CHAPITRE 6

ANATOLIAN

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1. INTRODUCTION

The Anatolian branch of Indo-European is attested in written documents from what is now Turkey and Northern Syria dating from approximately the sixteenth century B.C. to the first centuries A.D. To this group belong at least Hittite, Palaic, Luvian, Lycian and Lydian. I will argue below that we should add Carian, Pisidian and Sidetic, but the linguistic affiliation of these poorly attested and understood languages remains controversial, and in any case they can contribute little to our overall understanding of the Anatolian family. Unless stated otherwise, references to pan-Anatolian features in what follows are not meant to include them. It is unlikely that any of the Anatolian languages remained as a spoken language beyond the first centuries A.D., and there are no living representatives of the family.

The relationship of the Anatolian languages to the rest of Indo-European has been a matter of serious debate ever since the identification of Hittite as an Indo-European language by Bedřich Hrozný in 1915. The problem is complicated by the fact that the available evidence for Hittite

has far exceeded that for other members of the group. Hittite has hence been far more thoroughly analyzed and better understood. This imbalance has resulted in the peculiar situation that the debate over the relationship of Anatolian to Indo-European has been framed almost entirely in terms of Hittite, despite the fact that the close relationship of Hittite with the other members of the subfamily has been widely acknowledged for more than a half-century.

Dramatic new discoveries and further analysis have improved our understanding of the « minor » Anatolian languages to the point that some clarification regarding the status of the entire group is now possible. As I will show below, all members share certain highly characterized innovations which can only be explained by assuming a period of prehistoric common development. I call this stage for convenience « Common Anatolian », but I stress that this notion is primarily linguistic (on a par with Common Celtic or Italic), not geographic. I must note explicitly that Phrygian does not belong to this group, although it is an Indo-European language attested in Anatolia (see the separate discussion by Professor Brixhe in this volume). The existence of a common prehistoric source for the Anatolian languages as thus defined is independent of any hypotheses about population movements. The speech community associated with Common Anatolian may or may not have lived on the soil of Anatolia.

The evidence for a common prehistoric development falsifies the idea that the resemblances among some of the Anatolian languages are due merely to convergence or contact. However, it does not settle the issue of whether the rest of the Indo-European languages underwent a period of common prehistoric development apart from the Anatolian group. It is immaterial whether one frames this problem in terms of « Indo-Hittite », « early separation » of the Anatolian group, or « early » *vs.* « late Indo-European » features. The question remains: how can we best explain both the resemblances and differences between the Anatolian languages and the rest of Indo-European ? I can only allude to this issue here. In what follows, I will present Anatolian as a subgroup of Indo-European, on a par with Germanic, Slavic, etc. However, this should not be taken to prejudge the question just posed, which in my view remains open.

2. The Languages

2.1 Hittite

Hittite was the chief administrative language of the Hittite Empire. It is attested in extensive cuneiform documents dating from the sixteenth to the end of the thirteenth century B.C. Advances in scholarship over the past quarter-century now enable us to assign a relative chronology for most manuscripts and compositions, and we may distinguish Old Hittite (1570-1450 B.C.), Middle Hittite (1450-1380 B.C.), and Neo-Hittite (1380-1220 B.C.). This division of the corpus continues to undergo refinement, but the ability to differentiate older from newer manuscripts has already revolutionized study of the language. Nearly every aspect of Hittite grammar must be reevaluated in the light of this new knowledge.

The texts are inscribed on baked clay tablets (except for one splendid bronze example). The vast majority of tablets has been found at the Hittite capital of Hattusha (modern Boğazköy, now Boğazkale), in the middle of the central Anatolian plateau, but there have also been important finds at Maşat Hüyük to the northeast and at Ugarit (Ras Shamra) on the Syrian coast, with scattered discoveries elsewhere. A major trove of Hittite tablets just discovered at Ortaköy (south of Çorum) in north central Anatolia has yet to be fully evaluated.

The extant Hittite texts are quite varied in content, including historical texts such as annals and treaties, a « law code », and a series of instructions on the training of chariot horses. However, the bulk of the material concerns the state religion: cultic administration and ritual and related mythology.

Claims that Hittite has undergone some kind of « creolization » are unfounded, and the effects of « substrate » or « adstrate » languages on its development have also been grossly exaggerated. Hittite is unmistakably an Indo-European language in its grammatical structure and core vocabulary.

2.2. Palaic

Palaic was once the spoken language of the land of Pala, which in all probability lay to the northwest of the Hittite heartland, across the Halys River in classical Paphlagonia. It was certainly extinct by the thirteenth century B.C. and may have already been so by the time of our first texts in the sixteenth. We have only a few fragments of Palaic, preserved for cultic

purposes by the Hittites in their cuneiform archives in Hattusha. The very scanty evidence limits our knowledge of the language, but it is clear that it is an Indo-European language closely related to Hittite and Luvian, in some respects more conservative than either.

2.3. Luvian

We have evidence for two forms of Luvian. The Hittite archives at Hattusha contain a number of texts in «Cuneiform Luvian», with manuscripts dating from the Old to Neo-Hittite periods. While the number of manuscripts is reasonably large, recent research has shown that, aside from a few fragments, the extant material represents variations on only a handful of distinct compositions. As a result, the Cuneiform Luvian vocabulary known to us is severely limited, and evidence is lacking for some important grammatical categories. A number of Luvian words are also found scattered throughout the Hittite texts, both as genuine loanwords adapted to Hittite grammar and as unassimilated Luvian forms.

Given the close genetic relationship between the two languages, it is sometimes difficult to determine whether a given example in a Hittite context is an inherited Hittite word related to one in Luvian, or a borrowing from Luvian.

«Hieroglyphic Luvian» is attested in documents written in the so-called «Hittite hieroglyphs», a writing system apparently developed in Anatolia. The first extended texts in this system, monumental stone inscriptions dating from the thirteenth century, are very hard to interpret, because of the use of non-standard sign shapes and frequent «logographic» spellings which do not indicate the pronunciation. Most of our Hieroglyphic Luvian texts date from the tenth to seventh centuries B.C., after the fall of the Hittite Empire, and are thus much later than those for Cuneiform Luvian.

Aside from a few letters and economic documents written on soft lead strips (and personal seals with only names and titles), the Hieroglyphic Luvian texts are inscriptions on stone. Most are dedicatory in some sense, but many contain lengthy historical sections, and the Hieroglyphic Luvian corpus is more varied in content that that of any Anatolian language except Hittite.

The stone inscriptions are concentrated in southern Anatolia (classical Cilicia and Commagene) and northern Syria, but they are also found in central Anatolia (including Hattusha!) and as far west as modern Izmir. Luvian was certainly a major spoken language in large areas of southern and southwestern Anatolia during the Hittite Empire and afterwards. It

is likely that some form of Luvian was also once spoken across much of western Anatolia, and it is even possible, although unproven, that the language of the Trojans was Luvian (Watkins, 1986). To what extent and at what times Luvian was spoken in Hattusha and surrounding areas remains undetermined.

Major revisions in the reading of the hieroglyphic signs by Hawkins-Morpurgo Davies-Neumann (1974) have shown that Hieroglyphic and Cuneiform Luvian are very closely related forms of the same language. The older and highly restricted attestation of the latter makes it difficult to be more precise about their relationship. I follow others in treating them provisionally as parallel and independent dialects.

2.4. Lycian

We have somewhat less than 200 inscriptions on stone plus a number on coins in the native language of the kingdom of Lycia in southwestern Anatolia. These are written in an alphabet closely related to that of Greek. While a few coins may be older, the texts on stone all date from the fifth and fourth centuries B.C. Nearly all the texts are tomb inscriptions with fairly stereotyped contents. One notable exception is the «Inscribed Pillar of Xanthos», a dedicatory text with long historical portions, unfortunately still largely unintelligible due to problems of vocabulary. The «Létôon Trilingual», another dedicatory text in Lycian-Greek-Aramaic discovered in 1974, has dramatically improved our knowledge of Lycian.

Two extant texts from Lycia are written in a different dialect called Milyan or «Lycian B» (*vs.* «Lycian A», *i.e.* ordinary Lycian). While Milyan seems more conservative in a few respects, there is no justification for viewing it as an archaic form of ordinary Lycian. We should rather treat Lycian and Milyan as parallel independent dialects like the two forms of Luvian.

Lycian shares a number of innovative features with Luvian, leading some scholars to speak prematurely of a «Luvo-Lycian» subbranch of Anatolian. However, some of the relevant features are also shared with Lydian, while Luvian agrees with Hittite and Palaic in other respects. It thus seems more prudent at this point to view the Anatolian languages as a continuum of dialects.

2.5. Lydian

The language of the western Anatolian kingdom of Lydia is attested in over a hundred inscriptions, but only a few dozen of these are of significant length and reasonably complete. While some coins may date from as early as the eighth century B.C., the texts on stone are from the fifth and fourth centuries and thus roughly contemporary with our Lycian material. Likewise, the Lydian texts are written in an alphabet similar to that of Greek.

Most of the texts are dedicatory in some sense, and indeed mainly funerary. A few seem to be decrees of some sort. Remarkably, some are in verse, with a fairly regulated meter based on word accent and vowel assonance in the final words of each line (Eichner, 1986, with refs.).

A short Lydian-Aramaic bilingual permitted the first entry into the language, but we still lack a Lydian-Greek bilingual of any length. As a result, while we can parse most sentences with some assurance (except for some in the verse texts), our grasp of the meaning remains vague. This lack of precision in terms of the lexicon makes etymologizing particularly parlous, and we do not understand Lydian as well as any of the other languages cited above.

This is particularly unfortunate, because Lydian superficially appears much different from the other Anatolian languages. We cannot yet determine whether this is due to its having preserved archaisms lost elsewhere or to a series of unique prehistoric developments. In any case, Lydian clearly did share in certain crucial Common Anatolian innovations. Thus the notion that the appearance of Lydian in western Asia Minor might be due to a separate development from that of the other Anatolian languages is mistaken.

2.6. Carian, Pisidian and Sidetic

There are three more languages of southwestern Anatolia which we should probably add to the Anatolian group of Indo-European.

The language of Caria in the extreme southwest is attested in a few texts from Caria itself, probably dating from the fourth and third centuries B.C., but most evidence for the language comes from tomb inscriptions and graffiti of Carian immigrants in Egypt (seventh to fourth centuries B.C.). Decipherment of the Carian script has proven difficult and controversial. Ray (1981) has used Egyptian renderings of Carian names to establish

an objective basis for reading some signs, but his work has not yet won universal acceptance, and much work remains to be done in any case.

Evidence for Pisidian is extremely sparse: thirty-odd tomb inscriptions in alphabetic script from Northern Pisidia containing only names and patronymics. Precise dating is difficult, but second to third century A.D. seems most likely.

Sidetic, the language of Side, a city on the coast of Pamphylia, thus far appears in only a half-dozen inscriptions, all but one clearly dedicatory, dating from the third century B.C., and a few older monograms on coins, again written in an alphabet related to Greek.

My assignment of these problematic languages to the Anatolian family of Indo-European is based on a single highly characteristic construction: the same use of a «relational» adjective to mark possession which is also attested in Luvian, Lycian and Lydian (*i.e.* «paternal house» for «father's/fathers' house»). The Anatolian languages employ two suffixes in this function. The more common of these has the shape **-asso/ī-* (< PIE **-eh$_2$so/ih$_2$-*, as per Bader, 1985: 85, note 99, and others). For example, in Hieroglyphic Luvian /Halparuntiyas Laramassis nimuwitsas/ «Halparuntiya, son of Larama», the suffix appears in the animate nominative singular, modifying /nimuwitsas/ «son», which is in apposition to /Halparuntiyas/.

In Lycian original **s* becomes *h* between vowels and is lost at the end of a word. The above pattern thus is realized as: *Xudali Zuhriyah tideimi* «Xudali, son of Zuhri» (*-ah* < **-assos*). We similarly find in Pisidian *Musita Tas* «Musita, (son) of Ta». As in Lycian, both noun and adjective have lost the original final *-s* of the nominative singular, and the final unaccented vowel of the adjective has also been deleted, but the new final *-s* of *Tas* faithfully continues the original double *-ss-* of the adjectival suffix, like the *-h* in Lycian.

The same pattern recurs in Sidetic (*poloniw pordors* «Apollonius, (son) of Apollodoros») and Carian (*uksmu dkorś* «Uksmu, (son) of Dkor»), where the symbol *ś* indicates that the result of **-ss-* is somehow different in Carian from ordinary single *s*.

Lydian uses a suffix in *-l-* for the relational adjective: *eś wānaś manelis alulis* «This tomb (is) of Mane, (son) of Alu» (confusingly, *ś* indicates an ordinary dental sibilant in Lydian, and *s* a palatal caused here by the preceding *i*). Carian also has examples of this suffix beside the *-ś* from **-asso/ī-*.

3. Linguistic features of the Anatolian Languages

3.1. Phonology

The three contrasting stop series of PIE are reduced to two in Common Anatolian (CA) by the merger of the «voiced aspirates» with the voiced stops: Hitt. *anda* «into» < **endo*, *andurz(a)* «inside» < **en-dhwr̥+* *«indoors». The «functional load» of the remaining voiced/voiceless contrast is further reduced in CA by a series of conditioned changes. Voiced stops are generalized word-finally (cf. Old Latin): Hitt. pret. 3rd sg. *pait=as* [paydas] «went he» < **-t*, Lyd. *qid* «what», etc. Voiceless stops become voiced after accented long vowels (Eichner, 1973: 79f) and between unaccented vowels (Morpurgo Davies, 1982/3: 245-270, Eichner, 1986: 12-13, & Melchert, 1992a): Lyc. *tadi* «puts» < CA **dā́di* < PIE **dhéh$_1$ti* (cf. Grk. *títhēmi*); Lyc. *tubidi* «strikes» < CA **towbéyedi* < (virtual) PIE **(s)towbhéyeti* (cf. Grk. *stuphelízō*).

By the historical period all the attested languages have also generalized voiceless stops in word-initial position: Lyc. *tadi* «puts» (see above), Hitt. reduplicated *ti-tti-* «install» (also made from **dheh$_1$-* after the devoicing; on the geminate *-tt-* see below). In Lycian and Lydian voiceless stops merge with voiced stops after nasals: Lyc. *ñte* «into» < **endo* and pres. 3rd pl. *-ṼNti* < **-Vnti*, both pronounced [nd], likewise Lyd. *ẽt-* «into». In Lycian voiced stops become fricatives in all other environments. Lydian also shows a strong tendency towards spirantization under complex and not yet fully understood conditions. On the other hand, in Hittite, Palaic and Luvian voiceless stops appear as geminates in intervocalic position (Hitt. *āppa* «back (wards)» < **ópV*; cf. Grk. *opíssō*), and it is likely that the voiceless/voiced opposition has been reanalyzed in the few environments where it remains as one of fortis/lenis.

The Anatolian languages are neither «centum» nor «satem», since Luvian and Lycian show that CA preserved the PIE three-way contrast of palatal, velar and labiovelar stops (Melchert, 1987 and 1989): PIE **k̂* > Luv. *z*/Lyc. *s* (CLuv. *zi-* = Lyc. *si-* «lie» < **k̂ei-*); **k* > Luv. *k* /Lyc. *k* (CLuv. *kīsāi-* «comb» < **kes-*, Lyc. *tuk(edri)-* «statue» < **twek-* *«body»); **k^w* > Luv. *kw*/Lyc. *t* before front vowel (Luv. *kwi-*/Lyc. *ti-* < **k^{w}i-* «who/what»). Palaic and Hittite apparently do merge the palatals with the velars. The Lydian evidence is too sparse for a determination.

Of the famous PIE laryngeals, **h$_1$* is nowhere directly preserved in Anatolian, despite some claims to the contrary. In CA **h$_2$* undergoes weakening under roughly the same conditions as the voiceless stops and appears in Hittite, Palaic and Luvian in a stronger from *-hh-* and a weaker

-h-, matched in Lycian by *x* and *g*. The sound is totally lost in Lydian. PIE **h$_3$* is surely lost everywhere except in word-initial position, where I share the view that it is preserved as *h-* in Hittite, Palaic and Luvian – others assume that is lost here too.

The PIE sibilant **s* is generally stable in Anatolian but for Lycian (A), where it is weakened to *h* except as the first member of a cluster. Cases of geminate *-ss-* resulting from assimilated clusters are common.

The PIE sonorants **m*, **n*, **l*, and **r* are for the most part maintained, again with geminates formed by various assimilations. The secondary vowel which develops from their syllabic forms is usually *a*, but in a few cases probably *u*. The glide **w* is almost universally preserved, but loss of **y* is widespread, especially between vowels.

The CA vowel system is virtually that of PIE, with the exception that the diphthong **ey* may be monophthongized to a close long **ē̬*.

However, the attested languages radically modify the CA system in complex ways which can only be alluded to here. All the languages merge **o* with *a* except Lycian, where **o* falls together with *e* (Melchert, 1992b). This leaves Hittite, Palaic and Lycian with basically four-vowel systems (*a, e, i, u*) – Luvian further reduces this to three by merging **e* with *i*. Lydian recreates a five-vowel system by adding a secondary *o* whose origins are generally unclear.

Lycian definitely and Lydian probably abandons any contrast between short and long vowels, but Hittite, Palaic and Luvian show massive lengthening of accented short vowels, a change whose details remain the subject of debate (Kimball 1983, Eichner, 1986: 13, Melchert, 1992c).

3.2. Nominal Morphology

The inflection of nouns and adjectives in Anatolian holds relatively few surprises from the Indo-European point of view. There are only two numbers, singular and plural – alleged traces of a dual in Hittite and Luvian are quite dubious. Old Hittite does distinguish productively an individual and collective plural: *e.g. lahhurnuzziyes* «branches» *vs. lahhurnuzzi* «foliage» to *lahhurnuzzi-* «leafy branch». Luvian and Lycian also show traces of this distinction, comparable to Latin *locī* and *loca* to *locus* «place».

It is now certain that Common Anatolian inherited three genders from PIE: masculine, feminine and neuter. The strongest evidence for the feminine is provided by Lycian animate nouns with *a*-vocalism such as *lada-* «wife» (Melchert, 1992b) and by the phenomenon of «*i*-motion» in at least Luvian, Lycian and Lydian (Oettinger, 1987, after Starke). However,

in the attested languages the feminine and masculine have merged into an animate class opposed to the inanimate (neuter).

There is evidence for nine cases in CA: vocative, nominative, accusative, genitive, dative, locative, allative, ablative-instrumental and ergative. The first six clearly continue PIE categories both functionally and formally. As expected, the vocative differs from the nominative only in the singular, and the neuter gender has a single form for the nominative-accusative in both singular and plural. The dative-locative has a single form in the plural, and the distinction of these two cases in the singular in CA is far from assured.

The vocative singular usually consists of the bare nominal stem. The Old Hittite vocative ending *-i* may or may not continue PIE **-e* of the *o*-stems displaced to other stem classes. PIE masculine/feminine nom. sg. **-s* is attested throughout Anatolian. There is a strong tendency to generalize the *-s* to paradigms where it was lacking in PIE (Hitt. *hāras* «eagle» *vs.* Lat. *homō* «man», Hitt. *hāssas* «hearth» *vs.* Lat. *arā*), but the extent to which this had been accomplished in CA cannot be determined. Masculine/feminine acc. sg. **-m* is reflected in nasal or nasalized endings across Anatolian. Likewise the nt. nom.-acc. sg. **-om* of *o*-stems versus the expected zero ending in this category in other stem classes. Genitive singular **-os* appears in Hittite, Palaic and Luvian *-as*, and Hittite has a few examples of *-s* < **-s* (*nekuz* [nek^{w}ts] «of evening»). Noteworthy is the archaic gen. sg. *-as* < **-os* in *o-* stems, attested in the same three languages. Hitt. dat.-loc. sg. *-i* probably continues PIE locative **-i*, while CLuvian dat.-loc. sg. *-ī* with a long vowel even when unaccented shows rather PIE dative **-ey*, but this is by no means certain. The matching *-i* ending of Palaic and Lycian could reflect either **-i* or **-ey*.

PIE masculine/feminine nom. pl. **-es* is maintained in Palaic *-es*, which also shows *-as* from the PIE *o*-stem ending **-ōs*. Hittite has *-ēs* with a long vowel in all classes, probably generalized from a contracted form of the *i*-stem ending **-eyes*. The Western languages Luvian, Lycian and Lydian have built a new animate nominative plural ending by adding an *-i* of uncertain origin to the old animate accusative plural. The latter, from PIE **-ns* (or better **-ms*) is most clearly preserved in Luvian *-nz(a)* and Milyan *-$\tilde{V}$z* ([-nts] with epenthetic *-t-*). The PIE neuter (collective) nom.-acc. plural **-eh$_2$* of the *o*-stems appears across Anatolian as *-a*, generalized to all stem classes. Old Hittite *āssū* «goods» is a precious archaism showing long final *-ū* < **-uh$_2$* with original ending **-h$_2$*. PIE gen. pl. **-ŏm* is preserved in Old Hitt. *-an*, Lyc. *-ẽ*, and Lydian *-aν* (in the last instance shifted functionally to a dative). Hittite and Palaic *-as* and Lycian *-e* continue a CA dative-locative plural in **-os*, comparable to Lat. *-bus*, OLith. *-mus*, etc. without the labial element. Luvian has a new ending *-anz(a)*, again after the animate accusative plural.

The remaining three cases cited above reflect CA innovations built on inherited PIE material. Old Hittite has an allative singular in *-a* indicating place to which (*aruna* «to the sea» *vs.* locative *aruni* «in/to the sea»). This ending, also attested in Palaic loc. sg. *-a*, continues PIE **-ō* (cf. Lat. *quō* «whither»). A CA ending **-(o)ti* (secondarily **-odi* in unaccented position) appears in Luvian *-ati*, Lycian *-e/adi*, and Hittite *-az/-z(a)* ([-ats/-ts]), the last with assibiliation of **t* before **i* and then apocope of the vowel. Indifferent to number, this case functions as both ablative and instrumental in Luvian and Lycian. In Old Hittite it has been restricted to ablatival function by the appearance of a new instrumental ending *-(i)t*. In later Hittite *-(a)z* ousts *-it* and regains both functions (for this sequence of events see Garrett, 1990: 278). CA abl.-inst. **-(o)ti* has comparanda in Tocharian (Jasanoff, 1987: 109f) and Armenian (Schindler apud Melchert, 1977: 443). A major innovation of CA is the requirement that grammatically neuter nouns functioning as agents must be inflected in a special «ergative» case. For development of the ergative ending **-anti* from the ablative-instrumental of *r/n*-stems see again Garrett, 1990.

Hittite preserves some examples of «apophony» and accent alternation in nominal paradigms: *e.g.* nom.-acc. sg. *tēkan* [tḗgan] «earth» *vs.* oblique *takn-* [tagn^{ə}]; anim. nom. sg. *āssu-s* «good» *vs.* gen. sg. *āssaw-as* (cf. Skt. *vasú-s vs. vasó-s*). However, such alternations are mostly leveled out in nominal inflection in Anatolian as elsewhere.

Even a summary of nominal derivation in Anatolian is impossible here. For a useful overview see Oettinger, 1986.

3.3. Pronouns

Personal pronouns are predictably irregular in both stem formation and inflection. For the most part the stems are recognizably Indo-European (*e.g.* Hitt. *wēs* «we» *vs. anzās* «us» like Goth. *weis vs. uns*), but some of the inflectional endings have yet to be satisfactorily explained. Note in particular the equation of Hitt. *ammug* «me»), HLuv. *(a)mu*, Lyc. *a/ẽmu* and Lyd. *amu* «I/me» (cf. also Pal. enclitic *-mu* «me»). The initial **em-* of the CA form **emu* is familiar, but the *u*-vocalism of the second syllable (probably borrowed from the second singular accusative form **tu* «thee») is a significant common innovation of the Anatolian languages.

The PIE stem **k^{w}i-*, functioning as both interrogative and relative, is pan-Anatolian: Hitt.-Pal.-Luv. *kwi-*, Lyc. *ti-*, Lyd. *qi-*. The demonstrative stem **k̂o/i-* «this» of Hitt. and Pal. *kā/i-* and Luv. *zā/i-* is inherited: cf. Lat. *ci-trā* «on this side», etc. On the other hand, Hitt.-Pal.-Luv. *apā-* «that» (also Lyc. *ebe-* and Lyd. *bi-*, with a secondary meaning «this»)

represents another defining innovation of CA (a virtual PIE **obhó/í-*). Lydian *aλa-* «other» < PIE **alyo-* is a notable archaism absent elsewhere in Anatolian. The nominative and accusative endings of these pronouns are clearly inherited, but the oblique endings are problematic. The scarcity of evidence outside Hittite makes reconstruction of the CA state of affairs impossible at present.

3.4. Verbal Morphology

It is in the area of verbal morphology where the debate about the relative position of Anatolian referred to in the introduction has raged most fiercely. While many features of verb formation cited below are reassuringly familiar, there are serious and surprising discrepancies between the Anatolian verb and that traditionally reconstructed for PIE. Solutions to this problem are very divergent and mostly irreconcilable. The following summary is as objective and non-committal as possible, but it unavoidably represents a particular point of view, and readers should not assume that it even remotely reflects a consensus.

The Anatolian verb does have the expected three persons. As in the noun, there are only two numbers, singular and plural, but the plural endings we have formally resemble dual endings elsewhere: Hitt. pres. lst pl. *-weni* = CLuv. *-unni*; Hitt. pret. lst pl. *-wen* prob. = Lyd. *-wv* (cf. Skt. lst dual *-va(s)*, etc.).

All languages but Lydian show clear evidence for a middle voice beside the active. Judging from the ample Hittite evidence, we may conclude that the middle marks the familiar functions of passive, reciprocity and actions internal to the subject. Many verbs such as «sit» or «lie» are inflected only in the middle, and Hittite has examples of «deponents» which are middle in form, but active in meaning. The formal marker of the present middle (at least in the third person) is a suffix **-r*, a feature Anatolian shares with Italic, Celtic and Tocharian: see Yoshida (1990) for details. Other forms of the middle employ a suffix **-ti*, which is the CA reflexive particle of unknown orogin. Lycian unexpectedly has middle forms with a nasal suffix (*e.g. sijẽni* «lies»), whose source is also problematic (Melchert, 1992a).

The tense-aspect system is surprisingly simple. There is a present tense which also serves for the future, and a preterite. The two tenses are formed from the same stem, being distinguished only by the endings. Present active endings are characterized by the familiar marker *-i*, but the spread of this marker to the middle was incomplete in CA (*e.g.* OH *kitta* «lies» < CA **k̂eíto* < **k̂eítor*). There are no assured traces of the «augment» prefix **é-* of the PIE imperfect and aorist, nor of the reduplication of the PIE perfect.

There is also no direct evidence for the PIE aspectual distinction of imperfective, perfective and stative marked by the so-called present, aorist and perfect stems (but see further below). The status of aspect in Anatolian remains a topic for research, but it is clear that the suffix **-sk̂e/o-*, usually referred to as «iterative» in Anatolian, is used more generally to indicate imperfectivity.

The are only two moods, indicative and imperative. The second singular imperative usually consists of the bare verbal stem, but there are also traces of the PIE particle**-dhi* (Hitt. *īt* «go!» = Grk. *íthi*). The imperative second plural expectedly is identical to the preterite indicative, since the latter has no «augment». There are also third person forms marked with a final *-u* replacing indicative *-i*, comparable to those in Sanskrit (Hitt. *ēstu* = Skt. *ástu* «let it be»).

As to non-finite forms, there is a single participle, generally with a past passive value for transitive verbs, and that of an attained state for intransitives. In Luvian and Lycian the productive form has a suffix **-ómmo-* < **-ómno-*, but there are also lexicalized examples with a suffix **-ónt-*, which is the only form in Hittite. The position of Palaic is unclear, while Lydian goes it own way with a suffix in *-l*. Palaic and Luvian have an infinitive in *-una* < **-unō* (allative of a verbal noun in **-wr̥/-wen*), and Hittite *-wanzi* is some form of the same paradigm. Lycian *-Ṽne* and Hittite *-ānna* similarly continue **-ātnō* (allative of a verbal noun in **-ātr̥/-ātn-*). Once again, Lydian is unique in having a form in *- l*.

Hittite has a famous set of periphrastic forms with the verbs «have» and «be» plus the past participle. Their value appears to be that of an attained state, not that of a perfect as in the modern Western European languages.

Anatolian has representatives of most of the well-established verbal classes of PIE. I cite Hittite evidence for convenience, but most of these types are also attested somewhere else in Anatolian: root presents (*ēszi, asanzi* «be»); «Narten» presents (*wēkzi/wekanzi* «demand»); *nu*-suffix (*tepnu-* «belittle»); nasal-infix (*harni(n)k-* «destroy»); transitive-iteratives with *o*-grade root and suffix **-eye-* (*wasse/a-* «clothe»); deverbatives in **-ye/o-* (*karpiye-* «lift»); denominatives in **-eh₂-* (*nēwahh-* «make new») and extended **-eh₂-ye/o-* (*parsnāi-* «squat»); denominatives in **-ye/o-* (*tūriye-* «hitch»); statives in **-eh₁-* (*marse-* «be false») and «inchoatives» in **-eh₁-s-* (*marsess-* «become false»). On the other hand, there are no solid examples of simple thematic stems of the well-known type of **bhére/o-* «carry» (Grk. *phérei*, Stk. *bhárati*). Attempted explanations of this startling fact vary widely, with likewise very different implications for the PIE verb.

We come finally to the greatest conundrum of the Anatolian verb. All the stem types cited above are inflected with endings which are easily derivable from PIE: in Hittite for example the present endings are *-mi*, *-si*, *-zi*, *-weni*, *-teni*, *-anzi* (with regular **-ti* > *-zi* in the third persons). The preterite endings correspond: Hitt. *-un* and Lyd. *-ν* < **-m/-om*, Hitt. *-s*, *-t*, *-wen*, *-ten* and Pal. *-ant(a)* < **-e/ont*. However, beside this «mi-conjugation», Hittite also shows a «*hi*- conjugation», whose present singular endings are *-hhi* (OH *-hhe*), *-ti*, and *-i* (OH *-e*). Ample evidence from HLuvian confirms that this type is CA (Morpurgo Davies, 1979), and there are virtually certain remnants in CLuvian, Palaic, and Lycian.

I follow Jasanoff (1979) in assuming that the principal source of this type is a distinct class of PIE presents with **o/e* vocalism attested only in limited and altered form elsewhere in IE (*e.g.* Hitt. *malla-* = Lat. *molō* «grind»). For very different views see the articles by Cowgill and Kurylowicz in the same anthology, among many others.

The preterite endings of this class in CA are reflected by Pal.- CLuv. *-hha/-ha* = Lyc. *-xa/-ga* for the lst singular, and Hitt. *-ta* and *-s* for the 2nd and 3rd singular respectively. It also seems certain that the generalized Hittite preterite third plural ending *-er* has its origin in this class. One could thus derive this preterite from a conflation of the PIE perfect and sigmatic aorist (an event paralleled elsewhere), but it is by no means clear that this is the proper explanation.

3.5. Syntax

A systematic survey being impossible, I cite only two important innovations of Anatolian. For the development of «split ergativity» already mentioned and the related creation of enclitic subject pronouns with intransitive verbs see Garrett, 1990. The Anatolian languages are also justly famous for complex sequences of enclitic pronouns and «particles» attached to the first word in a sentence: *e.g.* Hitt. DUMU-*ŠU=ma=wa=ssi=za=kan...* or Lyd. *fa=k=mλ=it=in...* . However, differences in both the form and ordering of these elements in the various languages suggest that the attested complexity represents a parallel but independent elaboration of a system which was only embryonic in CA.

3.6. Lexicon

It has often been claimed that Hittite, despite a clearly Indo-European grammatical structure, has largely replaced its inherited vocabulary. This false claim is based on the skewed picture of the Hittite lexicon given us by our very limited evidence. Most of our material deals with the state religion. Since the latter is mostly non-Indo-European, it is hardly surprising that much of the attendant vocabulary is as well. An informal survey using the 100-word list of Swadesh shows that at least 75% of Hittite core vocabulary is inherited or built on inherited material (admitting only the most secure IE etymologies): cf. the similar conclusions of Tischler, 1979: 266f. Our knowledge of the core vocabulary of the other Anatolian languages is too limited to draw firm conclusions, but I know of nothing to suggest that the results would be radically different for them.

4. Conclusion

Although the Anatolian family is among the oldest in Indo-European in terms of the dates of its attestation, it is among the latest to be properly investigated. Difficulties in interpreting the limited evidence of the languages other than Hittite have until recently further impeded the process of integrating Anatolian into the overall picture of Indo-European dialects. The last quarter-century has seen dramatic progress in our understanding of Hittite and the rest of the Anatolian languages, and there is good reason to hope that further new discoveries will allow this progress to continue in the future.

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