup>15</sup> That we find rare hypercorrect forms in the *genitival ending -Vh(e)* such as *Sxxulijah* to *Sxxulije* is irrelevant, since this ending has nothing to do with the possessive adjective suffix, contrary to my earlier supposition.



is thus no basis whatsoever for the existence of demonstrative/anaphoric *\*so-* in Anatolian or for the presumed restoration of the geminate *\*-ss-* in *\*-os-so*.

Yakubovich's account of the possessive adjectives in *-ašša/i-* also encounters an irreconcilable conflict of relative chronology. According to his explanation (2008: 194&196), the secondary inflection of both *\*-os-so* and *\*-os-yo* is an innovation of the "Luvic" subgroup of Anatolian (Luvian, Lycian, and putatively Carian). Since Lycian and Carian are attested only well into the first millennium B.C.E., their apparent full inflection of the two suffixes is entirely compatible with Yakubovich's claim that the inflection is only incipient in Luvian.<sup>16</sup>

However, Hittite *-šša-* (whose form *without* a preceding *-a-* proves that this form of the suffix is native Hittite!) without "*i*-mutation" and Lydian *-si-* (i.e. palatalized [-ḫi-] or [çi]) with "*i*-mutation" show that inflected possessive adjectives in */-assa/i-/* predate Proto-Luvic and in fact are surely Common Anatolian (their absence in Palaic may be due to chance or to a Palaic innovation).<sup>17</sup> We must seek another source for this Common Anatolian possessive adjective suffix with geminate */-ss-/*.

In what follows I pursue a suggestion made to me by Elisabeth Rieken (pers. comm.), that the geminate sibilant in *-ašša/i-* may reflect an assimilation of *\*-VsyV-*.<sup>18</sup> The idea was already suggested by Georgiev (1967: 164 and 1972: 90), but his formulation must be seriously revised, since he necessarily operated with the false older readings of HLuvian, assuming a genitive ending *-a-sa-a* (*/-as(s)a/*) for what we now know is *-a-si-i* (*/-as(s)i/*). As noted in Melchert (1994: 157-158), all analyzable attested sequences of intervocalic stop or fricative plus *y* in Hittite are at transparent morpheme boundaries and thus offer no probative evidence for what happened to prehistoric *\*-VCyV-* sequences.<sup>19</sup> The only such sequence whose result we know for certain is *\*-V-tyo-*, where *\*t* underwent assibilation already in Proto-Anatolian and is preserved in Old Hittite *-zziya-* (e.g. *šarazziya-* 'upper'): see Melchert 1994: 62. The situation is the same for Luvian and Lycian.

<sup>16</sup> One should note that loss of final *\*-s* in Lycian and the failure to indicate the presence of nasalization in animate accusative singular [i] make it impossible to strictly prove full inflection in Lycian. Carian animate accusative singulars like *otonosn* suggest full inflection there.

<sup>17</sup> For *-si-* in Lydian see animate nominative singulars *kulumsis* 'Koloan' and *ibšimsis* 'Ephesian'. Ilya Yakubovich (pers. comm.) suggests that these two forms could be borrowings into Lydian from a form of Carian that had "*i*-mutation". This scenario cannot strictly be excluded, but there is no positive evidence for either of the two hypotheses on which it is based, and "*i*-mutation" is well-established in Lydian.

<sup>18</sup> The idea concerning Anatolian *-(a)šša-* < *\*-osyo-* arose in discussions with Paul Widmer about a similar source for Tocharian AB *-ši/-šše* (for the latter see also BADER 1991: 128-129). I must emphasize that the version of the idea presented here is entirely my own, for which Professor Rieken bears no responsibility.

<sup>19</sup> Thus also Kloekhorst (2008: 216), who independently derives the possessive suffix *-ašša-* from *\*-osyo-* and gives further probative native Hittite examples, but does not address the problem of HLuvian genitive singular */-as(s)i/*.

Therefore there is no counterevidence to an already Proto-Anatolian assimilation of *\*-Vsyo-* to *\*-Vss-*. However, if one is also going to derive the HLuvian and Carian genitive singulars /-as(s)i/ and -ś from *\*-osyo*, then one must account for the differing outcomes. This problem is by no means insurmountable. Based on the evidence of Hittite *-šša-* in *genu-šša-* ‘knee-joint’ (abstracted by resegmentation of examples with thematic bases, thus *\*-osyo-* → *\*-o-syo-*), we may assume that already in Common Anatolian there was secondary inflection of *\*-osyo*, thus anim. nom. sg. *\*-osyos*, anim. acc. sg. *\*-osyom*, neut. nom.-acc. sg. *\*-osyom/d*, and so forth.

The crucial assumption is a relative chronology by which the genitive ending with *\*-osyo#* in word-final position began its special development to *\*-os(s)i* before the assimilation of word-internal *\*-osyo-* to *\*-osso-* in the inflected adjective. The details depend on whether one accepts the claim of Yakubovich already mentioned that CLuvian (Kizzuwatna Luvian) attests a genitive singular ending *-ašši* with a geminate. If one does not, one could suppose simply apocope of final *\*-o* after yod, as discussed above: *\*-osyo#* > *\*-osi* > HLuvian /-asi/. I do not favor this because of Carian genitive singular -ś. As discussed in Melchert (2002: 305-306 and 310), *\*s* was palatalized to a *š* before front vowel, and to *ś* only before yod (still another reason to reject my derivation there of -ś from *\*-assis/n*). I therefore prefer the assimilation scenario sketched above: *\*-osyo#* > *\*-osyø* > *\*-osyi* > *\*-os(s)i*. Note that in the last step, one may assume the same assimilation of intervocalic *\*sy* to *ss* as in interior *\*-osyo-* or suppose that before the homorganic high front vowel the yod was simply deleted. If one chooses the first alternative and a result /-assi/, then the CLuvian genitive ending *-ašša* < *\*-oso*, if it exists, may easily have its geminate by analogy to /-assi/, but see further below.

The fact that Lydian (attested only in the second half of the first millennium) shows descriptive “*i*-mutation” in *-si-* in no way precludes Yakubovich’s scenario by which the secondary inflection of /-as(s)i/ began only within the historical period of HLuvian (Empire Luvian), as a result of contact with Hurrian. As he indicates (2008: 212), his explanation of the process accounts directly for the fact that the distribution of /-assi-/ and /-assa-/ within the paradigm corresponds with “*i*-mutation”.<sup>20</sup> Lydian shares other innovations with the “Luvic” subgroup (see Melchert 2003). Spread of the innovation from Luvian to Lydian as well as Lycian is therefore unproblematic. Likewise, that the innovation did *not* reach Carian (where *-s-* in *-sn* cannot reflect *\*-assin*) is not surprising. Different innovations in the Western Anatolian languages show varied distribution (see again Melchert 2003). The very limited secondary inflection of Carian genitive singular -ś must be independent of the process that led to the /-assa/i-/ adjectives

<sup>20</sup> Note that the undeniable geminate of *inflected* /-assis/, /-assin/ etc. may either be analogical to that of /-assa-/ or show that the result of final *\*-osyo#* was in fact /-assi/ with a geminate.

in Luvian, Lycian, and Lydian. As already noted, such secondary inflection is commonplace and need not in all instances reflect an areal feature originating in Hurrian.

A final point is the status of the alleged genitive singular ending *-ašša* in CLuvian. Yakubovich (2008: 202-208) argues cogently that forms in *-ašša* functioning as possessives but not showing agreement with their head noun cannot be dismissed as errors, as I had done. However, as pointed out to me by Petra Goedegebuure (pers. comm.),<sup>21</sup> Yakubovich's own statement (2008: 200<sup>7</sup>) that the *-ašša* possessive forms frequently depend on oblique case nouns is false. Of the eight instances he cites, *seven* depend on head nouns in the neuter nom.-acc. singular. The one exception, *imrašša* <sup>d</sup>IŠKUR-*u[nt]i* 'to the Storm-god of the open country' may with Yakubovich himself be taken as a false extension of the attested *imrašša* <sup>d</sup>IŠKUR-*an=za* 'of the Storm-god of the open country' (neuter nom.-acc. sg., modifying a missing noun).

This distribution strongly suggests that the CLuvian (Kizzuwatnan Luvian) forms in *-ašša* are not genitive singulars, but rather an older form of the neuter nom.-acc. singular of the inflected adjective, reflecting the thematic pronominal ending *\*-ossod* (with regular loss of final *\*-d* in Luvian).<sup>22</sup> This was only in the process of being replaced with *-an=za*, taken from the neuter thematic nouns. Since we can derive the form *-ašša-* from *\*-osyo-* as described above, the problem of a genitive ending */-assa/* and its derivation from a very dubious preform *\*-os-so* disappears.

In sum, the Anatolian languages apart from Hittite do partly or wholly replace the inherited genitive with a possessive adjective, but the Anatolian languages as a whole preserve not only the PIE athematic singular and plural endings *\*-os* and *\*-ōm*, but also the thematic endings *\*-oso* and *\*-osyo*. As already suggested by Bader (1991), though not always in the precise terms she envisioned, the inflected possessive adjectives of Anatolian containing a sibilant all represent various secondary inflections of the two inherited endings *\*-oso* and *\*-osyo*. This process took place multiple times within the history of the Anatolian languages.

## References

---

<sup>21</sup> Per an email of 15 November, 2010. The status of a genitive ending */-asa/* or */-assa/* and/or a neuter nom.-acc. singular ending */-assa/* of the adjective in HLuvian (Empire Luvian) remains to be determined and cannot be treated here. I should stress that the interpretation given below of CLuvian *-ašša* < *\*-ossod* is mine, not that of Dr. Goedegebuure.

<sup>22</sup> For the spread of the pronominal ending *\*-od* to the possessive adjective (probably starting in the demonstratives *za-* 'this' and *apā-* 'that') one may compare the broader generalization of that ending in Lydian to *all* neuter nom.-acc. singulars (see GUSMANI 1964: 36).

- Adiego 1994 = I.-J. ADIEGO, *Genitiu singular en lici i protoluvi*, in «Anuari di Filologia» 17, pp. 11-23.
- Adiego 1995 = I.-J. ADIEGO, *Contribuciones al desciframiento del Cario*, in «Kadmos» 34, pp. 18-34.
- Adiego 1998 = I.-J. ADIEGO, *La nueva bilingüe greco-caria de Cauno y el desciframiento del cario*, in «Aula Orientalis» 16, pp. 5-26.
- Adiego 2010 = I.-J. ADIEGO, *On Lycian Genitives in -h, -he*, in «Ex Anatolia Lux. Anatolian and Indo-European studies in honor of H. Craig Melchert on the occasion of his sixty-fifth birthday», ed. by R. Kim, N. Oettinger, E. Rieken and M. Weiss (Ann Arbor) pp. 1-8.
- Bader 1991 = F. BADER, *Problématique du genitif thématique sigmatique*, in «Bulletin de la Société Linguistique de Paris» 86/1, pp. 89-157.
- Brixhe 1988 = C. BRIXHE, *La langue des inscriptions épichoriques de Pisidie*, in «A Linguistic Happening in Memory of Ben Schwarz», ed. by Y. Arbeitman (Peeters) pp. 131-155.
- Eichner 1979 = H. EICHNER, *Hethitisch gēnuššuš, ginušši, ginuššin*, in «Hethitisch und Indogermanisch», ed. by E. Neu and W. Meid (Innsbruck) pp.41-61.
- Frei and Marek 1997 = P. FREI and C. MAREK, *Die karisch-griechische Bilingue von Kaunos. Eine zweisprachige Staatsurkunde des 4. Jh.s v. Chr.*, in «Kadmos» 36, pp. 1-89.
- Gamkrelidze and Ivanov 1995 = T. GAMKRELIDZE and V. IVANOV, *Indo-European and the Indo-Europeans* (English version by Johanna Nichols). Trends in Linguistics. Studies and Monographs 80 (Berlin and New York).
- Georgiev 1967 = V. GEORGIEV, *Die Genitivsformen des Hieroglyphen-Hethitischen*, in «Revue hittite et asianique» 25, pp. 157-165.
- Georgiev 1972 = V. GEORGIEV, *Der luwische Genitiv auf -assa*, in «Revue hittite et asianique» 30, pp. 89-90.
- Goedegebuure 2010 = P. GOEDEGEBUURE, *Deictic-Emphatic -i and the Anatolian Demonstratives*, in «Ex Anatolia Lux», ed. by R. Kim, N. Oettinger, E. Rieken and M. Weiss (Ann Arbor) pp. 55-67.
- Gusmani 1964 = R. GUSMANI, *Lydisches Wörterbuch* (Heidelberg).
- Hajnal 1995 = I. HAJNAL, *Der lykische Vokalismus* (Graz).
- Hajnal 2000 = I. HAJNAL, *Der adjektivische Genitivausdruck der luwischen Sprachen (im Lichte neuerer Erkenntnisse)*, in «125 Jahre Indogermanistik Graz», ed. by M. Ofitsch and C. Zinko (Graz) pp. 159-184.
- Jasanoff 2010 = J. JASANOFF, *The Luvian "Case" in -ša/-za*, in «Ex Anatolia Lux», ed. by R. Kim, N. Oettinger, E. Rieken and M. Weiss (Ann Arbor) pp. 167-179.
- Kloekhorst 2008 = A. KLOEKHORST, *Etymological Dictionary of the Hittite Inherited Lexicon* (Leiden).

- Laroche 1965 = E. LAROCHE, *Études de linguistique anatolienne*, in «Revue hittite et asianique» 23, pp. 33-54.
- Melchert 1990 = H. C. MELCHERT, *Adjectives in \*-iyo- in Anatolian*, in «Historische Sprachforschung» 103, pp. 198-207.
- Melchert 1994 = H. C. MELCHERT, *Anatolian Historical Phonology* (Amsterdam and Atlanta).
- Melchert 2000 = H. C. MELCHERT, *Aspects of Cuneiform Luvian Nominal Inflection*, in «The Asia Minor Connexion: Studies on the Pre-Greek Languages in Memory of Charles Carter», ed. by Y. Arbeitman (Leuven) pp. 173-183.
- Melchert 2002 = H. C. MELCHERT, *Sibilants in Carian*, in «Novalis Indogermanica. Festschrift für Günter Neumann zum 80. Geburtstag», ed. by M. Fritz and S. Zeilfelder (Graz) pp. 305-313.
- Melchert 2003 = H. C. MELCHERT, *The Dialectal Position of Lydian and Lycian within Anatolian*, in «Licia e Lidia prima dell'Ellenizzazione», ed. by M. Giorgieri et al. (Roma) pp. 265-272.
- Melchert 2010 = H. C. MELCHERT, *Further Thoughts on Carian Nominal Inflection*, in «Hellenistic Karia. Proceedings of the First International Conference on Hellenistic Karia - Oxford, 29 June - 2 July 2006», ed. by R. van Bremen and J.-M. Carbon (Bordeaux) pp. 177-186.
- Meriggi 1980 = P. MERIGGI, *La declinazione dei nomi propri e dei pronomi in licio*, in «Studi Micenei ed Egeo-Anatolici» 22, pp. 215-274.
- Mittelberger 1966 = H. MITTELBERGER, *Genetiv und Adjektiv in den altanatolischen Sprachen*, in «Kratylos» 11, pp. 99-106.
- Neumann 1970 = G. NEUMANN, *Beiträge zum Lykischen IV*, in «Die Sprache» 16, pp. 54-62.
- Neumann 1982 = G. NEUMANN, *Die Konstruktionen mit Adiectiva genetivalia in den luwischen Sprachen*, in «Investigationes Indogermanicae. Gedenkschrift Heinz Kronasser», ed. by E. Neu (Wiesbaden) pp. 149-161.
- Neumann 2001 = G. NEUMANN, *Der adverbale Genetiv im Althethitischen*, in «Akten des IV. Internationalen Kongresses für Hethitologie Würzburg, 4.-8. Oktober 1999», ed. by G. Wilhelm (Wiesbaden) pp. 446-455.
- Nollé 2001 = J. NOLLÉ, *Side im Altertum: Geschichte und Zeugnisse*. Band II. (Bonn).
- Puhvel 1997 = J. PUHVEL, *Hittite Etymological Dictionary. Words beginning with K* (Berlin and New York).
- Schürr 1992 = D. SCHÜRR, *Zur Bestimmung der Lautwerte des karischen Alphabets 1971-1991*, in «Kadmos» 31, pp. 127-56.
- Schürr 1996 = D. SCHÜRR, *Bastet-Namen in karischen Inschriften Ägyptens*, in «Kadmos» 35, pp. 55-71.

- Schürr 2001 = D. SCHÜRR, *Karische und lykische Sibilanten*, in «Indogermanische Forschungen» 106, pp. 94-121.
- Schürr 2010 = D. SCHÜRR. *Lykische Genitive*, in «Indogermanische Forschungen» 115, pp. 118-126.
- Starke 1990 = F. STARKE, *Untersuchung zur Stammbildung des keilschriftluwischen Nomens*. Studien zu den Boğazköy-Texten, 31 (Wiesbaden).
- Szemerényi 1990 = O. SZEMERÉNYI, *Einführung in die vergleichende Sprachwissenschaft*, 4., durchgesehene Auflage (Darmstadt).
- Yakubovich 2008 = I. YAKUBOVICH, *The Origin of the Luwian Possessive Adjective*, in «Proceedings of the 19th Annual UCLA Indo-European Conference. Los Angeles. November 2–3, 2006», ed. by K. Jones-Bley, M. Huld, A. Della Volpe and M. Robbins Dexter (Washington DC), pp. 193-217.