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## Chapter 3 Anatolian

Heiner Eichner

### 3.0. Introduction

The syllabic transcription of Hittite cuneiform signs follows J. Friedrich (1960), *Hethitisches Keilschriftlesebuch II* (with *u* replaced by *w* and *i* by *y*) or W. von Soden — W. Röllig (1967), *Das akkadische Syllabar*; for the reading of the ideograms, H. G. Güterbock (1973) "Einige seltene oder schwierige Ideogramme in der Keilschrift von Boğazköy", *Ottens Fs.* pp. 71—86, has also been taken into account. Sumerograms are given in capitals, akkadograms in italic capitals. Sumerian sequences of signs are joined by full stops on the line (e.g. GIŠ.KÍN), Akkadian and Hittite ones by hyphens. Determinatives, rendered by raised small capital or lower-case letters, are not to be read phonetically. Thus we have <sup>URU</sup> with the names of towns, <sup>LÚ</sup> with male names of occupations, <sup>SAL</sup> with female ones, and female personal names, <sup>m</sup> with male personal names, <sup>d</sup> with god-names. Determinatives usually stand before the words they refer to, but the signs <sup>MEŠ</sup> and <sup>HIA</sup>, which serve as plural determinatives, are placed after them (e.g. ŠAH.TUR<sup>HIA</sup>). In the rendering of Hittite words and word-stems in non-syllabic transcription I largely follow Friedrich (1952), abbreviated as *HW*, without considering satisfactory the procedure made use of there. Restored portions of text are given in square brackets [ ]; signs which are partially damaged are placed in parentheses; severe damage is indicated by a subscript dot. Signs inadvertently missed by the scribe are given in pointed brackets < >, superfluous signs in curly brackets { }. The translation of restored passages is also given in square brackets; e.g., [no single thi]ng (3.1.1.4.2.) means that the first half of the logogram translated by 'thing' and the word standing in front of it are restored. Non-literal translations departing markedly from the original text are printed in italics. An unknown or unidentifiable sign is represented by the symbol "x". Signs (and tablet-columns) that cannot be identified with certainty are indicated by one, respectively, two, su-

perscript question marks. Attention is called to the corrected reading of obvious miswritings by an superscript exclamation mark.

The quotations from cuneiform texts are taken from the editions which have so far appeared (including *Keilschrifturkunden aus Boghazköi* (KUB) XLIV and *Keilschrifttexte aus Boghazköi* (KBo) XXII), also from the card-index of unpublished tablets of Professor Otten (Marburg). A fully identified quotation contains, in this order, indicators of the edition-series (sigla: KUB<sup>1</sup> and KBo); the numbering of the volume (roman numbers); the numbering of the tablet (arabic numbers) within the volume; the column-reference if it can be given (roman numbers, or, in the case of one-column tablets o. = obverse, r. = reverse); and the line-number (arabic); in the case of a lost beginning of a tablet with following apostrophe. For instance, "KBo III 4 II 27" means *Keilschrifttexte aus Boghazköi*, vol. 3, tablet 4, column 2, line 27. "XIX 7 line 8" means *Keilschrifturkunden aus Boghazköi*, vol. 19, tablet 7, line 8 (no column-indication). Where there is no risk of confusion, a reduced indication may appear; thus "XXIV 8 I 16', II 3'" means *Keilschrifturkunden aus Boghazköi*, vol. 24, tablet 8, column 1, line 16', and the same, vol. 24, tablet 8, column 2, line 3'. The plus sign between two references (as KBo I 44 + KBo XIII) indicates that two fragments of tablets which have been published separately actually join. Frequently only one fragment is mentioned (e.g., XXXII 14 +), especially in the case of complicated joins. Unpublished tablets are cited with sigla such as VAT [*Vorderasiatische Texte*], Bo [unpublished texts from Boğazköy], .../n, and inventory numbers; thus Bo 620, VAT 13 016, 1103/u, 277/p. From these the specialist is informed as to the origin and place of keeping (Berlin, Istanbul) of the tablets; thus the reference "277/p II? 3" contains, in sequence, the inventory-number 277/p — it tells us that the tablet was found in one of the campaigns of excavation conducted by K. Bittel in Boğazköy in 1957 —, the supposed (but uncertain) column-number (II), and the line-number (3). If, instead of the edition or inventory number, a special text designation is given, e.g. "Maštigga", "Targašnalli", or, abbreviated as ("BdU" [*Beschwörung der Unterirdischen*]), this gives an indication of the appropriate discussion in the specialist literature; here will be found information as to further details, which cannot be mentioned in the present chapter.

The quotations from Hieroglyphic Luvian texts essentially follow La-roche (1960), abbreviated as HH, and his system. Raised *n* (as in *tuwī*"za) indicates the anteconsonantal nasal, which is not written. "M 129", etc., refer to the sign numbers in Meriggi (1962). Hieroglyphic Luvian logograms are given in capitals and in English translation (as SPEAK); for

the logograms which refer to numbers, which can be evaluated as true ideograms, arabic numbers are given.

Lycian inscriptions are quoted according to J. Friedrich, *Kleinasiatische Sprachdenkmäler* (*Kleine Texte für Vorlesungen und Übungen* LXIII; 1932).

The oblique stroke as in *nala/i-* indicates that both the interpretations *nala-* and *nali-* are possible.

Phonematic interpretations of Anatolian words are given between slanting lines (as /duia-/).

### 3.0.1. General comments on Anatolian numerals

Little is known of the numerals of the Anatolian branch of the Indo-European family, because, in most cases, the texts use numeral-ideograms. Thus, additional information has to be obtained by carefully observing the phonetic complementation of these numeral-ideograms, and by adducing derived words which permit conclusions as to the phonetics, morphology, and inflection of the numerals.

The present chapter represents a first attempt to discuss exhaustively an, admittedly somewhat inextensive, section of the comparative grammar of the Anatolian languages. The material derives from Hittite, Cuneiform Luvian, Hieroglyphic Luvian, and Lycian (A, B — Lycian A is for the most part not expressly indicated); the sources yield nothing for Palaeon and little more for Lydian (but cf. 3.14.2.). Etruscan, as to whose membership of Indo-European Anatolian there is as yet no agreement, is excluded from the discussion. But this does not mean that anything here has been prejudged.

The vocabulary of the Anatolian languages is distinguished by a relatively small store of lexemes, which often show a great range of meanings. This phenomenon is often to be noticed, too, in the domain of the numerals, in which there exist the most favourable preconditions for strict class-formation within the lexicon. For this reason terms such as "numeral", "cardinal", "ordinal" are not used here to indicate closed word-classes, the individual members of which have become consistently specialised in respect to specific numeric concepts. Here all the words are included whose spectrum of meaning comprises, among other things, specific numeric quantifiers (such as "one", "first", "once", "a third"); the domain of general quantifiers (such as "many", "a few", "some", "often") is left out of account.

In the presentation of the phonetic complementation of numeral-signs in Hittite texts, I have been able to rely on the splendid collections of

the Marburg Hittite Thesaurus. My sincere thanks are due to Professor Otten, who, with great friendliness, has made access to this material possible for me, and who has, further, given me information and advice. I am also grateful to Professors Cowgill (Yale), Neu (Bochum), and Watkins (Harvard) for important information from unpublished works.

### 3.1. The Anatolian numerals 'one' and their derivatives

#### 3.1.1. The Hittite cardinal 'one'

The numeral sign "1" appears with phonetic complements.

##### 3.1.1.1. -a-stem

Forms: Singular; Common nom. 1-*aš*

acc. 1-*an*

gen. 1-(*e*)-*el* XXIII 103 r. 5; 1103/u r. 8

dat. 1-*e-da-ni* (old loc 1-*e-da*, see 3.1.1.6.

instr. 1-*e-ta-an-da* KBo XXII 203 I 1' (context fragmentary)

\*1-*e-it*, see 3.1.1.7.

abl. 1-*e-da-az*

1-*e-az*? XIV 1 r. 25; XXX 15 o. 27 (error for 1-*e-da-az*?)

1-*e-iz* Bo 620 r. 19' (bis); 159/w

Singular: Neuter

nom. 1-*e*?, 1-*an*??; no clear examples; HW p. 301 quotes 1-*an*; see 3.1.1.4. for this; 1-*e*/*\*1-i* and, above all, *\*1-at* are more likely; see below.

Plural: Common

nom.? (1-*e* would be expected, see 3.1.1.1.2.)  
acc. (?) 1-*EN-aš* in the construction 1-*EN-aš*,  
<1->*EN-aš* VII 1 II 4 (= 1-*EN* 1-*EN-aš* in  
dupl. XLIII 52 II 12)

gen. — (*\*1-en-za-an* would be expected)

dat. 1-*e-da-aš*

instr. —

abl. —

##### 3.1.1.1.1. Notes

3.1.1.1.1.1. For 1-*at-ta* [X] KBo XVII 104 II 7 see 3.1.1.7.

3.1.1.1.1.2. 1-*e* KBo XVIII 172 o. 16', corresponding to the unknown gender and number (plurale tantum) of the word it qualifies, may be either nominative-accusative singular neuter, nominative plural common, or nominative-accusative plural neuter: 2 <sup>GIŠ</sup>ŠU-RI-EN-NU ŠĀ-BA 1 2 GIŠ.KÍN KUBABBAR 1-*e-ma* 1 GIŠ.KÍN KUBABBAR 'two š-emblems, of which one with two GIŠ.KÍN of silver, but the other with one GIŠ.KÍN of silver (?)'. An identification as a plural form would be the most convincing from the point of view of the morphology (cf. 2-*e*, 3-*e*), but it is only possible if the qualified word in Hittite is a plurale tantum. Since these are not very common among designations of objects, the force of 1-*e* as nominative-accusative singular neuter must be seriously considered.

##### 3.1.1.1.2. Declension

Possibly the same as the normal declension of pronouns, with *e* in most of the oblique cases < PIE *\*e* (cf. gen.sg. *\*téso* 'this') and PIE *\*ey/oy* (cf. gen.pl. *\*tóysōm*). The assumption of a half nominal, half pronominal mixed inflection (Friedrich (1940–46: § 130), following Sommer (1932: 164)), which would be comparable with Latin *ūnum*, *ūnūs*, *ūnī* and Vedic *ékam*, *ékasmin*, depends on the assessment of the nominative-accusative singular neuter form (1-*an* would agree in its ending with Latin *ūnum*, Vedic *ékam*). Today this assessment has to take place under changed conditions, because, in the meantime, an -*nt*-stem (to which 1-*an* can belong) has been found to be attested with certainty, and, on the other hand, a possible example of 1-*e* (?) has become known (cf. *ki-e* 'this'; if this form is old, it should be referred to PIE *\*ké*; the usual form *ki-i* goes back to something like *\*ki*, *\*gi*, *\*ghi*). We have in addition the fact that 1-*at-ta* (3.1.1.7.) presupposes a nom.-acc. sg. *\*1-at*, that is, it clearly points to pronominal inflection (for the variation 1-*at*/1-*e*, cf. 2-*at*/2-*e*, 3.2.1.1.1.). For instr. 1-*etanda*, cf. instr. sg. *apēdanda* 'that', *kīdanda* 'this'. For the forms 1-*ela*, 1-*eda*, 1-*etta*, taken from the paradigmatic nexus, see 3.1.1.5–7. Acc.pl. 1-*aš* in a text, which, with the corresponding form of the personal pronoun -*a* 'he, she', uses the variant -*uš* (not -*aš*), is surprising, but not objectionable.

## 3.1.1.1.3. Reading

Unknown. Goetze (1935) suggests \*šanna-, which Kronasser (1956: 152) also takes into consideration. (Friedrich 1952: 301 is against this.) Later, Goetze (1949: 288 ff.) puts in a plea for \*ašma- (to be rejected; see 3.1.4.). In my view, a reading \*ā- (< \*oyo- or \*oiyo-) is, rather, to be contemplated.

## 3.1.1.2. -i-stem

This stem can only be distinguished from the -a-stem in the nominative-accusative singular.

## 3.1.1.2.1. Forms

Nom.sg. 1-iš, about twenty examples, of which none are Old Hittite. For instance *KBo* V 2 III 41 (bis); X 34 I 8,9; XVIII 69 r. 11'; *KUB* XIV 1 (*Madd* [*Madduwattaš*] o. 57; XVIII 5 I 15; XXVIII 107 II 1, 6, 9, 12, 15, 18; XXXIII 5 III 10'; XLI 23 II 20', 21'. 1-iš <sup>LÜ</sup>ME-ŠE-DI 'one (single) MEŠEDI-man' XI 29 V 11 is in alternation with 1-aš <sup>LÜ</sup>ME-ŠE-DI *KBo* IV 9 V 4.

Acc.sg. 1-in 277/p II' 3 (1-iš 1-in).

## 3.1.1.2.2. Reading

The reading is unknown. At least in part of the examples probably only a stem-variant to 1-aš, corresponding to the frequent passage of -a-stems to -i-stems (cf. 1-aš XXVIII 107 I 9, 11, 13, 15: 1-iš XXVIII 107 II 1, 6, 9, 12, 15, 18). In the case of an -a-stem inflected pronominally one must especially consider analogy with the paradigm of the interrogative pronoun (*kuel*, *kuedani* : *kuiš*, *kuin* :: 1-el, 1-edani : 1-iš, 1-in).

## 3.1.1.3. Meaning and use of 1-aš, 1-iš

The phonetically complemented numeral-sign "1" is found mostly in non-attributive use. The boundaries between the meanings given in the following are often fluid.

1) Indication of the singular of specimens of a particular object or of a group of persons: *KBo* V 9 IV 4 1-aš <sup>LÜ</sup>ME-ŠE-DI 'one (single) MEŠEDI man'; XXVIII 107 II 1, 6, 9, 12, 15, 18 1-iš *hal-za-a-i* 'a single person calls'.

2) Stressing of isolation or uniqueness, 'single', 'alone', 'without companion': *KBo* III 4 II 77 1!-aš SAG.DU-aš iš! -*pár-za-aš-ta* '(PN) escaped as the only (or a single) one' (see also XIV o. 57 1-iš); *KBo* V 6 II 9 f. <sup>URU</sup>*kar-ga-miš-aš-pát* 1-aš URU-aš (10) *Ú-UL ták-šu-la-it* 'the town of K. was the only town that did not make peace'; *KBo* IV 14 II 9 <sup>URU</sup>*ni-hi-ir-ya-za-kán* *Ú-UL* 1-aš *ar-ha u-un-na-ah-hu-un* 'had I not all alone to hurry forth from the town of N.?' (similarly *KBo* IV 14 II 11; *KUB* XXI 1 II 69').

3) Stressing of the unity of a combination of two or several parts, 'one, united, joined into one': XXXIII 5 III 9 f. *nu-uš-ma-aš* (10) [*iš-ta-an-za-aš-mi-i*]š *ga-ra-az-ši-iš* 1-iš *ki-i-ša-ri* 'and to them their souls and the inside of their bodies become one' (similarly XLI 23 II 20 f.).

4) Use in repeated placement of 1-a- ... 1-a-, with various nuances of meaning.

4a) Successive-distributive, 'one after the other, each single one': VAT 13016 IV? 10 f. *ta* EN ERÍN<sup>MEŠ</sup>[x] (11) 1-an 1-an *anda tarnieškizzi* 'he admits the military commanders one after the other'; VII 1 II 4 f. *nu-uš ha-aš-ša-az* EGIR-*pa iš-pa-an-ni-it* 1-EN-aš <1->EN-aš *da-aš-ki-iz-zi* 'he takes them [sc. the twice seven dumplings] in alternation, the one set after the other [i. e., first the first seven, then the seven others] with a spit from the fireplace [and eats them one after the other]' (differently, H. Kronasser, *Die Sprache* vii, 1961: 150). With a slightly different nuance we have XIII 4 III 5 1-aš 1-aš 'the one like the other, each single one'.

4b) Reciprocal, 'one another, mutual': *KBo* II 5 IV 18 [X 1]-aš 1-an *ku-wa-aš-ki-it* 'one killed the other continuously'; *KBo* V 4 r. 3 ff. *nu* 1-aš 1-e-da-ni *li-e i-da-la-a-u-e-eš-zi nu-kán* 1-aš 1-e-da-aš-ša-an *İR-iš* (4) [<sup>LÜ</sup>*pít-ti-ia-a*]n-ti-li *li-e pa-iz-zi nù* 1-aš 1-an *ku-na-an-na li-e ša-an-ha* [-zi] '(of you three) one is not to think of evil against the other, and one is not to seek his refuge as a servant with the other [i. e., with one of the two others], and one is not to strive to kill the other'; XXI 1 III 76 f. *ki-i-ma A-WA-TE*<sup>MEŠ</sup> *Ú-UL ku-it-ki* 1-e-da-az 1-e-da-az (77) *IŠ-TU KUR* <sup>URU</sup>*ha-at-ti-at* 'these terms of Treaty are in no way mutually [binding]; they are [binding] in respect of the Land of the Hatti'.

## 3.1.1.4. -nt-stem

## 3.1.1.4.1. Forms

Nom.-acc.pl.neut. Old Hittite 1-*an-ta* ... 1-*an-ta* 'the ones ... the others' *KBo* XVII 3 IV 25 (cf. duplicate *KBo* XVII 1 IV 27, both tablets in the "typically old ductus", see H. Otten — V. Souček, *Studien zu den Boğazköy-Texten* (in future abbreviated *StBoT*) viii (1969: 38), as attribute to <sup>GIS</sup>*harpa* 'heap' (of logs?). Acc.pl.comm. *harpuš* (H. Kümmel, *StBoT* iii, 1967: 78 n. 8) cannot be adduced as an argument against the identification of <sup>GIS</sup>*harpa*, and, with it, 1-*anta*, as nominative-accusative plural neuter, cf. *harpa* : *harpuš* :: *alpa* : *alpuš* 'cloud' :: *hašša hanzašša* : *haššuš hanzaššuš* 'grandchildren and great-grandchildren' (see E. Neu, *IF* lxxiv, 1969: 240).

Nom.-acc.sg.neut. 1-*an* *KBo* XI 49 I 15; *KUB* IX 31 III 21; 32 o. 8; XIII 4 III 50; XIV 3 III 63; XIX 9 II 21; XXIV 8 I 16', II 3'; L. King, *Hittite texts in the cuneiform character from tablets in the British Museum* (1920), 1 III 11 can likewise be assigned to the -nt-stem.

## 3.1.1.4.2. Comments

The -nt-stem does not point to an entirely different word, but to a derivative of the -a- or -i-stem; cf. *dapi-* : *dapiyant-* 'complete, whole', and probably also *hūmant-* 'whole, each'. Following from the suggestion made above (3.1.1.1.3.), the reading \**ānt-* (??) is to be assumed. The meaning 'only a single one, only one' and 'something which forms a unit', clearly distinguishable in the case of the form 1-*an*, deserves notice; see Sommer (1932: 164); in the *Treaty with Targašnalli* II 9 (Friedrich 1926: I.60), Hitt. 1-*an* alternates with Akkadian 1-*NU-TUM* '(individual) unit'. As opposed to this, still other nuances of meaning appear to play a part in the case of 1-*aš* and 1-*iš*. If 1-*an* is an -nt-stem, this finding can be explained by means of the opposition to the antonymic nom. *dapiyan* 'whole, complete, altogether' (-nt-stem, cf. H. Eichner, *KZ* lxxxii, 1968: 215 n. 11).

From the point of view of the history of the language, the -nt-stem can be variously assessed. On the one hand, the suffix -nt- is to be taken into consideration; cf. the adjectives *nekumant-* 'naked' (: Av *maynənta-*) : \**neg<sup>m</sup>mó-* (Vedic *nagná-*), *tangarant-* 'sober' : \**donkró-* (> German *zan-ger*), etc.; further also *hūmant-* 'all, whole, each' (\**H<sub>2</sub>áw-mo-nt-*). On the other hand a collective or abstract formation in -and- (Greek -αδ-, \*-*η-d-*) could be present. In Hittite, both types fell together from phonological causes (nom.sg. \*-*ant-s* and \*-*and-s* > -*anza*, dat.sg. \*-*ant-i* and \*-*and-i*

> -*anti*, then confusion in other forms too) and were probably also fused semantically. Thus Hitt. \**ānt-* (??) may combine both components (\**ā-nt-* and \**ā-and-*).

*ānt-* is very probably to be established on the basis of the vocabulary *KBo* XIII 10 (Laroche, *Catalogue des textes hittites*, 1971: 309). Here there are the following consecutive lemmata:

o.?	4	[X]	x-iš-ka-aš
	5	[X]	ne-ku-uz me-hur
	6	[X]	a-a-an-za INIM-aš
	7	[X] xx	a-a-an-za INIM-aš ku-e-da-ni e-eš-ta
	8	[X IN]IM-aš	ku-e-da-ni NU.GÁL

Since the participle *ānt-* 'hot' can hardly be present here, and also because a reading A.A.-*an-za* (something like \**muwanza*) does not seem to make sense, I should like to suggest the translations 'one (single) thing' for line 6 and 'someone who had one (single) thing' for line 7. Line 8 may be completed as 'someone who has [no (single) thi]ng'; that the text already begins in the neighbouring rubric on the left is not too surprising in view of the other irregularities of this kind in the vocabularies. And as a support for this interpretation a further vocabulary passage can be added: *KBo* I 44 o. 9 f. NU.GÁL-*kán ku-e-da-ni ku-it* 'someone/something [nominative or some other case] who does not have anything' (NU.GÁL = *natta*, '(is) not'; *kuit* = *kuitki* 'something', see W. H. Held on the text, *The Hittite relative sentence (Language Dissertation 55)* (1957: 43), cf. *The Assyrian dictionary of the Oriental Institute of the University of Chicago* (ed. J. Gelb) Z p. 170a (H. Otten, *StBoT* vii, 1968: 9 to be rejected). The circle of the lucubrations closes if, further, we restore the reading X (1?)-*iš(-)INIM-aš* 'one (single) thing' in *KBo* XIII 10 o. 4.

The hyperplane writing of the vowel of the first syllable (*a-a-an-za*) finds its explanation in the fact that the initial contraction-vowel (*ā* < *aa* < *aya*) is over-long and is thus phonologically different from the usual initial long vowels; hyperplane writing indicates over-length, normal plane writing normal length. The two theoretically possible alternative readings *aant-* (more accurately *āant-* or *aānt-*, disyllabic, with hiatus) must be eliminated from our considerations. The first, because vowels of the same quality are contracted in Hittite (cf., for instance, 3.2.4., for the shortening of unstressed long vowels derived from contraction); the second because it is not consistent with Hittite scribal habits (A. Goetze *JCS* xvi: 32; *JAOS* lxxiv: 187, to be rejected). On the other hand it is not

possible to decide the question whether the contraction-length ( $\hat{a}$ ) in  $\hat{a}nza$  ( $a-a-an-za$ ) has been regularly preserved or only been based analogically on nom.-acc.sg.neut.  $*\hat{a}n$  (1- $an$ -). For if initial long vowels derived from contraction are regularly shortened before two consonants, the lack of the hyperplane writing in  $a-an-ki$  'once' (3.1.3.) could be phonologically justified. But, on the other hand, in  $a-an-ki$  an inaccurate writing instead of  $*a-a-an-ki = / \hat{a}nki /$  could be present. The same problem is posed in the verb  $\hat{a}$ - 'to be hot' (3 pl.  $a-a-an-ta$  with  $\hat{a}$ ), which, possibly, has been restored analogically on the basis of forms such as 3 sg.  $a-a-ri = / \hat{a}ri /$  or nom.-acc.sg.neut.ptc.  $a-a-an = / \hat{a}n /$ .

### 3.1.1.5. 1-e-la

1-e-la 'alone, single' Bo [unpublished texts from Boğazköy] 1806 line 7' and Bo 2701 III? 12' ( $^dU$  AN-E 1-e-la a-ku-wa-an-zi 'they drink to the Weather-God of Heaven alone (as the only one)': 1-e-la-aš (= Akk. e-te-nu ( $\bar{e}d\bar{e}n\bar{u}$ ) 'single' in Vocabulary KBo I 44 + KBo XIII 1 o. 34 (H. Otten — W. von Soden, *StBoT* vii, 1968: 11 line 17)).

We are here concerned with the extension of the adverbial genitive 1-el\* 'as a single one'. For this use of the genitive, adverbs of the type  $ašandaš$  'sitting, seated' ← 'as sitter(s)' — singular or plural — are to be compared. The postulated adverbial use of 1-el has a firm support in the attested 2-el 'both together, both' (see 3.2.1.6. — 9.). The form 1-ela appears to be an adverbial locative (1-el : 1-ela on the pattern of  $\bar{s}iuat$  :  $\bar{s}iuatta$  'by day',  $lukkatt$  :  $lukkatta$  'on the next morning?'). The secondary -a-stem 1-ela- 'single' could arise (by hypostasis) from 1-ela (cf. 2-ela-, 3.2.1.6., 3.2.1.9.). In 1-el, 1-ela (and 2-el), which arose correctly, the Hittites perhaps saw, because of a new, etymologically "false" analysis, an adverbial ending -el -ela, which they carried over into the personal pronouns, cf.  $ukel$ ,  $ukela/ukila$  'myself',  $zikela/zikila$  'you yourself',  $apašila$  'he himself, that one' (singular: KBo XIV 8 II 3; plural: see HW s. vv.; for acc.pl.  $apašilus$ , cf. nom.sg. 1-elaš),  $\bar{s}umašila$  'you yourself'. So we have an explanation of these hybrid formations, about which there has been much puzzlement: they start from the numeral, especially from 1-el, 1-ela. The postulated development would moreover present itself as considerably simpler still, if the suggestion made in 3.1.1.3. as to the initial of the numeral for "1" being  $\bar{a}$  should be correct.  $*\bar{e}l$   $*\bar{e}la$  (secondarily, unstressed  $*\bar{i}l$   $*\bar{i}la$ ) would have to be considered as the reading of 1-el 1-ela, nom.  $*\bar{a}š$  : gen.  $*\bar{e}l$ , like nom.  $ap\bar{a}š$  'that one' : gen.  $ap\bar{e}l$ , nom.  $k\bar{a}š$  'this one' : gen.  $k\bar{e}l$ . In  $ukel$   $ukela$   $ukila$  there could then be present a

conflation of the phrase  $*uk \bar{e}l(a)$  'I as the only one, I alone' (→ 'I of my own initiative', 'I in my own person', 'I myself'), as similarly in  $zikela/zikila$  and  $apašila$ ;  $\bar{s}umašila$  (cf. A. Kammenhuber, KZ lxxxiii, 275) is, rather, a later imitation.

### 3.1.1.6. 1-e-da

1-eda 'on one's own, isolated' is an original locative form taken out of the paradigmatic nexus (i. e., no longer freely formable). It is found in KBo IV 14 II 60, 64, 70 in the phrase 1-eda  $tiyawar$  'to put oneself in isolation, stay in isolation, keep oneself out of' (?) in an enumeration of three kinds of breach of duty to assist in case of war. Before the phrase there is  $allall\bar{a} p\bar{a}war$  'to become unloyal', whereas, after it, there is  $pidikan wahnumar$  'to turn back on the spot'; from this collocation, the meaning of 1-eda  $tiyawar$  is to some extent defined. A further example of 1-eda occurs in the phrase 1-eda  $leng$ - XXVI 1 III 54 'to swear for oneself alone' in an order concerning people who are absent at the general oath-taking (see Sommer — Falkenstein 1938: 143; E. von Schuler, *Hethitische Dienstanweisungen für höhere Hof- und Staatsbeamte* (Afo Beiheft 10) 1957: 14 'together' is not to be preferred). The difference between 1-ela (3.1.1.5.) and 1-eda does not lie in the meaning, but in the syntactic use.

### 3.1.1.7. 1-etta (1-ašša\*)

1-e-it-ta  $nai$ - 'to unite someone, make politically one' (XXI 37 o. 17; XXI 42 II 6 = dupl. XXVI 12 II 30) probably originally means 'to direct to one particular side, to make into one special party'. The grammatical determination of the form 1-etta, so far unsuccessful, depends upon one's assessment of the syntax. Among the morphologically possible alternatives, the syntactic properties of the verb  $nai$ - 'to step forward on someone's side, to turn to someone's party (middle reflexive)' determine the form 1-etta clearly as an instrumental. Cf. Goetze, *Hattušiliš* (1925: IV 10 f.) 'and the whole of Hattusa will concur in the matter of thy husband / will take up the party of thy husband'  $I\bar{s}-TU \bar{S}\bar{A}^{LU} MU-DI-KA ne-ya-ri$  (the Akkadian flexion-indicators must here denote a pendent genitive in the function of an instrumental or ablative), and, for a verb related in meaning, *Kup* § 13\* C 7 f. (Friedrich 1926: I. 122; E. Neu, *StBoT*, 1968: 7)  $I\bar{s}-TU \bar{S}\bar{A} ^dUTU-\bar{S}\bar{I} ma[-ah-ha-an] ar-ta-ti$  (8)  $nu I\bar{s}-TU \bar{S}\bar{A} ^dUTU-\bar{S}\bar{I}-p\bar{a}t EGIR-an ar-hu-ut$  'as thou (in the past) wast on the

side of The Majesty, so mayest thou in the future be on the side of The Majesty'. Cf., further XIV 1 r. 25 (Goetze, *Madduwattas*, 1928/68: 27) 1-*e* < -*da*? > -*az ti-ya-mi* '[against the land of Hapalla] I will make common cause [with thee]', lit. 'I will step forward on one side'.

Since the instrumental ending terminates with -*t* in postvocalic position (-*ta* only postconsonantal), 1-*etta* must be analyzed as \*1-*et* + -*a* 'and, also', and thus leads to positing 1-*ašša*\* '(only) one single one, one and the same'. The difficulties of deriving this meaning from the two elements 1-*aš* 'one, one single one' and -*a* 'and, also' can be eliminated by starting from the negated \**natta* 1-*ašša* 'and not a single one, not even one'. '(Only) a single one, just a single one' is yielded as one of the semantic possibilities of the use of this combination of words in the positive; for another semantic possibility, see 3.1.1.8. The further example 1-*e-it-ta* *KBo* III 4 III 33 (Goetze 1933: 76) is not unambiguous; the context allows the meanings 'everything in one, all together' or 'taken on its own, even alone'.

In conclusion it is to be observed that the interpretation of 1-*etta* as locative (cf. *tamatta* 'somewhere else', *kuwatta* 'whither', *apadda* 'thither'), to be found in the literature, comes to grief on the *e*-vocalism of the form; \*1-*atta* would necessarily be required, or 1-*eda* with a single dental, see 3.1.1.6.

Now a form 1-*atta* is actually recorded *KBo* XVII 104 II 7, but it is to be identified as nominative-accusative singular neuter to 1-*ašša*\*; its meaning is 'ditto, of the same kind, the same' (lit. 'one and the same'). By means of intratextual comparison (lines 8, 9 *KI.MIN*) and of placing it beside the duplicate *KBo* XI 14 II 8 ff., it follows cogently in fact that 1-*at-ta* is a heterogram for *KI.MIN* and takes the place of a clause which is to be repeated several times ('give me the sacrificer back'), which is only once written out in full. Nevertheless I should not wish to exclude the possibility that *KI.MIN* (written *KI.2*) has still other Hittite correspondences than 1-*at-ta*; those possible are *kīpat* 'the same, exactly that one' (Friedrich 1959, abbreviated as *HG*, i § 64) in alternation with *QA-TAM-MA-pāt*, *apeniššan* 'just so' (see *HW* 311 f.), and *katta* 'likewise, correspondingly' (the question mark after this meaning, *HW* 105, is to be deleted).

*Bo* 2933 II 5' *na-an* 1-*e-it-ta da-a-i* (*hīli pedai* in front of it) is not clear. Perhaps this example is to be placed with the cases just mentioned and is to be translated 'he puts him on (one and) the same side'. In this case 1-*e-it-ta* would be a further example for the "lateral" instrumental ('on the side of'; see *HG* i § 22 A *kēt* 'this side of') for 1-*ašša*\*.

### 3.1.1.8. 1-*ašša*

1-*aš-ša* (1-*aš* 'one' + *a-* 'and') 'each single one' occurs XLIII 23 r. 21'. H. Ehelolf (1933: 5), who interpreted the passage (*Orientalistische Literaturzeitung* xxxvi, 5), called attention to *kuišša* (*kwiš* 'who' + *a-* 'and') 'each', whose semantic history (cf. Latin *quisque*) rests however on conditions ('whoever it may be') which cannot be present in the case of 1-*ašša*. For this reason a further investigation of the evidence becomes necessary.

XLIII 23 r. 19' ff. *nu-za* 1 ŠAH *ma-a-ah-ha-an* (20') ŠAH. TUR<sup>HLA</sup> *me-ik-ku-uš ha-aš-ki-iz-zi ki-e-el-la-az ŠA* <sup>GIS</sup>SAR. G[EŠTIN] (21') 1-*aš-ša* <sup>GIS</sup>*ma-a-ah-la-aš* ŠAH-*aš i-wa-ar mu-u-ri-uš* (22') *me-ik-ku-uš ha-aš-ki-id-du* 'Just as one sow usually bears many piglets, so also is each single vine of this vineyard to bear many grapes just as the sow does'. (The attraction of the comparandum to the comparatum is typical of the style of Hittite comparisons.) Therefore the meaning given by Ehelolf is plausible; since the particle -*a* 'and, also' is already present with *kēl* 'of this' (genitive singular), taking 1-*ašša* to be a separate lexeme (and not just as a word-connection) should be justified (cf. *HW*, 302). The meaning of this lexeme is explained most simply if, once again, we start from negative formulations (cf. 3.1.1.7.). The material for demonstration can be extracted from the Hittite texts themselves.

XIII 4 III 51 f. *nu wa-as-túl ku-iš i-ya-zi na-aš QA-DU NUMUN-ŠU* (52) *har-ak-zi-pāt ku-e-ša-at-kán ku-i-e-eš im-ma ŠA É DINGIR-LIM nu* 1-*aš-ša* (53) *TI-nu-ma-aš Ú-UL e-eš-zi* '... so he who trespasses must nevertheless (-*pat*) perish. And of all those who are still in the temple as well, not one single one must be left alive'. Since the expression 'not one single one' is synonymous with 'no single one', the remaining 1-*ašša* can, after taking out the negation, be taken as 'each single one, each separate one'. So the two meanings of 3.1.1.7. and 3.1.1.8. depend on the fact that, to the negative concept 'not a single one, no single one', there corresponds, on the positive side, not only 'a single one' but also 'every single one'.

### 3.1.1.9. 1-*li* (?)

An apparent Old Hittite 1-*li* *KBo* VII 14 (old ductus) o. 8 is a constituent of PN <sup>m</sup>LI.KASKAL-*iš* (Laroche 1966, no. 1750) — Professor Neu has kindly called my attention to this fact; 1-*li* *KBo* XX 21 line 7' f. does not belong here. The abbreviation 1 *LI* for Akk. 1 *LI-IM* '1000' (cf. von



Soden (1965–81: 553)) could be present: [X 1? L] I 5 ME ERÍN<sup>MEŠ</sup>-aš ha-a-li-iš 20-iš 5 ME NINDA<sup>HLA</sup> ha[x] ('8') [X + ?] 1 LI NINDA<sup>HLA</sup> 30-iš 1 LI NINDA? ... [X]. Unfortunately the entire tablet is broken in such a way that it is not possible to determine with certainty to what word 1-li / 1 LI refers.

### 3.1.2. The Hieroglyphic Luvian cardinal 'one'

The numeral-sign "1" is used with phonetic complements (cf. Meriggi, *Glossar*<sup>2</sup> 1962: 165).

#### 3.1.2.1. Forms

Singular: scc. 1-na, 1-ti-na  
dat.abl. 1?-ti-na

#### 3.1.2.2. Comments

Further examples are obscure. The reading is unknown. With some reservations the coexistence of an unextended stem and one extended by -nt- (or derived by means of \*-and-) can be postulated, as in Hittite, perhaps \*a- (??) and \*anti- (??). An argument for the establishment of a stem \*a- 'one' in Hieroglyphic Luvian could be seen in the writing Kululu 2 B arha '1' -wa-ha-a?, if the meaning 'I came out' and the reading arha awaha (in my view, rather awiha; WA = wa, wi) could be assumed. It should be a rebus-like writing; for the form awaha, see J. D. Hawkins, *RHA* xxix (1966: 129). But this argument vanishes if, with Meriggi *Manuale* ii (1967: 46), the sign WA in this place has a "thorn", i.e., a little oblique stroke added, as actually the photograph H. T. Bossert, *Jahrbuch für kleinasiatische Forschung* (1950: Plate XXX) suggests. [Hieroglyphic Luvian nala/i- 'nullus' (Meriggi 1962: 86) is a wrong reading for \*hantili- 'prior, former' (J. D. Hawkins, *Anatolian Studies* 25, 1975: 148–150), therefore not to be analysed as \*ne oyolo-.]

#### 3.1.3. Hittite ānki

The hitherto unrecognized hittitogram for 1-ŠU ~ 1-an-ki 'once' occurs in a-an-ki KUB IV 2 IV 36, 38 (in alternation with 1-ŠU and 1-an-ki). The sequence \*ān which remains after the removal of the adverbial suffix -ki is to be regarded as nominative-accusative singular neuter. This form

can belong to an -nt-stem, \*ānt-, or continue directly an old nominative-accusative singular neuter with -n < -m. The unextended stem ā- probably contains a long vowel due to contraction, and points to \*oy-o- or \*oy-yo-, and is thus a derivative of PIE \*oy, meaning something like 'one, single' (adverb), somewhat different from the well-known stems \*oy-ko-, \*oy-wo-, \*oy-no- which are represented in the non-Anatolian branches of Indo-European (Pokorny 1959: 286). \*oy lying at the base of it is probably to be regarded as an old locative singular \*o-i 'with the one, in the one, on its own' of the pronoun e-/o- 'this, the, the one mentioned', from which the semantic constituent 'one, alone' is derivable from the grammatical function of the Indo-European singular.

Further reflexes could be present in Hitt. āšma 'firstly' (see 3.1.4.) and – quite uncertain – in the word ayawala- XIV 3 I 12, which is probably not true Hittite but comes from some dialect, if this is to be taken as something like 'of equal birth' (\*'being of one and the same rank'; \*oyo-wo-lo- – for the formation cf. Vedic kévala- 'alone; whole, complete').

#### 3.1.4. Hittite āšma

Hitt. āšma 'firstly, on the first occasion (?), for the first time (?)' is always written a-aš-ma.

XXXIII 120 I 31 ff. in the series āšmatta ... dānmatta ... 3-annatta 'at first/firstly ... but secondly ... and (finally) thirdly [have I impregnated thee]'; XXXIII 106 IV 13 āšma-an hullanun 'first I struck him'. Further possibly XXIV 8 II 14, where the translation is perhaps 'for the first time' (sense something like 'for the first time the Sun-god comes to visit us! Has something dreadful happened?'). x-ma-an-da XXXIII 120 II 78 probably does not belong here (against H. G. Güterbock, *Kumarbi (Istanbul Schriften XVI)*, 1946: 79).

There are two possible explanations:

(1) Connection with ānki 'once', \*ā- (??) 'one'. Stem \*ā-, or, more probably, loc. \*ā 'at the one' (formed like kā 'here, hither') was extended by a particle-like element -š- (something like PIE \*sé/\*só, cf. Vedic sā yathā 'as'; also in Hitt. kāša, kāšma 'look here' and naššu ... našma/naššuma 'either ... or', something like \*no-se/o-we) and by emphatic -ma (cf. aru-mma 'excessively', imma 'over and above' < \*id-ma or \*im-ma). Phonologically, the form āšma derives either by the route \*āše > \*āš (regular loss of final postconsonantal -e) with later addition of -ma, or by the alternative route \*āšama/\*āšema > \*āšma, with syncope of the vowel of the middle syllable after a long first syllable. In the series 'to

one ... to another ... to a third' a semantic shift → 'in the first place ... in the second place ... thirdly' could easily occur; cf. also Goetze's reference to Akkadian (Goetze 1949: 297 n. 46). The conjectural meaning 'firstly, on the first occasion (?)' is also easily explainable.

(2) \**ō-smō*, lit. 'at the one', from prep. \**o* [\**o-H*]<sub>1</sub> = Vedic *ā* 'to, around', and a case-form of PIE \**sem* 'one'. This interpretation is suggested by E. Neu, *StBoT* xviii (1974: 98 n. 210); it presents no difficulties and, moreover, finds support in further Hittite material.

### 3.1.5. Hittite *hantezzi(ya)-*

*hantezziya-* / *hantezzi-* 'first, anterior' is used as an ordinal. The word was apparently coined as an antonym to the perhaps inherited *appezziya-* / *appezzi-* (\**ope-tyo-* 'last, posterior, later', cf. Vedic *āpatya-* 'progeny' or \**opi-tyo-*, cf. Greek *ὀπίσσω*; whether the Hittite word had *e* or *i* in the second syllable is not determinable); cf. J. F. Lohmann, *IF* li (1933: 324). Hitt. *hantezziya-* cannot derive directly from ?*H<sub>2</sub>anti-tyo-* (cf. Greek *ἀντί* Latin *ante*), as is often said in the literature, because, in this case, \**hantzziya-* would have to be expected. It is probably an innovation starting from the dative, which had already fallen in with the locative, which happened at a time when \**H<sub>2</sub>ntēi* had already become \**hantē* 'in front' (see H. Eichner, *MSS* xxxi, 1973: 77), but had not yet undergone the further development of final \*-*ē* (< \*-*ey*) to *i* (cf. Hittite adv. *ha-anti-i* 'separate', originally 'front, to be found in the first place, especially'). [Or was \**H<sub>2</sub>ante-tyo-* due to the influence of \**ope-tyo-*?]

There are some derivatives to *hantezziya-* / *hantezzi-* (verb *hantezzi-yahh-* XXXI 147 II 21; noun d. *hantezumni* 'in the front room'); of these, *hantezzili* XXX 39 II 4 (*HW*, 53 'at the first time, at first') is the only one with a numeral concept.

#### 3.1.5.1. Cuneiform Luvian *hanteli-*

In Luvian the equivalent is *hanteli-* 'first' (Laroche 1959: 40), the corresponding ordinal. Just as in Hittite, a dative-locative form \**hantē* (< \**H<sub>2</sub>ntēy*), to which the suffix *-li-* has been added, probably underlies it. For the method of formation, the name of the originally second Roman month is, in my view, to be compared: *aprilis* (ls. \**apere/oy* + *-li-*). There also occurs a (not necessarily Luvian) PN *Hanteli* / *Hantili*; see Laroche (1966: no. 275); for the motive for giving such a name, one may want to consider joy at the birth of the first son (in this case, then, with the

meaning of the ordinal), but also the wish for high social position of the bearer of this name (in this case, then, with the meaning 'foremost, high in rank, of the first rank'). For Lycian, closely related to Luvian, from *χñwatawat-* 'ruler, king' (dat.loc. *-a*; for the formation cf. the Hittite suffix *-att-*, also Cuneiform Luvian *handawati-* 'ruler') we can construct a denominative verb \**χñtawā-* (for the formation, cf. Hittite *-ai-* verbs, e.g., *hantai-* 'to arrange' and *appai-* 'to be finished') 'to be a leader, find oneself in front'; and further adj. \**χñtewe* (or \**χñtawā-*) 'foremost, first, leader', which is derived, by means of the suffix *-we-* (*-wo-*), from an adverbial *a*-locative \**χñta* (this would be something like a Hitt. \**handa*). Hitt. *hantezzi(ja)-* is to Lycian \**χñtewe-* as is Hitt. *šanizzi-* 'pleasant' to Hieroglyphic Luv. *sanawa-* 'good' (see 3.1.6.). A Lycian equivalent of Luvian *hanteli-* 'first' can be assumed, as Professor Neumann (Würzburg) has pointed out to me, in gen.sg. *χñtlah*, which is probably used as a surname [Hier.-luv. \**hantili*, 3.1.2.2.].

#### 3.1.6. Hittite *šanaiš\** / *šaniš\**

Hitt. *šanai-?* / *šani-* 'one and the same, a single one' raises complicated problems. For the most part several possibilities call for consideration in the interpretation of the quotations; there is an additional complication by reason of the possibility of confusion with Akk. *šanū* 'second'.

Old Hittite *KBo* III 22 (E. Forrer, *Die Boghazköi-Texte im Umschrift [Wissenschaftliche Veröffentlichungen der Deutschen Orient-Gesellschaft XI, XII]*, abbreviated as *BoTU*; 7, old ductus) o. 10 *ša-ni-ia ú-it-ti* could mean 'in the same year', 'within the space of a year', or 'in the first year'. Further, the meaning 'in the next/second year' is not to be excluded, but, then, the necessary assumption of an akkadogram *ŠANIYA* would not yield a correct syntagma (adverbial accusative singular masculine or suffixed pronoun of the first person singular in the genitive — both are little used). *KBo* III 20 o. 60 *ša-ni-ya ši-wa-at-t[i]* is best interpreted as 'on one and the same day'. In the Laws § 191 (II § 97) *ša-ni-ya pí-di* '(if they) (are) at one and the same place' alternates with XXIX 34 IV 16' *2-el pí-di* '(if they) both (are) on the spot', whereby the same content is given in another formulation. The reading *2-el* (not *1-el*) is certain according to Otten (Friedrich, in *Pagliari Fs.* ii, 1969: 139 n. 1). The meaning 'one and the same' for Hitt. *šani-* is made certain by the passage from the Laws (see *HG* II § 97).

Recently E. Neu, *StBoT* xviii (1974: 20 f.) has taken up a position with regard to Hitt. *šaniya*; essentially, I follow him. He puts in a plea for an

akkadogram *ŠA-NI-I pi-di KBo IV 9 I 15* (otherwise *HW*) and *ŠA-NI-E pi-di XII 50*, line 10' (with duplicate). Admittedly the context does not permit a perfectly clearcut decision. According to Neu, the form *ša-a-ni-ta* does not belong here, as not certainly attested; otherwise Goetze (1949: 291 and n. 19).

### 3.1.6.1. Etymology

Kronasser (1956: 152) and Neu (op. cit.) (1974: 98 n. 210) suggest a connection with PIE *\*sem-* 'one'. Kronasser's derivation *\*sm-ni* should have yielded *\*samni-* or *\*šanni-*, not *\*šani-*, but this is hardly tenable, while Neu's referral to a neuter *\*san-* (with *-n* from *-m*) is unobjectionable. The protoform *\*šan* may constitute an equation with Greek *ἕν*, if weak stress can be assumed to here caused Hitt. *a* instead of *e*. Whether in *\*šani-* there is a functionless stem-extension (transference of a consonant-stem to the *-i*-stems) or a derivative from an adverbial *šan*, cannot be decided. Also analogical shaping of a *\*šami-* (*-i*-stem for *-a*-stem) 'the same' (cf. Vedic *samā-* 'just, like, the same', Pokorny (1959: 904)) on the basis of nom.-acc.sg.neut. *\*šan* or *\*šen* should be considered (protoform something like *\*smó-*).

#### 3.1.6.1.1. Additional remarks

The neuter *\*sem* is probably also reflected in adv. *kiššan* 'thus, in the following way', which can be interpreted as a conflation (univerbalisation) of an expression *\*ki šan < \*ki šen* (*\*kí/gí/gʰi sém*) 'in this one way, exactly so'. Adverbs such as *eniššan* 'thus, in the manner mentioned', *apeniššan* 'thus, in that way', *keniššan* 'thus, in this way', were then formed (always with *šš*) in addition to *kiššan* (which is best considered as a sequence of two nominative-accusative neuter forms). In the adverb of time *kuššan* 'when?' (beside *annišan* 'formerly') we must correspondingly assume a conflation of the old locative *\*k'u* 'where, when?' (in Vedic *kvà* 'where?', *kúha* 'where?' = Old Church Slavonic *kŭde*) with adv. *\*sém* *\*sóm*. In its turn *\*sém* *\*sóm* is probably also a locative ('in one' = 'together'). The Hittite particle of place *-ššan*, too, goes back to adv. *\*sém* *\*sóm*.

On the other hand, in my view, the following words do not belong here: *šannapi šannapi* (*āmreḍita*) 'each for itself, separate, scattered' (with derivative *šannapili-* 'empty, alone; not impregnated'); *šanezzi-* / *šanizzi-* 'pleasant, first class' (correspondingly Hieroglyphic Luv. *saniwa-*), which are no doubt to be assigned to *\*sen-i-* 'on its own, separated' (Pokorny 1959: 907).

## 3.2. The Anatolian numerals 'two' and their derivatives

### 3.2.1. The Hittite cardinal 'two'

The numeral-sign "2" is found with phonetic complements.

#### 3.2.1.1. Forms

The stem-class is not certain, but there are indications of an *-a*-stem (cf. 2-at).

Plural common nom. 2-e (probably *Bo 3542 II 10' ku-i-e-eš* 'the two, which')

(2-uš, see *HW*; cf. however 3.2.1.6.)

2-at, see 3.2.1.2.

2-ah-hi ??, see 3.2.1.3.

acc. (2-e ??, see 3.2.1.1.1.)

gen. 2-(e)-el (?), see 3.2.1.5.

dat. 2-(e-ta-)aš, see *HW*

abl. 2-az, see 3.2.1.4.

neuter nom.-acc. 2-e e.g., *KBo XVII 11 I 21'*, a tablet in typically old ductus; also in later duplicate 74 I 36', see E. Neu, *StBoT* xii (1970: 14); further *Bo 2410 2-e huppar GEŠTIN* 'two bowls of wine', and XXX 41 II 9'; see also 3.2.1.1.1.

For 2-at ?, see 3.2.1.2.

#### 3.2.1.1.1. Notes

2-e is taken by Friedrich as accusative plural common for a series of quotations which are listed *HW* 302 (*KBo XVII 74 II 14*, II 8'; E. Neu, *StBoT* xii, 1970: 18, 24 are to be added). If this interpretation were right, it would be possible, or indeed necessary, because of the coincidence of nominative and accusative *-e*, to consider 2-e the descendant of an Indo-European dual form, having in mind the Indo-European masculine dual ending *-e* (or to be put as *-H<sub>1</sub>e* in ablaut to *-H<sub>1</sub>ə* – fn. *iH<sub>1</sub>*, with secondarily accreted *i*?). Admittedly this ending would have to be taken over on to the numeral "2" only secondarily, since the Indo-European form is to be put as *\*d(u)wóH<sub>1</sub>*, *\*dóH<sub>1</sub>*, (traditionally *\*d(u)wō* *\*dō*), and, beside it, with a still obscure extension in *u*, *\*d(u)wóH<sub>1</sub>u*? etc. or

\**d(u)wōw* (PIE final  $^oH_1w > IE ^o\bar{w}?$ ), from which, in Hittite, a descendant with final  $^o\bar{a}$  or  $^oau$  would regularly result.

The quotations for 2-*e* are in expressions of the following kind. *KBo* IV 9 III 16f. LUGAL-*uš* GUB-*aš* 2-*e* *e-ku-zi* (17)  $^dhal-ma-aš-šu-ut-tu_4$   $^dZA.BA_4.BA_4$  'standing, the King drinks (to?) two: to the goddess of the throne and to Zababa'; from other passages it is seen that the names of the gods are in the accusative; for *eku-* + accusative 'to drink to someone / in honour of someone', see J. Puhvel, *MIO* v (1957: 32) — Engl. *to toast somebody* fits; XX 19 III 4f. LUGAL-*uš* KISLAH-*ni a-ri* 2-*e* *ir-ha-a-iz-zi* (5)  $^dše-pu-ru-ú?$   $^dte-li-pi-nu-ú$  'the King comes to the threshing-floor and completes (?) two (i.e. given operations); to the honour of Šepuru and Telipinu'; or, better, '... he memorializes two in common, Šepuru and Telipinu' — other passages show the accusative of the god-names; *irhai-* perhaps similar to *kalutiya-* 'to sacrifice in common / in one round'. In expressions of this kind, 3-*e* occurs too instead of 2-*e* (*XI* 30 IV 7; *IBoT* I 2 III 10); it must originally have been formed analogically on 2-*e*.

The determination of the forms 2-*e*, 3-*e* as nominative-accusative plural neuter is more probable than Friedrich's view (*HW* 302) of these forms as accusative plural common. Then there are two possibilities of interpretation:

1) There is ellipse of a neuter substantive, of which the meaning would be something like 'drink, draught of honour'. Neu, who inaugurated this view (*StBoT* xii 1970: 19, 25, 39), thinks of 'beaker' (Hitt. *zeri-* n.), but, against this, there is the fact that, in many cases, only a single vessel seems to be used (also *KUB* I 17 I 4f.).

2) 2-*e* (in the event, 3-*e*) refers to the gods honoured. Kammenhuber (1971: 143 ff.) emphatically proposes this solution. Admittedly its basis is surprising: in Old Hittite the difference in gender in the (lower) numerals is, she says, weakly developed (1971: 147). It is not clear what is to be understood by this. The missing gender-concord is however quite easily to be explained from a particular function of the Hittite neuter, one that may be called "complexive". The complexive neuter is usually still coupled with the (collective) singular; but, in the case of the numerals, this interpretation is really excluded because of their special meaning. It is to be remembered here that the replacement of the Old Hittite form of the anaphoric pronoun of the third person, nom.pl.common -*e*, by the original form of the nominative-accusative singular neuter, -*at* (< -*ed*), in Modern Hittite can only be explained from these syntactic conditions; that only the nominative plural common, and not the accusative plural common

too, is affected by this, must be due to a difference in the placing of the subject- and object-pronoun, which has not been sufficiently investigated.

Finally we must consider the question of stem-formation, which is decisive for the assessment of 2-*e*. Here I would like to put forward for discussion the question whether it would not be better to separate 2-*e* (and 3-*e*) from the basic stem, and assign it to the -*nt*-stem (thus 2-*e* = \*2-*ante*). From the point of view of the meaning, a collective formation (-*and*-) 'two in common' would fit excellently. For the ending -*e* in the nominative-accusative plural neuter, reference may be made to the occasionally recorded *waššante* 'covered' (*KBo* XI 29 o. 7). It would thus have remained as a nominal ending in the ritual formula 2-*e* *ekuzi* / *irhaizzi*, whereas, otherwise, it has — as is generally the case in the nominative-accusative plural neuter — been eliminated in favour of the competing ending -*a* to such an extent, that it merely occurs as a very rare variant. The cause of this lies in the striving for differentiation of nominal (-*a*) and pronominal (-*e*) declension. That -*e* has a firm place precisely in the case of \*2-*ante* in the ritual language would not come as a surprise. The regular descendant of the Indo-European dual ending of the thematic stems must appear in Hittite as -*e* (nom.-acc. neuter dual < Proto-Anatolian -*e* < PIE -*o-iH\_1*), corresponding to -*i* (< -*iH\_1*) in the stems ending in a consonant (cf. nom.-acc.pl.neut. *aniyatti* *IBoT* II 130 r. 5 from *aniyatt-* 'instalment, priestly dress of the Hittite king'). The confusion of the ending of thematic and consonant-stems corresponds precisely to the linguistic development of Hittite, which I cannot discuss here; a dual form \*2-*ante* would be just as possible as the singular form (accusative common) which \*2-*antan* actually is (with ending -*an* < -*o-m* instead of -*un* < -*ṃ*). When, after the — possibly very late — merger of the dual and plural categories, the endings -*e*/*i* (dual -*o-iH\_1*/*iH\_1*) and -*a* (from plural -*a-H\_2/ə\_2*) became functionless variants, which were, however, in part distributionally kept apart, \*2-*ante* might at first retain its dual ending. In the later process of the elimination of \*2-*ante* in favour of \*2-*anta* (attested in the writing 2-*ta*, see 3.2.1.5.) in historical Hittite, the ritual form then remained excluded; this stylistic peculiarity of the ritual terminology could then bring about the imitation \*3-*ante* *ekuzi* / *irhaizzi*.

So we see how Neu's suggestion as to the dual origin of 2-*e* is indeed vindicated by the assessment of this form as \*2-*ante*. While the ending -*e* quite corresponds to the norm in the pronominal declension, which the -*nt*-stems follow, it is something unusual, and its consistent use precisely in the case of \*2-*ante* must have a special cause.

In support of the interpretation of 2-*e* as \*2-*ante* I may adduce an example of a different kind: *KBo* XI 49 I 14' ff. 3 <sup>NINDA</sup>*par-šu-ul-li* (15') *tág-na-aš* <sup>4</sup>*UTU-i iš-ta-na-ni ZAG-na-az 1-an GÜB-la-az-ma 2-e da-a-i* 'he puts two crumble cakes on the altar of the sun-divinity of the earth, that is, one (one specimen) on the right side, and two (two specimens) on the left side'. Since in view of 1-*at-ta* (3.1.1.7.), 1-*an* should be considered as nominative-accusative singular neuter of the -*nt*-stem, 2-*e* should also be an -*nt*-stem. Therefore the example shows (with good probability) that the writing 2-*e* is actually used instead of \*2-*ante*.

A further possible support for \*2-*ante* is yielded from the passage *KUB* IV 1 II 10 f. *ma-ši-ia-an-te-ma-aš-ma-aš a-aš-šu* (11) *nu a-pi-ni-eš-šu-wa-an a-ku-wa-an-zi* (E. H. Sturtevant, *Language* x, 1934: 272 f.) 'as many [nom-acc.pl.neuter] as seem good to them, that many they drink'. This formation is of course patterned after the usual syntagma 2-*e*/3-*e akuwanzi*; it is crucial that here it is not the basic stem but the -*nt*-stem. Nom.-acc.sg.neuter *āššu* is syntactically correct, since the predicative adjective can appear in the neuter singular independently of the gender and number of the noun that goes with it; *apinieššuwān* is a "complexive" neuter singular. The emendation of *mašiyante* to \**mašiyanki* put forward by A. Goetze, *Neue Bruchstücke zum großen Text des Hattušiliš und den Paralleltexten* (1930: 36) and Sommer-Falkenstein (1938: 165 n. 1) is unnecessary.

### 3.2.1.2. 2-*at*

XXX 41 II 7' *nam-ma-kán 2* <sup>Giš</sup>*zu-up-pa-a[n X]* (8') *šu-un-na-i 2-at-kan wa-al-[hi-it]* (9') *2-e-ma-kán ta-wa-li-it šu-un-na-an-zi* 'Further they fill two *zuppa* in pairs. They fill two with *ualhi*, the other two with *taual*'. That *zuppa*- here shows neuter gender — otherwise only common gender is recorded, see H. Otten, *StBoT* xv (1971: 5) — need not be assumed, because of the possibility of a regular gender-discord (complexive-anaphoric neuter); the point is that 2-*at* here can be regarded as \*2-*ante* + -*at* (nom.pl.common 'they'), and so does not present a nom.-acc.pl.neuter \*2-*at*, which, in itself, would be conceivable. But 2-*at* is recorded with certainty as nominative plural common, *KBo* XX 83 I 4' 2-*at* 2-*at* (context fragmentary), something like '(they march) in groups of two, one behind the other; two by two' (cf. 1-*an* 1-*an* 'one after the other'). Nom.pl. common 2-*at* is formed to nom.pl.common, 2-*e* on the pattern nom.pl. common -*e* 'they' (older): nom.pl.common, -*at* 'they' (later). [2-*at* also 114/d I 11'].

### 3.2.1.3. 2-*AH-hi*

*KBo* XVII 74 II 31, non liquet. E. Neu, *StBoT* xii (1970: 21, 41, 92), operates with a 3 sg. pres. 'he doubles', i. e., 'takes double, takes twofold', Hitt. \**dayahhi* (?). On the other hand C. Watkins, *Akten der 5. Fachtagung der Indogermanischen Gesellschaft*, Regensburg (1974: 369), sees here the continuation of an Indo-European dual (-*aH<sub>2</sub>-iH<sub>1</sub>*), cf. Latin *duae*, Old Church Slavonic *dŭvě*. This view is decidedly favoured by the parallels to the passage adduced by Neu (1970: 41). The new example *KBo* XXI 14 o. 8' 9-*an* 9-*AH-ha iš-pi-ir-te-en* 'nine (or nine times?) ninefold have you spread out' makes the assumption of a special, non-verbal numeral-formation in -*hh*- necessary, but creates a problem in that, now, the locative to a numeral-abstract \*2-*ahh*- 'duality, doubleness' is rather to be envisaged ('in duality', i. e., 'divided' or 'doubled'; for the word-formation cf. *maninkuyahhi* XXIV 9 I 18 'in the neighbourhood'). A reading 2-*ih-hi* seems to me less suitable; for the consequences of this view for the assessment of the morphology, see (3.7.2.; 3.9.1.5.).

In this connection I may further call attention to the remarkable passage VII 1 II 9 f. It reads *ma-a-an* <sup>LÜ</sup>*MAŠDÁ-ma nu ka-ra-a-du-uš ku-wa-pi* (10) *ú-e-mi-ia-az-zi nu 2-ŠU 3-ŠU nu-uš e-iz-za-i* 'if he (i. e. the sacrificer) is however a poor man, as soon as he finds (gets) entrails, thus ... and then he eats them'. A finite verb is missing in the part of the sentence left untranslated, but the assumption of an ellipse (cf. A. Goetze, *Die Sprache* viii, 1962: 10) would be very difficult. The problem is solved if for 2-*ŠU*, 3-*ŠU* we introduce the reading \**t/dayahhi* (or the like; in the event, \**t/danki*), \**teriyahhi* (3 sg.), for then we obtain a parallel to II 1 f. — 'he makes twice three portions out of it' — to be recommended on the basis of the text-structure *nu 2-ŠU 7 ša-la-kar DUMU-li i-e-iz-zi za-nu-uz-zi* 'and then, for the child, he makes twice seven *šalakar* and roasts them'. The representation of the verbal form *teriyahhi* (to the verb *teriyahh*-, see 3.3.6.) 'he divides into three portions (?)' by 3-*ŠU* (really, 'thrice') becomes intelligible if there are locatives \**t/dayahhi* (or the like) 'in twoness, twofold, double' and \**teriyahhi* 'in threeness, threefold', which are homonyms with finite verbal forms of the meaning 'he divides into two, respectively, three parts' (or the like). Kronasser's translation of this passage (*Die Sprache* vii, 1961: 151) "sobald er die Eingeweide findet, dann isst er sie zwei mal und drei mal" goes against the Hittite sentence-boundary which is marked by *nu* and is also not a possible representation semantically — the entrails can only be eaten *once*.

## 3.2.1.4. 2-az

617/p II 10' ff. *ma-a-an 2-az-ma* (11') [KASKAL-az *na-aš-ma*] 3-az 4-az 5-az 6-az 7az KASKAL-az (meaning not clear); perhaps the assignment of this ablative form to the cardinal is not quite certain (= abl.sg. *damedaz*, 'other').

## 3.2.1.5. -nt-stem

Nom.-acc.pl.neut. 2-ta <sup>GIŠ</sup>*šar-pa* 'two <sup>GIŠ</sup>*šarpa*' KBo XIII 172 o. 10'. Because of KUR-*e-ta-aš* 'of the lands' XXIV 8 II 15 (-nt-stem), 2-*e-ta-aš* could also theoretically belong to the -nt-stem, but the probability of this is extremely small because of the -e-, which would then be hard to explain. On the other hand, the examples for 2-*e* (= \*2-*ante*) discussed in 3.2.1.1.1., probably do belong to the -nt-stem. For the mode of formation in general, see 3.1.1.4.2.

## 3.2.1.6. 2-el, 2-ela / 2-ila

This, meaning 'two together, both in common', is used in the meaning given by way of a pendent genitive; cf. 1-*el*, 1-*ela*, 3.1.1.5. Attestations allow an exposition of its use.

1) In the function of a nominative:

XIX 7 (BoTU 43) line 8 f. *na-at 2-e-la A-NA A-B[U-IA X]* (9) *kat-ta-an ú-e-ir* 'they came two together / both in common to my father'; KUB I 6 II 8 (= Goetze, *Hattušiliš*, 1925: II, 14) 2-*e-el iš-pár-zi-ir* 'they came away from there two together' (i.e. they were the only two); HG II § 97 (= § 191) j (= KBo VI 26) *tak-ku 2-el pí-di* 'if they (the girls) are on the spot two/both together' as a variant to the older (0<sub>6</sub> = XXXIX 34) *tak-ku ša-ni-ia pí-di* 'if they are in one and the same place'.

2) In the function of an accusative:

XIII 9 III 18 2-*i-la-pát ša-ku-wa-an-zi* 'the two of them will be looked at' (i.e. called to account, or the like).

3) Hypostasized, with flexional ending (cf. 1-*elaš*, *apašiluš* 3.1.1.5.):

VIII 50 III 18' f. (E. Laroche, *RHA* xxvi 1968: 20) *na-at-kán 2-e-lu-ušpát A-NA* <sup>GIŠ</sup>*MÁ ša-ra-a [pa-a-ir?]* (19') <sup>d</sup>*GIŠ.GÍM.MAŠ-uš* <sup>m</sup>*ur-ša-na-bi-iš-ša* 'thereupon they (-at) went the two of them / both together on board the ship, Gilgameš and Uršanabi'. The complete parallelism of the use suggests that the form cited HW, 302, npc. 2-*uš*, as short for 2-*eluš*, should be included here too (so already Kronasser 1962: 363). XIII 4 II

50 2-*uš-pát-at ak-kán-du* and XIII 4 III 83 2-*uš-ša-at* (= 2-*uš* + -*a* + *at*) *ak-kán-d[u]* 'two together both of them, they (-at) must die'. (XIII 4 II 49 dative plural is however not relevant.) Matters are perhaps different with regard to 2-*uš* XVI 29 line 25 (bis), but the syntax of the damaged passage is not clearly recognisable.

Whether the form 2-*el* continues a genitive form contained in the paradigm of the cardinal (cf. *anzel* 'of us', *šumel* 'of you') or represents a direct imitation on \*1-*el*, 1-*ela* and cannot stand attributively cannot be decided out of hand.

## 3.2.1.7. Declension

The declension is pronominal. For the analogically formed 2-*at*, cf. 3.2.1.2. The possibility of a direct reflection of the dual offers itself, if the grammatical determination of 2-*e* as accusative plural common and 2-*AH-hi* as plural common / nominative neuter is right. However, this is not very probable, because of better alternative possibilities. On the other hand a completely clear reflex of the dual would be present if 2-*e* were to be taken as nominative-accusative plural neuter of the -nt-stem, as is suggested in 3.2.1.1.1.

## 3.2.1.8. Reading

The reading is unknown. Etymological attempts would lead to the establishment of \**da-* (< \**dó-*), \**duwa-* (< \**dwó-*) or *d/tuma* (< \**duwó-*); they can be supported (see 3.2.2.—3.2.4.) but not rendered sure. The probability that an inherited word is present in the Hittite cardinal is however to be estimated as considerable. The view (HW, 302) that a phonetic realisation \**dā-* from *dān* 'second' and *dāiuga-* 'two years old' is directly to be inferred, is erroneous; see 3.2.3.—3.2.3.5. It is merely that certain variations in the phonetic form of these words permit an indirect reference to an analogical influencing by the cardinal, which may be shown to have *d-* as initial.

## 3.2.1.9. Meaning

While 'two' is a certain meaning, it cannot be decided whether the numeral-sign "2" also stands for a continuation of the Indo-European special indicator for 'both' (Pokorny 1959: 34 f.). The attempt to attribute the meanings 'two' (2-*e*) and 'both' (2-*uš*) to different formations, which

the data *HW*, 302 suggest, leads to the surprising result that 2-uš, at least in the quotations mentioned *HW*, may represent an abbreviation for 2-e-lu-uš (3.1.1.5.; 3.2.1.6.).

### 3.2.2. Forms of the Hieroglyphic Luvian cardinal 'two'

The accusative plural common is *tu-wa-i*; see Meriggi (1962: 138 and 1966: 128, 1967: 59). According to recent opinions, *tuwa''za* or *tuwi''za* (initial *t* or *d*) is to be read, for which I have received strong suggestions from Professor Neumann. The further phonetic complementations (1962: 164) 2-*i-a*, 2-*i*, 2-?-*ī*, are in agreement with this finding.

### 3.2.3. Hittite (\*)*t/dā* 'second'

To be compared is adv. *t/dān* 'for the second time'. This almost obsolete word stem seems once to have functioned as an ordinal. In addition, etymological attempts allow a stem \**duiia-* or \**duia-* to be postulated, but a reflex of it seems to be confined to Luvian. The usual Hittite ordinal is *t/damai-*, see 3.2.4. — 3.2.4.1.

#### 3.2.3.1. Locative *tā*

A remnant of the inflected paradigm is formed in dat.-loc. *tā*: XXXII 123 III 5 *ha-an-te-iz-zi UD-ti ... ta-a UD-ti* 'on the first day ... one the second day'; Old Hitt. *KBo* III 46 (*BoTU* 17, later copy) o. 14 *ta-a-ma ū-it-ti* 'but in the next year'.

For the formation of the form *tā*, cf. *kā* 'here, hither'. In the first passage there could be an error (*HW*), in the second, nasal reduction from \**tānma* (E. Neu, *StBoT* xviii, 1974: 98 n. 210). But the two quotations mutually support one another and contain a correctly formed and properly used form. In *IBoT* II 97 line 7' *da-a-an UD-ti*, the adverbial form *dān* (with the later phonetic realisation *d-*) has spread into the correct old syntagma *tā UD-ti*. For this cf. further *KBo* IV 4 III 58 *da-a-an KASKAL-ši* 'for the second time' (Goetze 1933: 130 f.); 2-*an* (+*za*) *pidi* 3.3.3.2.1.

#### 3.2.3.2. Adverb *tān/dān*

The form is an isolated nom.-acc.sg.neut. *tān*, *dān*, *HW* 209; older writing *tān*, according to H. Otten, *StBoT* xi (1969: 20) (with examples).

1) Adverbial use in the meaning 'for the second time, secondly, again'; examples for the independent use, see *HW*. Also with enclitic -*a*, f. i. *KBo*

XX 40 Col. b 6' *ta-a-na* 'at the second time, secondly' ... 8' *te-ri-an-na* 'and (finally) at the third time'; cf. also *KBo* V 2 II 59 2-*an-na* (later 3-*an-na*, 4-*in*, 5-*na*, 6-*na*, etc.).

2) The word group *dān pedaš*, something like 'of the second rank, second-ranking' has attracted much attention. It might be imagined that this expression could have arisen in syntagmas such as 'so-and-so is of the second rank / the second choice (*dān pedan*)' and was then used as an indication of quality either parenthetically ('it is the second choice', nominal phrase with no subject pronoun) or in the attributive or predicative genitive, in which case only the second part would be inflected, because, in the meantime, the stem *t/dā-* had become obsolete, apart from the fossilised form *t/dān*. Indeed some passages allow it to be supposed that there arose a new adjective (\*)*dānpeda-* (written with a space, *dān peda-*) 'of the second rank, second class, of the second quality', as a semantic opposition to *hantezzi(ya)-* 'of the first rank, first class, of the first quality' (cf. *HW* 1 *Ergänzungen*, 1957: 20), but clearcut examples are lacking. Cf. *KBo* III 1 + 68 (*BoTU* 23A) II 36 ff. *tāk-ku DUMU.LUGAL* (37) *ha-an-te-iz-zi-iš NU.GÁL nu ku-iš ta-a-an pi-e-da-aš DUMU-RU nu LUGAL-uš a-pa-a-aš* (38) *ki-ša-ru* 'If there is no king's son of the first rank, then shall someone who is a son of the second rank become king' (variant *da-a-an pi-e-da-an* in dupl. *KBo* XII 4 II 6'); X 13 III 4 ff. *A-NA* <sup>LÚ</sup>*SANGA* 1 *TÚG ha-an-te-i[z-zi-in]* (5) *pi-an-zi* <sup>LÚ</sup>*ta-az-zi-e[l-li-ya?]* (6) 1 *TÚG da-a-an pi-e-da-an pi-[an-zi]* (7) <sup>LÚ</sup>*ha-mi-na-a-i* 1 *TÚG* (8) *da-a-an pi-e-da-an pi-an-zi* 'To the *sanga*-priest they give a garment of the first quality, to the *tazzielli*-priest a garment of the second quality, to the chamberlain (??) a garment of the second quality'; *Bo* 3371 line 8 ff. (see H. Otten *AFO* xxiii, 1962: 38 n. 18) <sup>LÚ</sup>*KASŠ<sub>4</sub>.E* (sic) *tar-ah-zi ku-iš UŠ-G[I-EN]* (9) *ta-a-an pi-e-da-aš-ša* <sup>LÚ</sup>*KASŠ<sub>4</sub>.E ku-iš* (10) *LU-GAL-i UŠ -GI-EN* 'the runner who wins (in the race) may bow, and also the runner who comes in second place (lit. he who is of the second place / rank) may bow before the king' (cf. also *IBoT* I 8 II 4–6; I 13 V 14 ff.).

The verb *tān pedaššahh-* (Goetze, *Madduwattaš*, 1928/68) does not belong here, for it does not mean 'to make someone of the second rank' (so *HW*, 168, 209), but 'to put someone again (*tān*, § 39.1) in this place / in his rank'; see already H. Otten, *StBoT* xi (1969: 20). The verb *pedaššahh-* is based on a hybrid stem \**pedašša-*, which can be abstracted from the — predicatively used — genitive *pedaš-šaš* 'of his place', for *pedaššahh-* is equivalent to \**pedaš-šaš iya-*, lit. 'to make someone of his place'. In other texts *pedaššahh-* (without *t/dān*) has the meaning 'to bring to the spot' (cf. H. Otten, *Hethitische Totenrituale* (DAWBIO



XXXVII) 1958: 143); this use is clearly to be brought into connection with the expression *pe/idišši* 'on the spot', lit. 'in its place'.

3) A univerbation with *dān* is probably present in the word <sup>UZU</sup>*dān-hašti-* (neuter), which Neumann (1964: 51) (cf. *HW 3 Ergänzungen*, 1966: 31) has interpreted as 'double bone'. The univerbation may be relatively old, for neither member appears any longer in historical Hittite with the presupposed form (nom.-acc.sg.n. *hašti* with *-i* < *-ei* or *-i* against *haštai* with *-ai* < *-ēi* or *-ōi*) or meaning (*dān* \*'doubled').

### 3.2.3.3. *tāuga-*, *t/dāiuga-*

The stem *t/dā-* which is comprised in the compound *tāuga-* (thus the phonologically correct form; beside it *tāiuga-*, *dāiuga-*) 'two years old' has placed an important part in the determination of the numeral "2" in Hittite; see Hrozný (1917: I, 93); Friedrich *HW* (1952: 302), Kronasser (1962–66: 362). Identification of the first element *t/dā* with the expected descendant of PIE *\*d(w)ó-* (stem) or even nom.acc.masc.dual *\*d(w)óh<sub>1</sub>*, is, however, not convincing; since the compound must be relatively old, the Indo-European compound-stem *\*dwi-* (cf. Greek *δι-* Latin *bi-*, Vedic *dvi-*, etc.) should appear in the first element. Kronasser's comparison with Greek *δῶδεκα* is not apt; the latter is a dvandva not a bahuvrīhi like Hitt. *tāuga-*. For a better explanation, see 3.2.3.4.

### 3.2.3.4. Etymology

With regard to the etymology of *t/dā-* I follow (with an inessential modification) a suggestion made to me by Professor Cowgill (Yale). Hitt. *t/dā-* goes back to *\*doyó-* (his *\*dwoiyo-*) 'twofold, double', a phonological variant of PIE *\*dwoyó-*, cf. Greek *δοιός* and Old Church Slavonic *dŭvójŭ* (initial *dŭv-* perhaps originally from *dŭva*). Adv. *tān* < *\*doyóm* (Greek *δοιόν*) represents a correct form of the paradigm (nominative-accusative singular neuter). The slight semantic shift is simply explained; for instance, 'to make something doubled' is, in many situations, equivalent to 'to do an action twice / for the second time'; similarly 'to give something twofold' = 'to give something twice'; cf. XIII 9 + IV 7f. (E. von Schuler, *Festschrift Johannes Friedrich zum 65. Geburtstag am 27. August 1958 gewidmet* (1959: 448, 451) *na-aš-za ku-it ku-it da-a-an har-zi* (8) *hu-u-ma-an ta-a-an pi-eš-ki-iz-zi*, where one is tempted to translate 'whatever he has taken for himself, he must replace everything twofold (not: again)',

although, according to Hittite interpretation, *tān* here = 2-ŠU 'twice', as follows from other texts. The compound *tāuga-* must thus originally have meant 'having the yoke twofold / for the second time' or 'having the time-span *\*H<sub>1</sub>ugó-* twofold', that is then 'two years old' or 'just over two years old'.

Little attention has hitherto been paid to the cause of the variation of the initial writing TA/DA. If *d-* > *t-* has come into being regularly initially before unstressed *a* (at the stage *\*dayá-* or *\*daá* > *\*tayá-* or *\*taá* with secondary contraction to *tā*), as I would assume — only this assumption will correspond to the complicated graphical data, cf. *tan-garant-* 'sober' < *\*donkró-nt-* = German *zanger* — then the dominant Modern Hittite form of the initial with *d-* must be due to analogical influence of the cardinal, which may then unambiguously be determined as the descendant of PIE *\*d(w)ó-*. Before directly following accent, initial media (and media aspirata) stay preserved at least before *a*, cf. *dāi* 'takes' (root *deH<sub>3</sub>*) and *dāi* 'puts down' (*\*d<sup>h</sup>óH<sub>1</sub>yei*); occasional deviant writings can easily be explained on the basis of this assumption. So Professor Cowgill's etymology permits a satisfactory explanation both of the morphology and also of the varying phonetic form of *t/dā-* and *t/dān*, is thus well based, and is to be preferred to the thoroughly unsatisfactory earlier assumptions.

### 3.2.4. Hittite *t/damai-*

Hitt. *t/damai* 'other, second' is an extension of the wordstem discussed in 3.2.3. — 3.2.3.4. The anachronistic form *\*doyomōi-* obtained by transposing this into Indo-European terms allows the formation and phonology clearly to be recognised. Undoubtedly we have a suffix *-mo-*, which reappears in various languages in ordinals, cf. e.g., the Vedic new formation *pañcamá-* 'fifth' (5.2.5.). Whether this suffix was obtained secondarily by false division from ordinals such as *\*sebdmó-* 'seventh' and then carried over other ordinals, or is to be identified with the suffix in words such as *\*medhyo-mo-* 'middle', *\*upo-mo-* 'uppermost' can be left out of account. Passage to the *ai*-stems no doubt happened late by analogy with other pronouns (*dapi-* 'whole', *tagai-\** or *taki-\** 'other'). From *\*doyomōi* there developed *\*taamái-* (finally *\*tāmái-*) via *\*dayamái-*; the long vowel of the first syllable, due to contraction, was not shortened in the unstressed position until after the development of intervocalic *m* to *mm* after a short syllable in the neighbourhood of the accent was com-



pleted (cf. H. Eichner, *MSS* xxxi, 1973: 100 n. 88). An occasionally appearing *mm* was no doubt originally taken over secondarily from the pronoun of the first person; cf. for instance the opposition XIII 35 II 3 f. *am-me-el* 'of me': *ta-me-el* 'of another'. The occasional long vowel of the first syllable is decidedly secondary (f.i. *KBo* VI 5 III 1 *da-a-me-e-da-ni* 'to another' as a Modern Hittite variant writing for *ta-me-e-da-ni*, *HG* I § 28); it has been taken over from *t/dān* (3.2.3.2.). One must be clear on the point that the single *-m-* of *t/damai-*, which, because of the lack of parallel formations, can hardly have originally been introduced analogically, shows a late — Primitive Hittite — shortening of an unstressed long vowel which is due to contraction. Unstressed inherited long vowels (from Indo-European long vowels or short vowel + tautosyllabic *y*, *w*, *H<sub>1/3</sub>*) were already shortened in Primitive Anatolian time, long before the development *-m-* > *-mm-*, which even appears in Primitive Hittite *m* originating from *w*. With this, the etymology put forward in 3.2.4. may be sufficiently proved. Initially, *ta-* is phonologically regular; for *da-* the same source as for *dān* (3.2.3.2.) is to be assumed. See now O. Carruba, *RLL* cviii (1974: 590) on Hitt. "*damai-* 'altro', che etimologizziamo, dividendola nei suoi componenti *\*duwa-ma-i-*, con tematizzazione in *-i* di un antico *\*duo-mo-* 'secondo, altro'".

### 3.2.4.1. Inflection

The inflection is pronominal, gen. *tamēl*, dat. *tamēdani*, etc.; in all forms the accent is situated consistently on the second syllable (paradigm with deuterostatic accent); its vowel can be written plene, which is not the case for the vowel of the next following syllables (*tamēdāni*, etc.). In the dative(-locative) there is an old secondary form *tamatta* (e.g. XLIII 23 o. 5 *ta-ma-at-ta-ma* KUR-e 'in another land however'), which is to be compared with *kuwatta* 'where, whither' and *apadda* 'there, thither', and, further, with Lycian *eptte* 'to them' (< *\*ābātās*, see H. Eichner, *MSS* xxxi, 1973: 81).

### 3.2.4.2. Meaning

As to the meaning of *tamai-*, the only peculiarities which I point out here are *Maštigga* III 5 (L. Rost, *MIO* i, 1953: 358) 'one again, one new one' and XXX 10 r. 15 (with dupl. 11 r. 11') *ta-ma-at-ta pi-e-di* 'at a repeated time, repeated again and again'.

### 3.2.4.3. Derivatives

*tameuma(n)-* 'belonging to other people / to the enemy, enemy (adj.)' (cf. *HW* 208 — *KBo* XVI 46 o. 11' is to be added) is a derivative of *tamai-*, further the verbs *tameumeš-* and *tameummahh-* (mid.) 'to alter (intr.)'; the additional meaning 'to be angry, become annoyed' (examples see E. Neu, *StBoT* v, 1968: 166) is a calque on Akk. *nakāru* (von Soden 1965–81: 718 ff.); cf. *KBo* I 11 r. 23 *šarru ut-ta-ka<sub>4</sub>-ar* 'the king gets into a rage (?)'.

The adjective *damme/ili-* 'fresh, undisturbed, unworked' (so Güterbock with convincing arguments, see *HW* 3 *Ergänzungen*, 1966: 31) does not belong to *tamai-* (against N. van Brock, *RHA* xx, 1962: 122) but to the family of *dammēda(r)* 'plenty, abundance'; it must have been used originally of wild, proliferating plant-growth in nature. The *-mm-* of the word is justified only with this derivation, which is also semantically without objection. It must however be admitted that the expressions *dammili pedi* and *tamedani pedi* have, to a great extent, mutually approximated; cf. the examples cited by E. Neu, *StBoT* xviii (1974: 21); also, e.g. XL 17 IV 19' *gi-im-ri ... ta-me-e-da-ni pi-e-di* 'in the plain ... at another place'; an example such as VII 13 I 26' *ta-me-li* could be explained from this (with *t-* and *-m-*; but cf. *ta-mi-e-ta* VIII 22 III 3).

This short conspectus of the derivatives of *tamai-* makes plain how far this word is from being limited to its function as an ordinal. For the most part the meanings of Hittite words appear to us to have a very wide range. It is precisely in the case of the lower numerals that we must not expect that the concept — in some sort apt for modern languages — of the semantic categories "cardinal" and "ordinal" can materialize in Anatolian as lexeme-classes (of which the individual members have in the first place or exclusively pure numeral concepts attached to them).

### 3.2.5. Hittite *tagaiš* \*/*takiš* \*

Dat.sg. *takiya ... takiya* (correlative, *HG* §§ 77, 82) too belongs to a word *tagaiš* \* or *takiš* \* 'other, second', which is to be regarded as a derivative of *tā-* (3.2.3.). At the base of it there is a formation *\*doyo-ghó-* (parallel to *\*doyo-mó-*, 3.2.4. — 3.2.4.1.; less probably, *\*do-ghó-* directly from the cardinal), which contains a suffix which is doubtless present in Gothic *manags* 'many' (*\*mon-o-gho-*) and Old Church Slavonic *mūnogŭ* (*\*mṇ-o-gho-*). The initial writing *tā-* and the absence of plene writings in the first syllable correspond to what is phonologically to be expected. The word

became extinct early and is no longer affected by the workings of analogy which are present in the case of *tamai-*.

The nature of the use deserves attention; it departs markedly from that which we see in Latin *alter ... alter*. *HG* ii § 77 *ka-a-aš-ma ta-ki-ya ut-ne-e ka-a-aš-ša ta-ki-ya ut-ne-e-ya* '(if) the one is in the one land and the other in the other land'. Here *kāš ... kāš* functions as the normal correlative distributive; *takiya ... takiya* stands as an additional correlative for emphasising diversity. In English what is meant must be reproduced in the following way: 'if the one is in a land *other* than where the *other* one is'. The Hittite formulation is a consequence of the circumstance that, in this language, there is no direct possibility of expressing relations such as 'bigger than' and 'other than'. The etymological connection with *tā-* (3.2.3.) is thus correct; a connection with PIE *\*two-* ... *two-* (as in Vedic and Avestan) would leave unexplained the type of use which is characteristic of *takiya*.

### 3.2.6. Hieroglyphic Luvian *tu-wa-na*

For this form Meriggi (1962: 135, 1966: 59) proposes the meaning 'secundum' or 'duplicem', which is perfectly possible. The series of signs can be interpreted as *tuwān* (< *\*dwoyóm* cf. Hitt. *t/dān*, or *\*dweyóm*, cf. Vedic *dvayá-*) or *tuwin* (initial *t* or *d*), cf. Lycian *kbi* (3.2.7.).

### 3.2.7. Lycian *tbi*, *kbi*

Lycian B *tbi*, A *kbi* 'another, second' (G. Neumann 1969: 394) is an *-i*-stem from an original *-ya*-stem, as can indeed be seen from the derivative A *kbijehi-* 'foreign' (< *\*dwiyasi-*); for an old *-i*-stem, *\*kbehi-*, would be expected as the derivative (otherwise E. Laroche, *Bulletin de la Société de Linguistique de Paris* lxii, 1967: 47). The protoform *\*dwi(y)o-* can be analysed as *\*dwi-ó-* or *\*dwi-yo-*. Both possibilities are plausible; for *-o-*, cf. *\*sebdmó-* / *septmó-* 'seventh'; for *-yo-*, *\*alyo-*, *\*anyo-* 'other'. It is important that the stem *\*dwi-* functions as the basis of derivation, as in Indo-Iranian (Vedic *dvitīya-*, Gāthic *daibitiia*, YAv. *bitiia* 'second'). Elsewhere this stem is very rare; it has its place in composition (as front element) and in adv. *\*dwis* 'twice' (gen.abl.sg.), also in some derivatives (cf. 4.). But originally *\*dwi-* must have stood beside *\*dwo-*, as *\*k"i-* is found beside *\*k"o-* in the question-pronoun. The semantic difference between such stem-doublets has not been sufficiently investigated. For the retreat of the stem *\*dwi-*, in spite of support by *\*tri-* 'third', must be

due to some special circumstance. It is to be supposed that this circumstance is to be seen in the fact that the special meaning of the stem *\*dwi-* overlaps with one of the types of use of the Indo-European dual (the "natural", "anaphoric", "elliptic" dual), and that, therefore, the stem *\*dwi-* was replaced by the use of the dual by itself. So precisely those cases of the survival of *\*dwi-* can be understood to whose assessment Lycian offers an important contribution. The possibility of explanation sketched here is intended more as a call for further investigation than as a concrete suggestion as to solution. *kbijēti* 44c4 is a derivative of *kbi-*; a further derivative, used as a personal name, is *kbijētezi huzetēi*, from a newly-discovered inscription, see G. Neumann, in: J. Borchardt et al. (eds.), *Myra (Istanbuler Forschungen XXX)* (1975: 152). He compares the personal name(s) *trijētezi* 7,2; 8,2, which is derived from *\*tri-* 'third' (?).

### 3.2.8. Hittite *duianalli-*

Hitt. <sup>LÚ</sup>*duianalli-* 'officer of the second rank' (Güterbock, see *HW* 2 *Ergänzungen*, 1961: 25) is, in my view, a loan-word from Luvian; for justification, see 3.3.3.4. – 3.3.3.5.2. Here we are concerned with a derivative by means of the suffix *-alli-* from a basis *\*duiana-* 'to be found in the second place' (ord. *\*dwiyo-* 'second', cf. 3.2.7. + *-no-* suffix indicative of position – cf. Vedic *dakṣiṇá-* 'right'), or *\*dwiyan* 'secondly' (adverbial nominative-accusative singular neuter). It is not necessary, with N. van Brock, *RHA* xx (1962: 111 No. 209), to postulate a word *\*duyana-* 'deuxième'. Having in mind the etymology, there is no need for */dwia-/* or */dwiya-/* to be read, for *w* (consonantal *u*) in such a position has perhaps become *u* (vocalic *u*) for Hittite; see H. Eichner, *MSE* xxxi (1973: 82). So the no doubt careless reading *duyanalli-*, *HW*, 227, could be right.

F. Sommer's old postulate (*IF* lix, 1948: 205 ff.) *\*duya-* 'quartus' < *\*dur(i)ya-* = Vedic *turīya-* rests of an understandable misinterpretation and seems, indeed, in the meantime generally to have been abandoned.

### 3.2.9. Lycian *tbi*su, etc.

Lycian B *tbi*su 44 c 41, 64; A *kbihu* 44 b 6, 7 (bis) – Neumann (1969: 394) – presumably means 'twice'. Probably we have here before us an endingless locative, *\*dwišwé* 'twice', of a *-wo-*derivative to *\*dwis* 'twice', with which Old High German *zwiro* 'twice' and, quite probably also Av. *bižuuat* 'twice' (*\*dwis-wnt* – cf. 8.3.1.6.) is to be compared. If we only consider Lycian, an adverbial nominative-accusative of a syncopated *-wa-*

stem would also seem possible (-wan > -un > Lycian -u), but a Hieroglyphic Luvian piece of evidence (3.3.4.1.) is in opposition to this explanation, which might at first sight be preferred to the one given first.

Lycian B *tbiplē* (multiplicative, distributive, or the like) could be derived from *\*dwiplom* (cf. Latin *duplum*) or *\*dwipelom* 'twofold, double'. For another possibility, see Neumann (1969: 394).

The lack of syncope in *tbišu* / *kbihu* and *tbiplē* causes difficulties. Probably the initial has been analogically affected by *tbi/kbi* 'other, second' (3.2.7.), perhaps especially by an adverbial nominative-accusative singular neuter *\*tbi/\*kbi* 'for the second time'. It is less probably a matter of a derivative of the stem *\*dwi(y)o-* right from the beginning.

For Lycian *kbišni* and *tupme*, see 3.13.1.1.

### 3.2.10. Miscellaneous Hittite items

These are written with the numeral sign "2" with Hittite phonetic complements, in diverse value.

#### 3.2.10.1. 2-an-ki, 2-ki

The meaning is 'twice, to a double level' (HW, 302); the reading uncertain, possibly *\*t/dānki*.

#### 3.2.10.2. 2-an, 2-anna

2-an and 2-anna occur with a meaning 'the second, secondly, the second time'. The Hittite reading is presumably *t/dān* and *t/dānna*. The complex 2-an-na is to be analysed as 2-an + -a 'and, but' (geminating) and should not be regarded as a special numeral formation in -anna, as has hitherto happened (HW, 302, according to Sommer 1932: 272 n. 1). Cf. 888/z IV 7' 2-an-za pi-di ... 3-an-na pi-di ... 4-an-za pi-di (particles -za and -a on the numerals); KBo V 2 II 59 ff. 2-an-na ... 3-an-na ... 4-in ... 5-na ... etc.

#### 3.2.10.3. 2-iš

2-iš 'twice'? XXXI 143 II 1, 8, 15 f.; cf. E. Laroche, JCS i (1947: 205). If the meaning is correctly determined, a variant of 2-an-ki, 2-ki (3.2.10.1.) could be taken into account — thus something like *\*t/dānkiš*. Theoretically, a reading *\*duiš* would come under consideration as a descendant

of PIE *\*dwis* 'twice' (Latin *bis*). The form *\*duiš* (instead of the phonologically regular *\*duš*) would have been retained or restored in analogy with the other multiplicatives in -iš; cf., further, analogical *kuiš* 'who, which?', beside the rarely evidenced phonologically regular *kuš* (< *\*kuiš* < *\*k<sup>w</sup>is*). If we consider such a possibility, we must at all events be aware that it is not very probable.

#### 3.2.10.4. takšan

2-an = *takšan* (reading made certain by alternative parallel passages) in the expression UTÚL<sup>HLA</sup> *tak-ša-an* (or 2-an) *šar-ra-(at-)ta-ri* 'the things to eat are halved (?)'; see the quotations HW 2 *Ergänzungen* (1961: 32) and E. Neu, StBoT v (1968: 153) below. Probably the juxtaposition *takšan šarra* here shows a semantic shift from 'to divide into two parts, to halve' to 'to divide into (as many) parts (as you like), distribute, divide out'; similar to German *entzwei* (J. L. C. and W. G. Grimm, *Deutsches Wörterbuch*, 1854–60: ii. 672). At all events this meaning seems to me to fit better in the situation of use — distribution of the portions of food to the religious "gathering" — than 'to halve' (so E. Neu, StBoT v 1968: 153). Nevertheless for *takšan šarra* the meaning 'to divide into two parts, to halve' (Friedrich 1959: i § 31) is also evidenced in *takšan arha šarra* 'to divide (youths) into two groups' (XVII 35 III 9). *takšan šarran* 'half-share, half; piece?', too, is perhaps originally nominative-accusative singular neuter of the participle (Kronasser 1962–66: 532); but an -a-stem *takšan šarra* (HW 204: -aš XIII 4 I 56, now rendered sure by dupl. XL 63 I 5) is attested. For its part *takšan* could equally be nominative-accusative singular neuter to *takš-* 'to join together'. Originally *takšan* was certainly used, like Greek σύμβολον, for the indication of two pieces, which, joined together, gave a complete whole. So in Anatolian territory a new formation came into being, which shows semantic properties similar to Proto-Indo-European adj. *\*sēmí-* 'half' (Pokorny 1959: 905 f.), originally probably 'belonging to a unity, forming a whole' (word-formation difficult; perhaps double vřddhi-derivative, zero-grade stem *\*sm-* 'one', to which *\*\*semó-* 'unit', to which *\*sēmí-* 'forming a unit'), cf. Gonda, *Reflections on the numerals 'one' and 'two' in the ancient Indo-European languages* (1953: 35 ff.) (with a partly differing semantic argumentation). In *takšan* we have the only directly palpable Anatolian term for a fraction.

Whether adv. *takšan* (HW 204) 'in common, together, two together' is also a participle, or an endless locative of a substantive (*\*)takšan-* 'connection, juncture' may be left undecided. If IX 34 III 29 *ták-ša-ni*

(not clear to me) were to mean, not 'in the middle', but 'in common', there would be an argument in favour of the latter possibility. We must be clear that the homonymy of *takšan* 'half, a half' and *takšan* '(also) two together' (e.g. XXXII 135 I 9; Friedrich 1959: i § 53) has led to the first word being written with the numeral sign "2" (2-*an*). Admittedly "½" also occurs in the meaning 'a half' (½-*AM* XV 31 II 28, Goetze, *Verstreute Boghazköi-Texte*, 1930: 24 I 38 f.); ½<sup>HLA</sup> XVII 28 IV 48, *Bo* 1078 III 7' ff.), but up to now there are lacking Hittite complementations — XX 99 II 11 contains only particles — or parallel passages with the phonetic writing *takšan*. So it is not to be precluded that there exists a further word for "a half" (not homonymous with *takšan* 'two together' and thus not written 2-*an*).

I have not investigated whether in ornithomantic texts 2-*an* really means 'half-way' (a suggestion of Sommer's, see *HW* 302). At all events easily misleading comments *HW* 302 and *HW* 2 *Ergänzungen*, 32 (as if 2-*an* 'half-way' = *takšan* were proved) are to be modified.

### 3.3. The Anatolian numerals 'three' and their derivatives

#### 3.3.1. The Hittite cardinal

The number is written using the numeral sign "3", or sequence *teri-*, both with phonetic complements. No clear evidence can be adduced for an -*nt*-stem.

##### 3.3.1.1. Forms written with the numeral sign

Plural common nom.	3- <i>i-e-eš</i> X 55 line 12 3- <i>e-eš</i> XV 31 I 6; <i>IBoT</i> I 36 II 35, III 13
acc.	3- <i>uš</i> IX 31 I 11 (in the margin); <i>KBo</i> XII 85 I 48
gen.	3- <i>aš</i> , see 3.3.1.1.1.1.
dat.	3- <i>ta-aš</i> 1175/u r. 7' (- <i>nt</i> -stem?)
instr.	—
abl.	3- <i>az</i> , see 3.3.1.1.1.
Plural neuter nom.-acc.	(3- <i>e</i> , see 3.3.1.1.1.2.)

#### 3.3.1.1.1. Comments

**3.3.1.1.1.1.** Gen. 3-*aš* and abl. 3-*az*. *IBoT* II 5 r. 4 ff. [<sup>NINDA</sup><sub>t</sub>]a-*pár-wa-a-šu-uš ŠA* UDU. [NITÁ] (5) [še-*i*]r 3-*aš* <sup>UZU</sup>ÚR-*az n*[a-*aš-ta*?] (6) *šar-ra-an-zi* 'A *taparwa*<sub>a</sub>-*šu*-loaf ('men's virility loaf') from rams. On top it is covered with the penises (<sup>UZU</sup>ÚR 'penis') of three of them. It is divided (distributed?)'. (Not understood by A. Goetze, *Journal of Cuneiform Studies* ii, 1948: 31 and *HW*: <sup>UZU</sup>ÚR.) Cf. XX 78 III 5' ff. <sup>NINDA</sup>ta-*pár-wa-šu-uš-wa* <sup>d</sup>U-*aš* NINDA *har-ši-iš* (6') *še-ir-wa-kán* UDU. NITÁ-*az* 3-*az* (7') <sup>UZU</sup>ÚR-*az* 't.-bread is the normal bread of the weather-god. On top it is covered/to be covered with three ram-penises'. The ablative UDU. NITÁ-*az* (instead of the genitive) is part of a badal construction or is due to case-attraction. Whether 3-*az* belongs to <sup>UZU</sup>ÚR-*az* or to UDU. NITÁ-*az* is unimportant. For the titbits <sup>UZU</sup>ÚR cf. also IX 32 o. 20 f. (H. Kümmel *StBoT* iii, 1967: 120 below) and *KBo* IV 2 II 10. E. Laroche (1967: 170 n. 31) gives the quotations for the *taparwa*<sub>a</sub>-*šu*-bread; for the operation of the covering which is described *KUB* II 10 IV 16 ff. (cf. *KBo* XX 67 III 20 ff.) in all details, cf. above all XI 13 V 11 f. *še-ir-ra-aš-ša-an ŠA* UDU. NITÁ (12) 3 <sup>UZU</sup>ÚR *wa-aš-šu-u-ar*! (13) *wa-aš-šu-wa-an-zi* 'And on it three ram-penises are to be put as a covering' (figura etymologica). As a consequence of these parallels the forms 3-*aš* and 3-*az* may, despite the elliptic (or brachylogical) mode of expression, be clearly determined from the actual quotations.

**3.3.1.1.1.2.** Nominative-accusative plural neuter 3-*e*: IX 30 IV 7 3-*e*! *ir-ha-a-iz-zi*; *IBoT* I 2 III 10 f. LUGAL-*uš* 3-*e* (11) *ir-ha-a-u-wa-an-zi* 'The King has task of bestowing a round of three' (for the construction cf. Friedrich 1940–46: i § 274 n.); 355/t r. 8' 3-*e* *irha*[X]; *Bo* 2692 V 23' 3-*e e-ku-zi*; 428/s II 3'. Possibly 3-*e* belongs to the -*nt*-stem; for discussion of the problem, see 3.2.1.1.1.

#### 3.3.1.2. Forms written with *teri-*

Plural gen. *te-ri-ia-aš* UD-*aš* XLIII 60 (*Bo* 2533) I 9' '(a distance) of three days' (Güterbock 1957), see *HW* 2 *Ergänzungen* (1961: 25).

#### 3.3.1.3. Inflection

The pattern is nominal or mixed nominal-pronominal. Gen. *teriyaš* (3-*aš*) follows the nominal pattern, dat. 3-*ta-aš* and nominative-accusative neuter 3-*e* the pronominal, unless both forms belong to the -*nt*-stem. The

pronominally inflected forms, if these exist, are nearest to the paradigm of *kuiš* 'who?' (dative pl. *kued/taš*, nominative common pl. *ku-i-e-es*, occasionally *ku-e-eš*, nominative-accusative neuter pl. *ku-e*, rarely *ku-i-e*).

### 3.3.1.4. Etymology

Hitt. *teri-* is clearly a descendant of the Proto-Indo-European cardinal *\*tri-*. The nominative masc. *\*tréyes* should regularly result in Hitt. *\*terēš*, which was altered to *\*teriēš* (written 3-*i-e-eš*; in the -*i*-stems -*iēš* in general replaces the ending -*ēš* < -*éyes*). Gen. *\*triyóm* (with *iy* instead of *y* by Sievers' Rule) or *\*tṛiyóm* should really give *\*tariyan* or *\*tariján* > ? (probably *\*tariyan* rather than *\*tarriyan*). The old ending -*an* is, as usual, replaced by -*aš*. For the variation in the anaptyctic vowels cf. nom. *gerēz* 'flood' (K. K. Riemschneider, *Otten Fs.*, 1973: 279); gen. *karittaš* < PIE nom. *\*gróyts*, gen. *\*grítós* (J. Schindler 1972: 35) or nom. *karaiz* (equivalent to *\*gróits*). The other variant of genitive *\*tréyóm* should lead directly to Hitt. *\*teriyān*, *teriyaš*. The initial of the original nominative appears to have been introduced analogically into the whole paradigm. PIE *\*tríns* must have led to Hitt. *\*tariš*; as elsewhere, the ending is altered to -*iuš*. The marked feminine forms (n. *\*tis(o)res*), which were perhaps not obligatory in Indo-European, have been eliminated in Hittite, in accordance with the general course of development.

We must allow for the possibility that forms of a word nominative-accusative singular neuter *\*teriyān* < *\*tereyān* < *\*treyóm* 'group of three' merged with the paradigm of the Hittite cardinal. Anyone who, because of 3-*e* and 3-*aš*, wants to assume a pronominal type of inflection, could in such a way explain the deviant gen. *teriyaš* (3-*aš*). *\*treyóm* 'group of three' would be a substantivized adjective *\*treyó-* 'consisting of three, threefold' (Vedic *trayá-*), which is derived by means of a thematic vowel and Kurylowicz *vṛddhi* from *\*tri-*. In this connection the existence of a *vṛddhi*-derivative with another position of the stem-infix *e*, *\*teryo-*, too, would be theoretically possible, but without support from non-Anatolian material.

Finally it may be noted that the widespread rejection of an anaptyctic vowel in words like *teri-* has never been sufficiently supported, in particular the assumption of "Pleneschreibungen für nicht gesprochene Vokale" (Kammenhuber 1968: 204) is completely unfounded. It has for long been supposed that the writing of the Aryan numeral compound *ti-e-ra-wa-ar-ta-an-na* (initially, consistent *ti-e-*, otherwise with variants) could depend upon the influence of the Hittite word for "3"; see Mayrhofer, *Indo-*

*Arier* (1966: 16 n. 1, 19 with n. 1). The unexpected plene-writing is perhaps to be explained by the fact that the anaptyctic vowel came secondarily under the word-accent; a cause for the use of the initial TI instead of TE is however not apparent.

### 3.3.2. The Hieroglyphic Luvian cardinal

The numeral-sign "3" appears with phonetic complements; see Meriggi (1962: 164). The accusative 3-*i-a* is probably to be read as *\*tari"za* (or *\*tri"za*); cf. 3.2.2. 3-*i*, too, is possibly *\*tari"za/i*. It should be noted that the numeral-sign "3" (beside its variant augmented by a "thorn") can also be used as a phonetic sign. In Laroche (1960: no. 388), the values *tara/i* or *tra/i* are assigned for "3" and (no. 389) the values *tar* or *tra* for "3" + "thorn" (for which Meriggi 1962: no. 370 has only *tar*). For systematic reasons, it is, however, preferable that the values *tara/i* should be assigned to either sign; if either of the two vowels assumes zero value, *tar(a/i)* or *t(a)ra/i*, the signs represent *tar* and *tra*/*\*tri*. In particular the non-recognition of the value *tari* for "3" + "thorn" on the part of Meriggi and Laroche leads to bizarre readings, e.g. *tar-su-u* 'thrice' (Lycian *trisu*!), SPEAK *ta-tar-ā* (Cuneiform Luv. *tatariyaman*-!).

### 3.3.3. The Hittite ordinal and related material

#### 3.3.3.1. *teriya-*

*KBo* XVI 49 IV 2' *nu a-pa-a-aš te-ri-aš-mi-iš* (context fragmentary) '(±) that one is the third of them'; for the surprising use of the personal pronoun (lit. 'that one is their third', cf. *KBo* III 20 I 4 [*ha-a*] *n-te-iz-zi-ya-aš-mi-iš* LUGAL-*uš* 'my earlier king' i.e. 'the king previous to me'; *KBo* XX 32 III 13 *ha-an-te-iz-zi-ya-aš-mi-iš* 'their first', i.e. 'the first of them'. *KBo* V 2 II 60 3-*an-na hu-up-ru-uš-hi-in* 'and the third tureen (he libates for Kumarbi)'). The analysis 3-*ann* + -*a* 'and' (cf. already Hrozný 1917: 95 f.) is necessary; Sommer (1932: 272 n. 1) is to be rejected. See also *teriyala-*, 3.3.3.3.

#### 3.3.3.2. *teriyān*, *terin*

##### 3.3.3.2.1. Forms

*teriyān*, *teriyānn* + -*a* (3-*an*, 3-*an-na*, 3-*na*), *terin* (*\*3-in*) 'thirdly; at / for the third time'.

*KBo* XX 40 V 4' ff. [nu?] 3.TA.ÀM *tar-ku-wa-an-zi*[-] // (5') <sup>LÚ.MEŠ</sup>*zi-in-hu-u-ri-eš* <sup>SAL.MEŠ</sup>*zi-in-t[u-hi-ša?]* (6') *SÌR-RU ta-a-na hu-u-ma-an-ti-iš* (7') *tar-ku-wa-an-zi* <sup>SAL.MEŠ</sup>*zi-in-tu-hi-e-eš* (8') *Ú-UL SÌR-RU te-ri-ya-an-na* (9') *iš-hi-ma-na-an ap-pa-an-zi* (10') <sup>GIŠ</sup>*dINANNA<sup>HLA</sup> ha-az-zi-ya-an-zi* (11') [<sup>GIŠ</sup>*a*] *r-ga-mi wa-al-ha-an-zi* '(±)' 'They dance three times. // (First) the *zinhuri*-men (dance and) the *zintuhi*-women sing. At the second time they all dance, but the *zintuhi*-women do not sing. And (finally) at the third time they seize a rope, pluck the <sup>d</sup>*INANNA*-instruments and strike the tambourine (?)'.

*KBo* III 18 (*BoTU* 4B) r. 4 ff. [*ha-a*] *n-te-iz-zi-ya pal-ši* ... *t[a-a-an]* ... [*te-ri-ya-an-na*, for which dupl. 16 (*BoTU* 4A) r. 1 has [*ha-an-te-iz-zi pal-ši* ... *ta-a-an* ... 3-na 'At the first time ... at the second time ... and (finally) at the third time'; XXXIII 120 I 33 *3-an-na-at-ta* 'and (finally) thirdly' (32: *da-an-ma-at-ta* 'at the second time ...'.

*KUB* II 10 IV 33' *nam-ma 3-an pí-di* 'at the third time again' (i.e. if the third penis is laid on the *taparwa<sub>a</sub>š*-loaf); in IV 24 there corresponds *nam-ma da-a-an* 'at the second time again', 888/z *3-an-na pí-di* (between *2-an-za pí-di* and *4-an-za pí-di*); *KBo* XIII 145 o. 3' *te-ri-in 4-in* (context fragmentary); the duplicate *KBo* XI 14 II 15 ff. gives the full wording, but in a condition difficult to read: *zi-iq-qa* <sup>d</sup>*UTU-uš i-(it?) nu t(e!)-ri-in (4)-in (5)-in [-]* (16) *ú-e-(e!)-(lu?)-i-(kañ??) (na?)-(ya?) (??; or ?i (tu)-ri-(ya??))* etc. 'But thou, sun-god, get up and drive for the third time, for the fourth time, for the fifth time, around the plain! Unharness (there-upon) the tired (draught animal) and harness a rested one'. The attempt at an interpretation, which does not yet give perfectly correct Hittite, should only allow the sentence-structure to be approximately recognised; that *terin* belongs under 3.3.3.1. is not entirely excluded.

### 3.3.3.2.2. Inflection

The inflection is that of *-ya*-stems. The form *terin* must show syncope (cf. H. Eichner 1968: 215 n. 11) if has been correctly identified as a nominative-accusative singular neuter.

### 3.3.3.2.3. Word formation

We must posit either a derivative from the cardinal *\*tr-i-* by means of the suffixes *-o-* (*\*tri-ó* → *\*triyó-* / *\*tryó-* or *-io-* (*\*tri-ió* → *\*triyó-*) or else a direct derivative of the "numeral root" *\*t(e)r* by means of the suffix *-io-* (*\*tér-io-* → *\*téryo-* or *\*tr-ió* → *\*triyó-* or *\*tryó-*). That both

alternatives really have to be admitted is shown by the comparison with Latin *tertius* and Gothic *þridja* (*\*trityón-*, from the cardinal) and Vedic *tṛtīya-* (from the "root"). In addition a *vrddhi* derivative of the cardinal would seem possible (*\*ter-io-* → *\*teryo-*). Since the sound changes to be assumed have not yet been fully elucidated and analogies with the cardinal could play their part, no decision can be reached. As the most probable phonological development we might assume

<i>*tryó-</i>	(← <i>*tri-ó-</i> / <i>*tr-ió-</i> )	>	Hitt. <i>*tariya-</i>
<i>*triyó-</i>	(← <i>*tri-ó-</i> / <i>*tri-ió-</i> / <i>*tr-ió-</i> )	>	Hitt. <i>*tariya-</i>
<i>*téryo-</i>	(← <i>*tér-io-</i> / <i>*téri-o-</i> )	>	Hitt. <i>*tériya-</i>

Thus the postulates *\*tri-ó-* and *\*tr-ió-*, in their coincident realisations *\*triyó-* and *\*tryó-*, would yield Hitt. *tariya-* (perhaps still preserved as a variant of a derivative, see 3.3.3.3.). Hitt. *teriya-* could not have arisen in a phonologically correct manner in this way; it must have taken its *e* from the cardinal. Reconstructed *\*t(e)r-io-*, with its two ablaut doublets *\*tér-io-* → *\*teryo-* and *\*tr-ió-* → *\*triyó-* / *\*tryó-* (essentially already Benveniste 1962: 87), would yield all the Hittite phonetic forms in question (*teriya-* and *tariyala-*), but is doubtful on other grounds.

### 3.3.3.3. Hittite *teriyalla*, *tariyala*

Ehelolf recognised that the derivative *teriyalla* / *tariyala*, a drink, belongs here (see *HW*, 221). There are the following attestations: *KBo* V 1 IV 35 f. *nu ši-ip-ta-mi-ya te-ri-ya-al-la ši-pa-an-da-an-zi* 'They libate *šiptamiya* and *teriyalla*'; *Bo* 4951 [X] *3-ya-al-la 7-mi-ia ši-pa-an-ta-an-zi* 'do.'; *Bo* 2375 (with dupl. *Bo* 553) III 14 1 GAL GIR<sub>4</sub> *ta-ri-ya-la* 'a vessel of fired clay (?) with / for *tariyala* (?)'.

#### 3.3.3.3.1. Inflection

If it is not just the stem-form that is used (as is probably the case at least in *Bo* 2375), *teriyalla* is to be identified as nominative-accusative plural neuter of an *-a-* or an *-i-*stem.

#### 3.3.3.3.2. Word formation

Because of parallel *šiptamiya*, a derivative from the ordinal is probably present. The basic meaning would then not be 'drink from three ingredients' (cf. English *punch*, Hobson-Jobson 737–738) but something like

'drink of one-third', whatever may be implied by that. Friedrich's reference (*HW* 194) to Akk *šikar šalultum* '“one-third” beer' supports the suggestion. Perhaps in *teriyalla* and *šiptamiya* there is an indirect attestation for Anatolian fraction-formations. The morphological analysis leads either to an *-alli*-derivative or a (typologically older) *-la*-derivative from the ordinal *teriya-* / *\*tariya-*; the single *l* in *tariyala* can have been influenced by other *l*-formations.

### 3.3.3.4. Hittite *teriyala*- 'mediator'

In the Old Hittite ritual (Laroche, *Catalogue des textes hittites*, 1971: 416), we find II 56 (= *KBo* XVII 3 II 13', old ductus) a group of signs *te(?)ri-ia-la-aš-mi-iš* for which H. Otten and V. Souček venture the interpretation (*StBoT* viii, 1969: 29 n. 9) 'my/our third' and further suggest that a circumlocution for the "mediator" (intermediary) is to be seen in the term "third". This suggestion fits the context of the passage extremely well and has important support in Hieroglyphic Luv. *tariwana/i-* (3.3.4. – 3.3.4.1.). The word *teriyala*- (this reading of the initial is virtually certain because of a lack of suitable alternatives) can now be analysed in two ways:

- 1) As a derivative of the ordinal *teriya-* (3.3.3.1.) by means of a formant *-la-*. In this case there could be identity with the material of 3.3.3.3., as already suggested by Otten and Souček.
- 2) As a nomen agentis, derived by means of the formant *-ala-* (Friedrich 1940–46: i § 46 c) from a verb *\*teriya-* 'to be the third, to function as third' or also directly from the ordinal *teriya-*.

### 3.3.3.5. Hittite *tarriyanalli-*

This adjective, meaning 'of the third rank, to be found in the third place; of third quality', has long erroneously been regarded as an ordinal (*HW*, 214, with literature). The correct determination of the meaning goes back to H. G. Güterbock, see *HW* 2 *Ergänzungen* (1961: 24).

#### 3.3.3.5.1. Attestation

Nominative singular common <sup>LÜ</sup>*tar-ri-ya-na-al-li-iš* *IBoT* I 36 I 38; dat. *-li* I 37 'man (officer) of the third rank' or 'man in the third place'; further 4 TUG *tar-ri-y[a-na-liš]* *KBo* XVIII 181 r. 3'; 3 TUG *tar-ri-ya-na-liš* r. 8; 6 TUG *tar-ya-na-liš* (abbreviated writing because of lack of space);

186 left margin 4 'third-quality garments' according to a suggestion of H. G. Güterbock, *KBo* XVIII, p. VII. (The writing with the sign LIŠ in *KBo* XVIII is to be assessed as an "abbreviated" writing, similar to, e. g., *kiš-an* for *ki-iš-ša-an* 'as follows'; what is meant phonetically is most probably Hitt. as in *IBoT* I 36.)

#### 3.3.3.5.2. Linguistic assessment

Just as in the case of *duianalli-* (3.2.8.) an *-alli-* derivative is probably present. As the basis we must infer *\*tarriyana-* 'to be found in the third place' (ord. *\*tarriya-* + suffix *-na-* indicating position) or perhaps also an adv. *\*tarriyan* 'thirdly'. If, as has hitherto been usual, it is desired to consider the word as of Hittite origin, the explanation of the *-rr-* — about which it is indeed believed that one should not worry — would cause the greatest difficulties. PIE *r* gives Hitt. *r* between unstressed vowels (cf. H. Eichner 1973: 100 n. 86), as also after stressed etymologically short or long vowel (cf. *háraš* 'eagle' < *\*H<sub>2</sub>árō*, *pēru* 'rock' < *\*pérw<sub>1</sub>*, *pēran* 'in front' < *\*pérom* or *\*pērām*; in *arraš* 'arse' < *\*H<sub>1</sub>órsos* the *rr* goes back to *\*rs*, not *\*r*). As a consequence, the position before directly following accent is the only possible condition for *rr* < *r* (*warri-* 'helpful' must thus tentatively be derived from *\*worí-*, *šarrizzi* 'transgresses' from *\*soréyeti*, etc.). This is however certainly not the case if the Hittite vowel preceding the *r* has been inserted in an original group of consonants by anaptyxis (cf. *geréz*, *karáiz* 'flood', *pará* 'forward' < *\*proH<sub>1</sub>*, *karáuar* 'pair of horns'). The only remaining possibility is at best to posit *\*təryó-* < *\*təryá-*, provided the change *\*r̥* > *\*ər* took place very early (earlier than the development of an anaptyctic vowel in *\*tr-*), and, further, that postvocalic *\*r* was doubled before *y* too: *\*təryó-* > *\*tarriya-*. For the latter hypothesis reference could indeed be made to *anturriya-* 'inland' (beside *anturiya-*). But this assumption, too, loses probability if words such as *tūriya-* 'to harness' (< *\*dhwṛh-yé-*) are adduced, particularly when *rr* of *anturriya-* can have been taken over analogically from *katterra-* 'lower' (anachronistically *\*kmt-eró-*, a replacement of *\*nd<sup>h</sup>ero-*; beside it also *kattera-* with a different accent, or analogical *r*).

But all problems are resolved if *tarriyanalli-* is considered an originally Luvian word. Luvian *rr* is a normal correspondence of Hitt. *r*, to which, above all, B. Čop, *IF* lxxv (1970: 86 f.) has called attention. The textual evidence (clear luvisms in *IBoT* I 36!) and the word formation (suffix *-alli-* more productive in Luvian than in Hittite in the case of such words



as *mawalli-*, 3.4.4.1.) are reconcilable with the hypothesis that *tarriyanalli-* is Luvian. We then obtain the correspondences Hitt. *dān pedaš*, *\*teriyan* / *\*teriyaš pedaš*: Luvian *duianalli-*, *tarriyanalli-*.

Hitt. *teriya-* and Luvian *\*tarriya-* 'third' can be equated on the basis of (Proto-Anatolian or Common Anatolian) *\*ter(i)ya-*. If the *e* of this form goes back to PIE *e*, Luvian *tarriyanalli-* would be the only word in the whole of the Indo-European material which requires a form *\*teryo-* with *e* after *C<sub>1</sub>*- and thus provides proof for Benveniste's reconstruction *\*teryono-* (1962: 87).

But, as far as I can see, there is no cogent ground for the assumption that Luvian *rr* next to an accent — this condition must not be overlooked — could not have arisen after an anaptyctic vowel, too (*šarra* 'on' corresponds to Hitt. *šarā*, at first < *\*šrā*?). In Luvian *atari-*: Hitt. *etriya-* 'to nourish', Luvian *hattarai-*: Hitt. *hatrāi-* 'to write', Luvian *huppara-*: Hitt. *hupra-* 'sort of girdle', Luvian *immari-*: Hitt. *gimra-* 'field, plain', Luvian *iššari*: Hitt. *keššar* 'hand' (see Laroche 1959), the *r* does not necessarily occur after an originally stressed vowel (*\*H<sub>1</sub>ed-ri-yé-* 'to nourish', *\*H<sub>2</sub>atraH<sub>2</sub>-yé-* 'to scratch', *\*ghésr* 'hand'). Initial stress in *\*gémra-* 'plain' is probably indicated by Hittite dat. *-ri* (not *-ri-i*). Luvian *pari* (Laroche 1959: 78) on its part, can no longer be directly equated to Hitt. *parā*, and, for Luvian *kuranni-* 'section (??)' (Laroche 1959: 57), original final stress, an aberrant development *kurá-* < *\*k<sup>w</sup>rá-*, or borrowing from Hittite must be assumed. Even this short sketch makes it probable that Benveniste's reconstruction *\*teryono-* is not unavoidable.

From the data the conclusion may be drawn that the Luvian cardinal (*sic*) "3" is to be posited as *\*tarri-* < *\*tri-*; as in Hittite, it is the phonological form of the cardinal that became decisive, and probably caused a reshaping of the ordinal *\*tariya-* (< *\*triyó-*, by far the most probable protoform) to *\*tarriya-*. In its turn, *\*tarriya-* is attested by *tarriyanalli-*, indirectly to be sure, but nevertheless undoubtedly.

### 3.3.4. Hieroglyphic Luvian *tariwana-*

The very common Hieroglyphic Luvian epithet of the ruler, *tariwana-* (perhaps to be put phonetically as *\*tarriwanni-* — but this question is not significant in our connection) has been approximately identified by Meriggi (1962) and Laroche (1960: i. no. 371) (both read *tarwana-*) as 'righteous one' or 'judge'; the two meanings are best joined together as 'righteous judge'. The sphere of meaning is in any case fixed by the

related abstract *\*tariwana-* 'righteousness' (a meaning assured by the Phoenician translation), probably originally as *ya*-derivative (*-aya-* > *-a-*) like Hitt. *pittuliya-* 'anxiety' to *pittula-* 'noose'. A word 'judge' as the title of a prince naturally does not surprise us; Laroche calls attention to the political meaning of Semitic *špt*; we need only think of the rôle of the "judges" in the Old Testament.

If it is assumed that the basic meaning is 'impartial person, arbitrator', the etymology is of course clear: *tariwana-* denoted the impartial "third", who — in certain circumstances on account of his power and of the regard in which he is held — has to settle the dispute of two parties in a law suit (not the criminal judge). For the historical importance of the office of arbitrator as early as the time of the Hittite Great Kingdom reference should be made to the "Arbitrament of Muršili II in respect of Barga" iii, 27 f. (H. Klengel, *Or.* N.S. xxxii, 1963: 38, 44, 53), where "the Priest" (epithet of Telipinu of Aleppo) is named as the competent court for any disputes between Muršili's Syrian vassals. Perhaps it is no coincidence that this rule concerns precisely a region which belongs to the area in which, later, the *tariwanas* officiated.

### 3.3.4.1. Word formation

If fundamentally there are no objections to raise against positing *\*tri-wo-n-* 'third' (with characteristic *-n*-suffix) or *\*tri-wo-no-* 'to be found in third place' (cf. Vedic *pūr-vá-* 'first', also Lycian *χῆtawati* 'ruler'), it is worthy of thought that, in the Luvian domain, there should be a further formation too, *\*tarriwa-* or *\*tarriwana/i-*, beside *\*tarriya-* 'third' (= Hitt. *teriya-*) or *\*tarriyana-*. But all doubts can be eliminated by reference to a further Anatolian word, to which *tariwana-* can have been assimilated (see 3.4.6.).

For the details of the reading, see 3.3.2. Under no circumstances can the controversial state of affairs lead to doubt about the etymology. Those researchers who want to read *tarwana-* also interpret the multiplicative *tar(r)iš(š)u* as *tarsu*, see 3.3.2. and 3.3.5.1.

### 3.3.5. Luvo-Lycian multiplicative adverbs, etc.

3.3.5.1. Hieroglyphic Luv. *tarisu* 'three times' (?) (= *\*tarriššu*?), see Meriggi (1962: 165); Laroche (1960: i. no. 388). The writing is *tari-su-u*, with the first sign "3" + "thorn".



Lycian B *trisu* 44c 51, d 70 'three times' (?), A *\*trihu*, corresponds to Hieroglyphic Luv. *tarisu*; for possible syncope, cf. Lycian *hri* = Hieroglyphic Luv. *šarri* 'above'. To be derived from  $\pm$  *\*tris-wé*; for an explanation see 3.2.9.

**3.3.5.2.** Lycian B *trpplē* 44 c 53 (beside *tbiplē*), derived from  $\pm$  *\*triplom* or *\*tripelom*; after the syncope of the *i*, *p* was regularly doubled in the position after a consonant. For the word formation, see 3.2.9.

**3.3.5.3.** Lycian *trppeme* 109,5 (numeral ??): *hrppibeije : tātu : epñte : trppeme* 'so afterwards they must be enjoined *trppeme*'. The form is thus to be identified as nominative-accusative plural neuter (admittedly dative plural would also be possible). It is hard to say whether a meaning '3½' or '2½' would be apt. All the same, because of *tupñne* and *mupñme*, this possibility must be considered. See 3.13.1.6.. For the proper name *trijē-tezi-*, see 3.2.7.

### 3.3.6. Miscellaneous Hittite items

The writing is with the numeral sign "3" with various Hittite phonetic complements.

**3.3.6.1.** 3-*an-ki* 'three times' Goetze, *Verstreute Boghazköi-Texte* (1930: 111 III 22'); 482/z line 2; to be read *\*teriyanki* (??).

**3.3.6.2.** 3-*iš*, 3-*kiš* 'three times' (?); see *HW*, 303; to be read *\*teriyankiš* (??). For 3-*iš* the assumption of a direct continuation of PIE *\*tris* (> Hitt. *\*tariš*, analogically *\*teriš*) would be improbable. For 3-*kiš* there is a quotation on a tablet in typically old ductus (*KBo* XVII i I 3').

**3.3.6.3.** 3-*li* (?) *KBo* III 56 (*BoTu* 19) line 13' (or 3-*li-(x)*[X]).

**3.3.6.4.** 3-*yahh* and 4-*yahh* (verb-stems); according to *HW*, 303 'to make threefold' and 'to make fourfold'; but the meaning is not clear. The quotations for 3-*iahhahh-* and 4-*iahhahh-* (IX 4 II 35) are possibly to be regarded as dittographic (with *HW*), but, on the other hand, we can also seek a connection with verbs such as *teriyahh-* (*\*teriyahhahh-* would be the normal factitive to the participle *\*teriyahhant-*) or with the numeral formations in *-hh* (cf. 3.2.1.3.).

One could attempt to connect 3 pl.pret. *te-ri-ir* XXXIII 60 r. 14 (Laroche, *RHA* xxiii, 1968: 154) with a verb *\*teriya-* 'to divide into three parts, to be one of three (or the like)' because of the shortly preceding (r. 11) 3 DUMU<sup>MES</sup>.ŠU 'three children from him (from her?)'. However we probably have here just the third plural preterite of the verb *tar-* 'to speak', which is not recorded elsewhere.

## 3.4. The Anatolian numerals 'four' and their derivatives

### 3.4.1. The Hittite cardinal

#### 3.4.1.1. Forms written with the numeral sign '4'

The phonetic complements indicate both root-stem and *-nt*-stem.

Plural common acc.	4- <i>uš</i> <i>KBo</i> XVII 1 II 8' (Otten — Souček, <i>StBoT</i> viii, 1969: II 22'), tablet in typically old ductus
dat.	4- <i>ta-aš</i> XXXIII 51 line 7' ( <i>-nt</i> -stem?)
instr.	4- <i>it</i> 1238/v line 11'; 941/z r. 5'
abl.	(4- <i>az</i> 617/p, see 3.2.1.4.)

Plural neuter nom.-acc. 4-*ta*, see 3.4.1.1.1.2.

#### 3.4.1.1.1. Notes

**3.4.1.1.1.1.** 4-*aš* (?) *IBoT* II 97 line 4 (*HW*, 303) does not exist. Instead of this we should read [X <sup>GIS</sup>ZA.LAM.] GAR-*aš-ma* kat-ta-an tar-na-an-zi 'they put a tent up'; cf. line 3'. <sup>GIS</sup>ZA[LAM.GAR.X].

**3.5.1.1.1.2.** Plural neuter nom.-acc. 4-*ta*: *KUB* V 7 o. 30 4-*ta* TA-PAL EZEN ITU.KAM ku-it kar-ša-an e-eš-ta 'which concerns the fact that four pairs of month-festivals have been neglected'. The form belongs to the *-nt*-stems (*\*4-ant-*). The writing of the next line but one, 4 TA-PAL ITU.KAM, shows that, in the case of numerals too, the graphic indication of the *-nt*-stem can be entirely omitted.

**3.4.1.1.1.3.** On the problem 4. (KI.) GUB 'standing with four legs' (*HW*, 303, 2 *Ergänzungen*, 1961: 32) light is thrown by *Bo* 6514 IV 3' f. (H. G. Güterbock, *Oriens* x, 1957: 361) IŠ-TU BI-IB-RI GUD.AMAR 4-i[t GİR<sup>MES</sup>-it ?] (4') a-ra-an-te-it a-ku-wa-an-zi 'they drink out of a calf's rhyton standing on (all) four feet'; cf. 1238/v line 11' 4-it GIR-x[X] and X 89 I 20 f. 4 arantet (O. Carruba, *Kadmos* vi, 1967: 93).

**3.4.1.1.1.4.** [X](x) 4-at irhaizzi *Bo* 7967 line 5'. A passage which poses a riddle. If correctly read, 4-at would have to be compared with 2-at : 2-e and 1-at : 1-e (an instrumental in -at is excluded). Is it a special kind of numeral? Since the accusative is required syntactically, 4-at must formally be the nominative-accusative singular neuter. The explanation of this form will only be possible with additional material and will have consequences for the assessment of other forms (e.g., 2-e).

3.4.1.2. Forms written with *mieu-*

Hitt. *mieu-*, *miu* denotes 'member of a group of four; four?' (according to H. G. Güterbock, see *HW 2 Ergänzungen* 1961: 18).

Plural common nom. *mi-e-wa-aš*- ABoT 44 I 54  
*mi-e-ia-wa-aš* I 55  
 acc. *mi-e-ú-uš* I 52  
 gen. *mi-i-ú-wa* <-aš> XLIII 60 I 11.

## 3.4.1.2.1. Notes

ABoT 44 shows the word applied to the sun-god's four-in-hand: I 52 ff. *nu mi-e-ú-uš ku-i-uš tu-u-ri-ya-an har-ši* (53) *nu-uš-ma-aš ka-a-ša DUMU.NAM.LÚ.ULU<sup>LU</sup>-aš hal-ki-in šu-uh-ha-aš* (54) *nu mi-e-wa-aš-ti-iš ka-ri-ip-pa-an-du nu ku-it-ma-an* (55) *mi-e-ya-wa-aš-te-eš hal-ki-in ka-ri-ip-pa-an-zi*, etc. 'Look, the mortal man has heaped up grain for the four which thou hast yoked! Now may thy four eat! And while thy four eat the grain — mayst thou live, O sun-god! — look, then will the mortal man, thy servant, address the word to thee and will listen to thy words'. Hitt. *mieu-* stands here without additional substantive for the parties concerned in a collective of four: the quadriga of the sun-god. A corresponding content may be present in the further passage, in which admittedly an assessment of *mi(e)u-* as a simple numeral is also possible: XLIII 60 I 10 f. NIM.LÁL *te-ri-ya-aš UD-aš* (11) *mi-i-ú-wa* <-aš> UD-aš KAS-KAL-an *pa-a-an-du* 'the bees shall put behind them a journey of three days, of four days'. Perhaps here the idea of the nature of a 'three-days' journey, 'four-days' journey' is intended, and not simply 'three journeys of a day', 'four journeys of a day'. For the time being, then, the situation does not yet permit the definitive statement that *mieu-* is the normal Hittite cardinal; it could be a case of a special collective nomenclature.

## 3.4.1.2.2. Inflection

The pattern is that of a *-u*-stem with traces of suffix-ablaut as found in the "proterodynamic" inflection, which, in Hittite, for the most part occurs in adjectives. But in respect to the typology of the ablaut, the substantive *he(i)u-* 'rain' is comparable, too. The form of the nominative plural common *miewawaš* is decisive for the determination as a *-u*-stem; in the case of an *-a*-stem, *miewa- miwa-*, as we should normally posit it (cf. Laroche's *mauwa-* for Luvian — see 3.3.3.5.2.), the ablaut would

come as something of a surprise. The ending *-aš* is to be assessed as an archaism or hyperarchaism merely conditioned by the text — originally *-aš* belongs to the *-a*-stems, PIE *-ōs*, cf. I 61 *ú-e*-<*ri*->*te-ma-aš* 'the terrors'.

## 3.4.1.2.3. Etymology

Cf. A. Heubeck, *Die Sprache* ix (1963: 201 f.); G. Neumann, *Innsbrucker Beiträge zur Kulturwissenschaft*, Sonderheft xxiv (1967: 24 f.).

We must start out from a Proto-Indo-European adjective stem *\*méyu-* 'little, small'. *\*meyu-* became Hitt. *miu-*, *\*meyw-*, Hitt. *\*mēw-*; by mixture of these, *mīw-*, *miew-*; Proto-Indo-European forms such as nominative plural masc. *\*meyowes* > Hitt. *\*miyaw-* or *\*m(i)-yéwes* > Hitt. *miew-* are to be considered. Heubeck suggests convincingly that a designation of the "little" hand (without the thumb) is to be seen in *\*meyu-*. The word formation is most easily to be understood if a substantivized neuter adjective *\*méyu-* is assumed (type *\*pélH<sub>1</sub>u* > Gothic *filu* 'much'), to which there would belong a thematic derivative *\*meiw-o-* '(plural) belonging to the little hand', i. e., 'the four long fingers', and transferred, 'the members of a group of four; the four'. In Hittite the two formations would be conflated.

The postulated adjective, *\*meyu-*, is directly derived from the root *\*mey-* 'to be little, small' (cf. Pokorny 1959: 711). A denominative *n*-present *\*minéwti* 'to make less, make smaller' served as a Proto-Indo-European factitive to this adjective. (I owe the hint for this important assumption to Professor Klingenschmitt.) Parallel to it a denominative *n*-present to a substantive *\*m(e/o/0)y-eH<sub>2</sub>* 'lack, diminution' was formed, *\*minéH<sub>2</sub>ti* 'to cause diminution', Vedic *mināti* 'to harm, diminish, injure'; we must be clear that, in the case of *\*minéwti* and *\*minéH<sub>2</sub>ti* with *n* as stem-infix, a very old type of formation in present, which, in contradistinction to the well-known type with *n* (or *ne/n*) as root-infix, must be primary, for root-infixation is not consonant with the structure of Indo-European morphology elsewhere, whereas for stem-infixation, reference can, after all, be made to the morpheme *-e-* of "vrddhi-derivation" (which does not start from the root but from a stem). Starting from *\*minéwti* a new adjective *\*minu-* '(too) small, less' was formed still in Proto-Indo-European times, evidenced by the reflexes found in Greek, Latin, Celtic(?), Germanic, Slavic. (A secondary formation of the same type is Vedic *dhṛṣṇú-* 'bold' beside *dhṛṣṇóti* 'to the bold'; the old adjective is represented by Greek θρασύς.) But if, beside *\*méyu-*, there was the new formation *\*minu-*, it may be suggested that, already in Indo-European, *\*méyu-* could

have developed its special use as a numeral, thus PIE *\*méyu-* '1. little; 2. (substantivized neuter) little hand': PIE *\*minu-* 'less, (too) small'. The Anatolian languages preserve thus something very old in Hitt. *mi(e)u-* together with its Luvian correspondences, as should have become clear after this excursus into questions of word formation; *\*méyu-* must be older than *\*minéwti* and this again older than the adjective *\*minu-*, and even this must be a Proto-Indo-European form. And even without a consideration of the background, it would be difficult to assume a Hittite-Luvian innovation, since there is no other trace of the relevant Indo-European root in Anatolian (Laroche 1959: 70).

### 3.4.2. The Cuneiform Luvian numeral 'four'

**3.4.2.1.** Forms written with the numeral sign '4' with phonetic complements: nominative plural common 4-*zi*?; instrumental plural 4-*ti* (= *māuwāti*), see 3.4.2.2.

**3.4.2.2.** Forms written with phonetic signs plus complements. The stem is *mauwa-* (or *mauwi- mau-*?). Instrumental plural *ma-a-u-wa-a-ti pa* [-a-a-]r-ta-a-ti XXXV 54 III 10 'of/with the four sides'; likewise *ma-a-u-wa-ti p* [a X] XXXV 21 r. 4; in alternation with 4-*ti* p. 43 II 12 III 24, 33 III 7 (restored); XXXII 14 + line 6.

**3.4.2.3.** Discussion. The phonological development is hard to assess: *\*meyaw-* > *\*maaw-* > *māw-*, but also *\*meyw-* > *\*mew-* > *\*maw-* (Heubeck) may have to be considered. It is hardly possible to argue here from the plene writings, since the attested forms are too few and occur in passages where one must certainly reckon with emphatic lengthenings (conjunction-formulae!); the emphatic lengthenings are quite obvious in XXXV 54 III 10 (see above; twice double-plene). It is not clear whether by-forms *\*mu(wa)-* (< *\*mau* < *\*meyu-??*) and *\*miu*, *\*miwa-* are to be assumed. And no certainty is to be attained concerning the stem-formation (stem *mawi-*?; the instrumental *-ati* would be regular for this stem too). However, in any event, because of the connection with the Hittite, we must posit a *-u*-stem as original for Luvian also — which was secondarily extended to an *-i-* or *-a*-stem — and not seek some direct connection with Old Icel. *mær miór* 'slim, narrow' and Tocharian B *\*maiwe* 'young' (*\*moywo-*).

### 3.4.3. The Hieroglyphic Luvian numeral 'four'

Written with the numeral sign "4" with phonetic complements (Meriggi 1962: 165; *HH* I, No. 391).

Accusative plural common 4-*i* (two examples), 4-*i-a*, to be read 4-*za*, 4-*za-a* (see 3.2.2.) = *\*mawi<sup>n</sup>za*?

#### 3.4.3.1. Discussion

The numeral sign "4" has also the phonetic values *mi*, *ma*, which have been derived from the numeral according to the acrophonic principle. The value *mi* agrees with Hitt. *mieu-*, *miu-*; since it is already attested in the time of the Great Kingdom, it could derive from the Hittite numeral (?). With due caution, notice should be taken of a possible phonetic variant *\*muwa-* indicated by WOMAN — M 129 4-*tà* (= [1 +]3-*tà* according to a brilliant suggestion of Mittelberger's in Meriggi 1962: 85) 'woman's power' i. e. 'weakness'; the word is in opposition to M 129 *muwa-a-tà-na* '(man's) power'; for the passage, see Meriggi (1967: 67 f.); for the realia see also Goetze, *Verstreute Boghazköi-Texte* (1930: 24 I 28 f.).

#### 3.4.4. Miscellaneous forms derived from stems studied in 3.4.1. — 3.4.3.

**3.4.4.1.** Accusative singular common *mawalli-* XXXI 66 IV 14 (Laroche 1959: 70), in reference to a horse, perhaps 'belonging to a four-in-hand' (?). The word is obviously of Luvian origin.

**3.4.4.2.** Hitt. (?) *mi-u-wa-ni-ya-an-t-* and *mu-u-wa-n[i-ya-an-t-]* (of horses), perhaps 'harnessed in fours' (??), according to a suggestion by Kammenhuber see *HW 2 Ergänzungen* (1961: 18). The alternative, that there is a connection with a higher numeral derived from "four" ('forty, four hundred', something like 'accomplishing a distance of four hundred measuring units'), which comes to mind because of the Lycian type *kbišñtāta*, *nuñtāta* (ending *-nta*), does not seem applicable.

**3.4.4.3.** Luvian *ma-a-wa-ni-in-tā* (Kammenhuber 1961: 152) can be the Luvian or luvianizing correspondent of *miuwaniyant-*. The textual surroundings perhaps contain further related expressions, but the beginnings of the lines are lost: *ḫ ta-aš-ta-a-ri-in-ta 2 ME gipeššar* '... *taštārinta* (*\*ta-* "double" at the beginning of the word?), two-hundred ells' and *[X]x-an-ti-in-ta 3 DANNA* 'x (containing "three" in the lost beginning?), three miles', then finally our *[X 4 ?? DAN]NA māuwaninta* '[x 4 ?? mi]les *māuwaninta*'.

**3.4.4.4.** Hieroglyphic Luv. 4-*su-u* 'four times' (?); see Meriggi (1962: 165); cf. 3.2.9.

**3.4.4.5.** Hitt. 4-*iahh-*, 4-*iahhahh-*, see 3.3.6.4.

**3.4.4.6.** Hitt. 4-*iš*, see *HW*, 303.

### 3.4.5. The Hittite ordinal and related material

The words earlier included here (HW, 303) must now in part be assessed differently. For <sup>LÜ</sup>*duianalli-*, see 3.2.8.; for 4-*na* (IBoT II 91 III 9, before it III 5, 7 3-ŠU, meaning ± ‘a fourth time?’) and 4-*in* (KBo V 2 II 61; KBo XI 14 II 15; KBo XIII 145 o.? 3’), cf. 3.3.3.2.1.

### 3.4.6. Hittite *kutruwan-* ‘witness’

This form, originally an *-n*-stem, secondarily also *-a*-stem, is, according to what has been said in 3.3.4., to be analysed as *\*k<sup>w</sup>tru-(y)ó-n-* or as *\*k<sup>w</sup>trw-(y)ó-n-(?)* ‘the fourth’. It is a derivative formed by means of a suffix *-o-* or *-io-* to the zero-grade stem of the cardinal *\*k<sup>w</sup>tru-* (cf. Greek τρυφάλεια, Avest. *caθru-*, Latin *quadru-*); a protoform without the metathesis of *w* and *r* but with dissimilatory loss of the *w* perhaps also calls for consideration (*\*k<sup>w</sup>-trw-wó-n-* > *\*k<sup>w</sup>tr-wón-*).

This etymology poses an interesting phonological problem. The descendants of Indo-European labiovelars (before consonant and word-boundary) are generally not written plene in Hittite; at all events in the checking of about a thousand passages for forms like *ku-na-an-zi* ‘they strike’, *ku-ra-an-zi* ‘they cut’, *e-ku-zi* ‘drinks’, *tak-ku* ‘if’, *ne-ku-ma-an-za* ‘naked’, I could not detect a single plene writing. All but one of the examples of *kutruwan-* — and its derivatives — conform to this rule too; nevertheless there occurs KBo IV 4 IV 7 (late tablet) the writing *ku-u-ut-ru-wa-a-iz-zi* ‘he declares it before witnesses’ (Friedrich 1959: 56 f.). In my view, this isolated plene writing is on a par with KUB VI 46 I 39 *i-iš-ta-ma-aš-ša-du* ‘they shall hear’ (apart from this the prothetic vowel *i* is never written plene — in hundreds, indeed perhaps thousands, of examples). Just as, because of this isolated spelling, a derivation of *ištamaš-* from a protoform beginning, not with *st-*, but with *ist-* or *eist-* has little to recommend it, so can the writing *ku-u-ut-* not be adduced as an argument against a protoform *\*k<sup>w</sup>t-*. On the other hand, in my view, it proves the existence of a pronunciation *kut-* (instead of or beside *k<sup>w</sup>t-*) just as well as the spelling *i-iš-ta-ma-aš-ša-du* decides the question of the phonological reality of the prothetic vowel in the positive sense (to add Friedrich 1940–46: § 24); against the assumption of plene writings of unpronounced vowels, cf. 3.3.1.4. According to a view often presented, the labiovelars are however preserved as consonants (monophonematically) in Hittite — see, above all, F. O. Lindeman, *Revue hittite et asianique* lxxvi (1965: 29–32). This view may be supported by writings such as *e-*

*uk-zi* ‘drinks’, *e-uk-ta* ‘drank’, *e-uk-ši* ‘you drink’ (KBo XXII 1 o. 28), which are occasionally to be encountered; from the variation *e-uk-zi* ~ *ekuzi* etc. we assume a phoneme *k<sup>w</sup>* (written KU, UK). This conclusion is however not certain, for the variation of the *eukzi* ~ *ekuzi* cases may be based on the differing position of an anaptyctic vowel (*taruhzi* ‘defeats’ ~ *tarhudu*, see HW, 123; from this first, *tarukzi* ~ *tarkuzi* ‘dances’, from the root *terk<sup>w</sup>-* ‘to turn oneself’; then *eukzi* ~ *ekuzi*), cf. secondary *me-uh-ni* (VIII 21, 8, thus to be read in my view) against *me-hu-ni* from *mehur* ‘time’ — the assumption of spelling mistakes, confusion of the signs KU and UK, etc., would be very improbable for these cases). On the other hand the fixed points for the phonological disintegration of the labiovelars (*watkut* ‘jumped’ from the root *tek<sup>w</sup>-*; *kuiš* < *kwiš* < *\*k<sup>w</sup>is* ‘who?’, 3.2.10.3.), which have been little considered in the discussion so far, are really hard to discount; in addition, the form *kūtruwāizzi* ‘he declares it before witnesses’ would come as a further argument. It cannot however be passed over in silence that, as an alternative, a pre-Anatolian postulate with schwa secundum (*\*k<sup>w</sup><sub>e</sub>tru-*) also comes into question, just as, for instance, it is unavoidable for Latin *quadru-*. The reflex of the schwa secundum as *u* is conditioned by the vicinity of the labiovelar (*\*k<sup>w</sup><sub>e</sub>t-* > *\*k<sup>w</sup>ut-*, in the event further to *kut-*); cf. Greek κύκλος < *\*k<sup>w</sup><sub>e</sub>k<sup>w</sup>los*, etc.; for the assimilatory labialisation of secondary vowels in Hittite, cf. my suggestions put forward in MSS xxxi (1973: 76). And, too, whichever of the two alternatives (*\*k<sup>w</sup>t-* or *\*k<sup>w</sup><sub>e</sub>t-*) one decides on, the consequences for the phonology are, in each case, considerable.

For prehistoric Anatolian we thus obtain the following word-range: the two contracting parties before a court are denoted by one word, which survives in Hitt. *hannitalwan(a)-* (? word formation); the judge functions as an impartial third, *\*teriyan-* (altered to *\*teriwan-*), and, as ‘fourth’, the witnesses, *\*kutruwaneš*, are brought in. Thus it is clear how the difference in the nomenclature as against Latin *testis* came about.

C. H. Carruthers, *Language* ix (1933: 152) first proposed the etymology of Hitt. *kutruwan-* presented here; he also discussed the semantics: “If the judge is considered as a major party in the case, he will normally be the *third* person present, and the witness, when called, will obviously be the *fourth*” (in addition a very improbable semantic hypothesis, going back to Sturtevant, was given as an option). Carruthers was certainly wrong in the matter of the word formation, for he lets “Hitt. *kutrus*” derive from “*\*q<sup>w</sup>tru*”; as we know today, the stem *kutru-* (instead of *kutruwan-*) is secondary in Hittite; further, PIE *\*k<sup>w</sup>tru-* belongs to the cardinal, not the ordinal, and could also not be used as nominative in

the ablaut-grade attested. Despite this misconception, the sharp rejection which Carruthers' suggestion has experienced, on the part of H. Pedersen *Archiv orientální* v (1933: 178) and Benveniste (1962: 110) ("H. Pedersen a fait justice de ces fantaisies") is not justified at all.

Pedersen's connection of *kutruwan-* with Lith. *gudrūs* 'clever, cunning, wily' can now be dismissed. The Lithuanian word was perhaps secondarily altered from *gudras* to a *-u*-stem; in its turn, *gudras* may be a relatively late Baltic innovation as could be formed at any time, which then would have little relevance for comparative reconstruction (*gudrūs* must be viewed ultimately as derivative of *gūsti gundū* 'be accustomed, obtain experience' (Fraenkel, *Litauisches etymologisches Wörterbuch* 1, 1962: 141).

### 3.5. The Anatolian numerals 'five' and their derivatives

#### 3.5.1. Hittite data

These data are extremely scanty. Synopsis of the material:

**3.5.1.1.** Cardinal. *5-az* (?), see 3.2.1.4.; it is not clear whether there is a phonetic complement in *KBo* XX 67 III 15 f.

**3.5.1.2.** Ordinal and related material. (5?)-*in* *KBo* XI 14 II 15, see 3.3.3.2.1. (probably syncopated from \**5-yan*); *5-an* VIII 62 IV 8' (?); *5-an-na* XVII 1 II 7' 'and/but (-a) for the fifth time'; *5-na* *KBo* V 2 III 1 'and the fifth', see 3.2.3.2.; 3.3.3.2.1.; not clear: MU.3.KAM (5)-*ia* ITU-*mi* *Bo* 6828 IV 9 (dative ending or -*ia* 'and'?).

**3.5.1.3.** *5-an-k* [i X] *KBo* XXII 79 line 1'; see also *HW*, 303.

**3.5.1.4.** *5-li-eš* XXXVI 89 o. 5' 'containing five units of measure' (of loaves) (?); see *HW* 1 *Ergänzungen* (1957: 30).

#### 3.5.2. Hieroglyphic Luvian data

The forms are written with the numeral sign "5" with phonetic complements.

Acc.sg. *5-wa-sà-pa-* (before a consonant) 'fivefold' (?); *5-na-a* can be a shorter writing for this (see Meriggi 1962: 165, where taking a clear stand is avoided — probably intentionally. Cf. however Meriggi 1966: § 108 n. 2).

If, with Meriggi (1966: § 108), a suffix *-apa-/api-* (or *-aspa-/aspi-* too, possibly even *-asampa/i-*) is assumed, the initial bit *5-w(a)-*, shows a word that, in its final, can be compared with PIE \**pénk*"e; \**pa*"ku would be expected.

#### 3.5.3. Hittite *panku-*

A discussion of the suggestion that Hitt. *panku* 'whole, all, totality, generality, etc.' should be connected with PIE \**pénk*"e can be omitted here, for, according to this suggestion, Hitt. *panku-* would not be the reflex of a Proto-Indo-European numeral, but merely that of a root from which, in Proto-Indo-European, a numeral had been derived. See E. C. Polomé, *Pratidānam. Indian, Iranian and Indo-European studies presented to Franciscus Bernardus Jacobus Kuiper on his sixtieth birthday* (1968: 98 ff.), and N. van Brock, *Mélanges de linguistique et de philologie grecque offerts à Pierre Chantraine (Études et commentaires LXXIX)* (1972: 266 f.).

### 3.6. The Anatolian numerals 'six' and their derivatives

#### 3.6.1. Hittite data

**3.6.1.1.** Cardinal. *6-az* (?) 617/p II 11'; see 3.2.1.4.

**3.6.1.2.** Ordinal and related material: (6?)-*an* VIII 62 IV 17'; *6-an-na-za* XVIII 1 II 9' 'and for the sixth time' (= *6-ann* + *-a* + *-za*); *6-na* *KBo* V 2 III 2 'and/but the sixth', see 3.2.3.2.; 3.3.3.2.1.

#### 3.6.2. Cuneiform Luvian data

(6?)-*un* (??) *KBo* XI 145 II 11-3 (ter, Laroche 1959: 125); reading of the numeral in all three cases uncertain, emendation to (9)!-*un* should be considered.

### 3.7. The Anatolian numerals 'seven' and their derivatives

#### 3.7.1. Hittite data

The forms are written with the numeral-sign "7" with phonetic complements.

**3.7.1.1.** Cardinal. *7-an* ~ UH<sub>4</sub>-*an* XXVII 29 I 28'; *KBo* XI 11 II 5 f. *ki-e-iz* *7-an pa-ah-hur ki-e-iz-zi-ya* (6) *7-an pa-ah-hur pa-ri-ih-hi* 'one the

one side I kindle seven fires and on the other side seven fires'; 297/d V 4' f. nu 7-an 7-an an-da iš-hi-iš-kán-z[i X] (5') nu iš-hi-ya-tar AN.TAH.ŠUM<sup>SAR</sup> i-ya-an[-zi X] 'they bind seven at a time onto it and make a bundle from A.-plants' (?); 7-az 617/p II 11'; see 3.2.1.4. The complementation 7-an could point to \*se/iptan-. Phonologically this phonetic form could not go back to PIE \*septm̥ (\*-m̥ > -un, proved by the first person singular preterite of the athematic verbs), but possibly to \*septmt-. The final -an could also have been taken over from other numerals, for instance from "10", where a Proto-Indo-European form \*dekmt- 'decad' beside \*dék̑m̥ '10' is well attested (Old Church Slavonic locative deset-e, etc.; see Pokorný 1959: 191). It would thus present a problem similar to that of Germanic "7" (Gothic sibun, etc., with preserved -n). On the other hand 7-an can belong to the -nt-stem; because of the examples just given ('seven here' ... 'seven there', 'seven at a time'); I would give preference to this possibility.

**3.7.1.2.** Ordinal and related material. 7-an-na-za-kán XXVII 11 II 11' 'and/but for the seventh time' (7-ann + -a + -za + -kán); 7-na KBo V 2 III 3 'and/but the seventh'; perhaps Hitt. \*šiptama- or \*šiptamiya-.

**3.7.1.3.** 7-an-ki XXXIII 105 I 5'–8' (quater).

**3.7.1.4.** 7-iš KBo XVII 50 r (?) 5' (tablet in old ductus); perhaps = \*7-ankiš (?).

### 3.7.2. Hittite šiptamiya-

šiptamiya KBo V 1 IV 35 in alternation with 7-miya (discussion of the examples, 3.3.3.3.), as the name of a drink, is a derivative of an original ordinal \*šiptama- < \*sebdmó- (or from a secondary, but perhaps still Proto-Indo-European, \*sebdmó-), or, more probably, \*septmó- (\*septmó-), with pt analogically restored from the cardinal (Hittite writing with TA, not DA). For the semantics, see 3.3.3.3. The attempt, often undertaken, to infer a cardinal \*šiptam on the basis of šiptamiya (e.g. Kronasser 1962–66: 365; also HW 303, with a question-mark) represents a gross error; a Hittite word, as is well-known, cannot end in -m. Every attempt to wish to see in šiptamiya an intra-Hittite derivative of the cardinal comes to grief because of the regularity of the sound change -m > -n (also in -m̥ > -un).

If šiptamiya is anachronistically expressed by a Proto-Indo-European formula, \*septmeyo- (\*septmeyo-) or \*septmiyo- (also \*septm̥yo-?) would result. In the first case the Old Indian type dvi-maya- 'containing the double, consisting of something in two parts out of three' (Wackernagel,

Altindische Grammatik, 1896–1957: II/2, 770, with literature; -maya- in my view by "suffix-extension" from -a-ya- would be comparable). In the latter case -iyo- would be a Sievers variant of the suffix -yo-; the suffix traditionally postulated as -iyo- can be disregarded, as Hitt. -ihha- (-iH<sub>2</sub>o-) should correspond to it (perhaps attested in 9-AH-ha = 9-ih-ha?, 3.9.1.5.). Typologically perhaps the Roman name Septimius is comparable.

In \*septmiyo-, i-umlaut would probably occur (cf. \*mélit > Hitt. milit 'honey'), but the writing of the initial with the sign ŠI (instead of ŠE), which occurs only once, can be otherwise explained, and can hardly contribute anything to the decision of the question of the word formation.

A further indirect piece of evidence for the Hittite ordinal is probably present in the Cappadocian female PN ša-áp-ta-ma-ni-ga (Laroche 1966, No. 1111), which can be interpreted as 'the seventh (šaptama-) sister (niga-)'. Cf. G. Neumann in: M. Mayrhofer et al. (eds.), Gedenkschrift H. Güntert (1974: 279). Above all it is the vocalism of the first syllable that remains obscure (dialectal sound-change e > a or assimilation to the vowels of the following syllable ?).

## 3.8. The Anatolian numerals 'eight' and their derivatives

### 3.8.1. Hittite data

The forms are written with the numeral sign "8" with phonetic complements.

**3.8.1.1.** Cardinal. 8-ta-aš XXXI 143 II 1.8 etc. (E. Laroche, JCS i, 1947: 205 f.), probably, rather an -nt-stem than a direct reflex of PIE \*H<sub>2</sub>októ-.

**3.8.1.2.** Ordinal. 8-na KBo V 2 III 7 'and/but the eight'.

**3.8.1.3.** 8-anki KBo XXI 90 o. 11 'eight times'.

**3.8.1.4.** 8-iš (4-ŠU follows) 913/z IV 6'.

### 3.8.2. Hieroglyphic Luvian data

The writing is with the numeral sign "8" with phonetic complements (Meriggi 1962: 165). 8-wa-a-ī = ± 8-ua"zi/a. Etymological attempts lead to the reconstruction of \*hak?taud"zi (?), which implies a \*haktau (derived from PIE \*H<sub>2</sub>októu) carried over into the plural. Thus the dual ending ōw, which would be hard to explain on the basis of the laryngeal theory, is, for the first time, required by Anatolian; perhaps PIE \*ōw goes back to earlier \*oH<sub>1</sub>w (\*w would be a deictic particle, cf. Vedic u).

On the other hand the Hieroglyphic Luvian form could be influenced by the numeral "9", see 3.9.1.

**3.8.3.** Hitt. 8-*in-zu* in the passages given *HW*, 303 is not clear.

### 3.9. The Anatolian numerals 'nine' and their derivatives

#### 3.9.1. Hittite data

The forms are written with the numeral sign "9" with phonetic complements.

**3.9.1.1.** Cardinal. Dat.sg. 9-*an-ti happešni* 'to/on the nine limbs' *KBo* XXI 14 o. 13'; 9-*an-ti-ma* KASKAL-*ši* *IBoT* II 128 r. 5', see 3.9.2.3.; abl.sg./pl. 9-*za* *KBo* XIII 109 II 3'; gen.pl. 9-*aš* XXXVI 89 r. 4 (see V. Haas, *Der Kult von Nerik*, *Studia Pohl* IV, 1972: 150 f.); dat.pl. 9?-*an-da-aš happešnaš šer* 'on the nine limbs' *Bo* 2533 I 23; 9-*aš* (?) *KBo* XVII r. 7'; XXXVI 49 I 9', 89 r. 4 (?).

**3.9.1.2.** 9-*an*: — *KBo* XI 10 II 17'; 72 III 28; *KBo* XII 70 II 11', 16'; *KBo* XIII 94 line 4'; *KBo* XVII 1 I 9' (typically old ductus); 88 III (?) 9' (bis); *KBo* XX 59 line 15'; *KBo* XXI 14 o. 8'; Goetze, *Verstreute Boghazköi-Texte* (1930: 58 IV 12'). Several passages are enigmatic; in others, a form of the cardinal could be present (3.9.1.1.), e. g. *KBo* XII 70 II 11'. The meaning 'ninefold' (*HW* 303), too, would fit some passages, e. g., *KBo* XI 72 III 28; Goetze, *Verstreute Boghazköi-Texte* (1930: 58 IV 12').

**3.9.1.3.** Ordinal. 9-*na* *KBo* V 2 III 8' 'and/but the ninth'; (9?)-*ti-(ma?) MU-ti* XXXIII 120 I 12 'but in the ninth year'. The second example could contain the cardinal, if, in dates, the construction 'in the year 9' should also be possible; then we should not have to postulate the coexistence of base-stem and -*nt*-stem for the ordinals, too. An analogical argument applies to *BdU* II 60 E (*IBoT* II 128 r. 5') 9-*an-ti-ma* KASKAL-*ši* 'but at the ninth time'.

**3.9.1.4.** 9-*al-li-uš* *Bo* 5149 line 7 (Sommer 1948: 206 n. 1), 9-*li* 9/y line 5', 654/z line 2'; here perhaps also 9-*iš* VII 17 line 12' (\*9-*alliš*?). Not clear: 9-*at* = 9-*la*! (?), see *HW* 1 *Ergänzungen* (1957: 30) (against it Kronasser 1962–66: 365).

**3.9.1.5.** 9-*AH-ha* *KBo* XXI 14 o. 8' [X] x 9-*an* 9-*AH-ha iš-pi-ir-te-en* ('... ye have spread out'), for the construction cf. *KBo* XIII 94 line 4' 9-*an* 9-*an-ki še-eš-zi* ('... he sleeps (with?)'). For the assessment of a form

9-*ah-ha*, see 3.2.1.3. The reading 9-*ih-ha* too is possible (theoretically further 9-*uh-ha*), for the morphology, see 3.7.2.

**3.9.1.6.** 9-*an-ki* *KBo* XIII 94 line 4' 'nine times' (3.9.1.5.).

**3.9.1.7.** 9-*iš* VII 17 line 12' (see 3.9.1.4.).

#### 3.9.2. Luvo-Lycian data

The Luvo-Lycian forms are (\*)*nunzi/a*, (\*)*nuwanzi/a*.

**3.9.2.1.** Cuneiform Luv 9-*un-za* (Laroche 1959: 125); see also 3.6.2. ((9?)-*un*?).

**3.9.2.2.** Hieroglyphic Luvian material (Meriggi 1962: 165; *HH* I, no. 395):

9-*ī* or *nu-ī*, to be read as 9-*za/i* or *nu"za/i*.

9-*wa-a-ī*, to be read as 9-*wa"za/i* or *nuwa"za/i* A 13 d 4

(according to Laroche; non vidi).

The numeral sign "9" (nine vertical strokes) has the phonetic value *nu*.

**3.9.2.3.** Lycian *nuñtāta*. This numeral of unknown meaning is obviously derived from the word for "nine" ('19', '90', '190', '900?'). If, in Lycian, single nasal after *u* and before consonant vanishes without trace (\**unt* > \**ūt* > \**ut* (denasalized]), as is to be expected on the basis of parallelism with *ī* (\**int* > \**īt* > \**it*, e. g. in 3 pl. *tubeiti* 'they strike' 57,8; 59,3; 88,5; 101,4), *nuñt-* must be derived from \**nunant-*, just as *mñti* from \**minant(i)-* (-*nt*-formation to *mina-*, cf. Hieroglyphic Luv. TOWN *mina-* 'town'). The Lycian -*nt*-stem \**nunant-* (possibly syncopated from \**nuwanant-*) or \**nunanti-*, which is then to be assumed, can be directly equated with Hitt. 9-*ant-* (3.9.1.1.).

The material points to a Proto-Luvo-Lycian cardinal \**nuwan* or \**nun*, which, in Luvian, secondarily acquired plural endings.

The etymological connection with PIE \**newn* (variant \**enun* > Arm. *inn*) is evident, but the phonological derivation remains unclear. Perhaps the old ordinal \**newnó-*, which would have given Proto-Anatolian \**nuná-*, influenced the phonetic form of the cardinal. However, anyone who wants to maintain the direct derivation from \**newn* can point to the variants *muwaniyant-* and \**muwa-* from 3.4.4.1. and assume the development \**néwn* > \**newan* > \**newun* (this state approximately Proto-Anatolian) > \**naun* > \**nun* (with secondary monophthongisation, cf. the suggestion \**meyu-* > \**mau* > \**mu* from 3.4.1.2.3.).

### 3.10. The Anatolian numerals 'ten' and their derivatives

#### 3.10.1. Hittite data

The writing is with the numeral sign "10" with phonetic complements.

**3.10.1.1.** Cardinal. Instr.sg. 10-*an-ti-it kalulupit* 'the ten fingers' *KBo* XVII 32 line 12' (relatively old ductus).

**3.10.1.2.** Ordinal. 10-*na KBo* V 2 III 9 'and/but the tenth'.

**3.10.1.3.** 10-*an-ki KBo* I 42 I 40' 'ten times'.

**3.10.1.4.** 10-*pa XXXIII* 87 I 36' approximately 'tenfold' (adv.), see H. G. Güterbock, *Journal of Cuneiform Studies* vi (1952: 12f.); for the formation-type 3.10.2. and 3.5.2. are perhaps to be compared (Meriggi 1966: 59).

**3.10.1.5.** 10-*iš*, see *HW*, 304; cf. 3.9.1.7.

**3.10.1.6.** 10-*li-iš* VII 29 I 12; XXXII 123 II 14'; 10-*AM-liš* XLI 36 II? 4; *KBo* XXI 1 I 4 2 NINDA.GIDIM 10-*iš* 2 NINDA<sup>mar-ki-iš-sar</sup> 10-*li* 2 NINDA.ERÍN<sup>MES</sup> 10-*iš* perhaps points to a paradigm common nom. 10-*iš*: neuter nom.acc. 10-*li*.

#### 3.10.2. Hieroglyphic Luvian data

For acc.sg. 10-*ha-sà-pi-na*, as well as 10-*ta*, both something like 'tenfold', see Meriggi (1962: 165). For the initial sequence 10-*h-*, 2-*AH-hi*, 3.2.1.3., and 9-*AH-ha*, 3.9.1.5., should be compared.

### 3.11. The Anatolian numerals 'twelve' and their derivatives

#### 3.11.1. Hittite forms

**3.11.1.1.** ERÍN<sup>MES</sup>-*an* 12-*an* 148/r line 7'.

**3.11.1.2.** 12-*iš*, e.g., *KBo* XI 36 V 8 1 NINDA<sup>pi-ia-an-ta-al-li-iš</sup> 12-*iš*.

**3.11.1.3.** Higher numeral: *LI-IM-aš* KUR-*e-aš* XXXI 142 r. 4 'of a thousand countries'.

#### 3.11.2. Cuneiform Luvian forms

Instr. 12-*ta-a-ti*, see Laroche (1959: 125); very probably an -*nt*-stem.

### 3.12. Derivatives of higher numerals

#### 3.12.1. Hittite forms

**3.12.1.1.** 15-*anki*, 20-*anki* 'fifteen times', 'twenty times', see *HW*, 304.

**3.12.1.2.** 15-*iš* (e.g. *KBo* XVII 14 line 4', typically old ductus), 20-*iš* (*KBo* XVII 100 IV 3'; *KBo* XX 3 r. 9'); 25-*iš* (*KBo* XVII 29 I 7', old ductus); 30-*iš* (e.g. *KBo* V 5 r. 9'); 40-*iš* (e.g. *KBo* XVII 100 IV 2'); 50-*iš* (e.g. *KBo* XX 3 o. 14'; 21 o. 9'; *IBot* II 93 line 3'); *ŠU-ŠI-iš* (968/z, left col. K 7'); 70-*iš* (*KBo* XX 3 o. 14'; VII 17 line 15'); 80-*iš* (*IBot* II 93 line 4'); 90-*iš* (VII 17 line 14'); the formation-type probably belongs to one paradigm with 2.12.1.3., cf. 3.9.1.4.

**3.12.1.3.** 20-*li-eš* (XXXVI 89 o. 5); 30-*li* (e.g. *Bo* 2309 III 15); 30-*li-eš* (XXXVI 89 o. 5); 70-*la* (?) VIII 72 o. 7; the enumeration XXXVI 89 o. 5 3 NINDA.KUR<sub>4</sub>.RA 5-*li-eš* 20 NINDA.KUR<sub>4</sub>.RA 20-*li-eš* 20 NINDA.KUR<sub>4</sub>.RA 30-*li-eš* suggests that here indications of size are given in the form of fractions; obviously smaller baked goods are produced in a greater number than big ones (cf. also the passages cited in 3.1.1.9.). As a consequence 20-*alli-* is to be interpreted as '(containing) a twentieth (of a particular unit of weight)'. The same type of word formation is present as in the case of *teriyalla*, 3.3.3.3.

### 3.13. Numerals of unknown meaning

#### 3.13.1. Miscellaneous Lycian numerals

Several Lycian numerals elude an identification of their meaning (cf. Neumann 1969: 394).

**3.13.1.1.** *kbišñi* 26,17 and *trisñmi* 26,18; 44b, 45 (both times beside *wawā*). It has been suggested that these are multiplicatives, distributives, or the like. Also the meanings 'twenty', 'thirty' (H. L. Stoltzenberg, *Die termilische Sprache Lykiens*, 1955) or 'twelve', 'thirteen', are not entirely excluded. Analysis: *kbi* ('second', 'for the second time') / \**tri* ('third', 'for the third time')? + -*šñ* + ending. The forms might be derivatives (note the suffix -*šñ* in, e.g., *trñmisñ*) or compounds. In the latter case a connection with PIE \**dékṃ* (> \**tesñ*, with syncope > \**tsñ* > Lycian \**šñ*?) should be considered.

**3.13.1.2.** *aitāta* 102, 3. The beginning of the word may contain "one" or "once", a meaning 'ten', 'eleven', 'one hundred ten' should perhaps



be considered. The sequence *it* can have developed phonologically from *\*ind* (*\*ind* > *\*indd* > *\*it* > *\*it*). The form is to be analyzed either as a derivative by means of the collective suffix Proto-Anatolian *-and-* (< PIE *\*-n-d-*) to the *-nt*-stem *\*aiti-* (equivalent to *\*oye-nt-i-*), thus something like *\*ay(n)tay-and-a*, or a compound *\*ain(t)-dayant-a* (*\*dekont-ə₂??*).

**3.13.1.3.** *kbisñtāta* 111, 3.4. Meaning: probably in the area 'twelve', 'twenty', 'one hundred twenty' or 'two hundred'. Analysis: *kbisñ* (3.13.1.1.) + *\*dayant-a* (< *\*dekont-ə₂??*) or *kbi-* + *\*sñtāta*, in which case *-sñtāta* is either a compound *\*sñ-dāta* (*\*dekm̃ \*dekont-ə??*) or an *-and*-collective formation (plural ?) to *sñta* (5).

**3.13.1.4.** *nuñtāta* 131, 3. Meaning in the area 'nineteen', 'ninety' or 'one hundred ninety' (Neumann 1969: 394 'ninety?'). "9" is contained in the beginning of the word — see 3.9.1.3.; for further analysis, see 3.13.1.2.3. **3.13.1.5.** *sñta* 112,6; 149,9. The meaning is something like 'ten' or 'hundred'. *sñta* could be interpreted as a descendant of PIE *\*kmtóm* (> *\*sñtñ*, then secondarily altered to *sñta* after other numerals?), or as a derivative to *\*sñ* (3.13.1.1.). J. E. Rasmussen, *Haeretica indogermanica* (KdVS XLVIII.3 1974: 56 n. 15) points out that *sñta* is "in all probability a loan-word from Persian *sada*" and therefore "not diagnostic for the assignment of the labels *satem* and *centum*".

**3.13.1.6.** It is not clear whether the following Lycian words belong to the designations of numbers: *tuprñme* 57,6; *trppeme* 109,5; *muprñme* 149,14; 57,4 ff. serves as the point of departure for the determination of the meaning: *sei pijētē* (5) *pijatu: miñti: ētri: xupu: siḫli: aladehxxāne: se hrzzi* (6) *tuprñme siḫla* 'And for the town authority (?) he has ordered as an order: the lower grave-chamber for one shekel (dative singular) *aladehxxāne* (infinitive) and the upper for *tuprñme* shekels'. Since the interpretation of E. Torp (*Lykische Beiträge*, 1853–1916: ii, 25) of *tuprñme* as 'two each' and that of W. Deecke (*Lükische Geschichten und Sagen*, 1852) as 'double' (criticised by Torp) do not quite satisfy from the realia point of view, it would be preferable to think of  $2 \pm \frac{1}{2}$  and correspondingly for *trppeme* and *muprñme* as  $3 \pm \frac{1}{2}$  and  $4 \pm \frac{1}{2}$  respectively. The upper grave-chamber is the more valuable one (cf. Friedrich 1932: no. 36).

*tusñti* 44a, 12 (meaning 'twelve' because of δώδεκα c 22?) could perhaps be adduced for *\*tu-* 'two' (with syncope of a vowel, < *\*dwo* or *\*dwi*). The suggestion that *tusñti* is 'twelve' has recently received noteworthy support in that E. Laroche, *Fouilles de Xanthos* V (ed. P. Demargue) (1974: 146) has recovered a part of the destroyed context with the aid of a newly-found fragment. Line 44 a 12 now reads *ñte*

*ma[h]ñānaha: tusñtiti*[, with which the correspondence a 12 *ma[h]ñānaha tusñti* (with a form of adj. *mahānahi* 'divine; of the gods') to c 22 δώδεκα θεοῖς is evident. So Laroche, *Les noms des hittites* (1966: n. 41) himself offers the following thought: "N'avons-nous pas ici le nom de nombre 'douze' en lycien? On rapprochera d'une part, les δώδεκα θεοῖς de c 22, d'autre part, le nom de nombre *sñta*. D'où *tu-sñti* '2 + 10'; le thème *tu(i)-* est connu par *\*twi-* donnant *kbi* ..., et *kbisñtata* [sic] serait non pas '200' mais '20', proprement 'deux dizaines': *sñtata* [sic] dérivé en *-at-* [sic] de *sñta/i-* '10'". Already W. Deecke and S. Bugge, *Lykische Studien* (1897: i, 50) had taken *tusñti* to be a form of a numeral (*tu-sñta* '200'), to which P. Meriggi (*Germanen und Indogermanen. Festschrift für Herman Hirt*, IB III.15, 1936: ii) energetically raised objections. In the meantime O. Caruba has produced a detailed account of the determination of the Lycian numerals in an article entitled "I termini per mese, anno e i numerali in Licio", (*RIL* cviii 1974: 575–97, especially 583–93). For the cardinals he reaches the results *sñta* 'one', *\*tuwa-* 'two', *\*tri(ja)* 'three', *teteri* 'four', *aitāta* 'eight', *nuñtāta* 'nine', *tuweri* 'twelve'; for the other numerals, inter alia, *tuprñme* 'second' (?), *kbisñni* 'di due anni', *trisñni* 'di tre anni'. I cannot agree with his system. For instance *teteri* 'four' is falsified by the newly-found trilingual from the Letoron of Xanthos, which shows that it has the meaning 'city', see E. Laroche, *RFil* cxvii (1965: 119).

### 3.13.2. Cuneiform Luvian data

For the sake of completeness I would like to mention Cuneiform Luv. *ta-aš-ta-a-ri-in-ta*; see Kammenhuber, *Hippologia Hethitica* (1961: 152 f.) with Note a. "Für t., falls luvische Entsprechung zu 200 (Ellen), fehlt es an vergleichbarem Material für Hunderter aus dem Hethitischen".

## 3.14. On the diverse numeral categories in Anatolian

### 3.14.1. Cardinals

As a consequence of a Common Anatolian innovation, it seems that an *-nt*-stem existed beside the basic form throughout the cardinals. It is therefore not possible to determine whether the plain cardinals from "5" onwards were in part indeclinable as in Proto-Indo-European. The complete phonetic form of a cardinal is known only in the case of Hitt. *ānt-*

(?) 'one', Hitt. *teri-* 'three', Hitt. *mi(e)u-* 'four', Cuneiform Luv. *mau(wa/i)-* and also Hieroglyphic Luv. *tu-wa-i* 'two' (something like *(d)tuwa"za/i-*) and Hieroglyphic Luv. *9/nu-ī, 9/nu-wa-a-ī?* 'nine' (something like *nu"za/i, nuwa"za/i*).

As far as can be seen, the cardinals are, in their entirety, inherited from Indo-European. An exception in the case of the word "1" is probably based on the fact that here no true cardinal existed in the parent language. In the case of "4", the counting term *\*méyu-* — probably already in existence in Indo-European —, possibly completely eliminated the cardinal *\*k<sup>u</sup>etwóres*, in its turn originally a counting-word too. The most important indication for this lies in the phonetic value of the Hieroglyphic Luvian numeral sign "4"; the Hittite and Cuneiform Luvian examples occur under such conditions that a special collective terminology could be present.

In several instances phonetic complements of numerals written only with numeral signs fit the reconstructable descendants of Proto-Indo-European cardinals, as in the cases of "5" and "8" in Hieroglyphic Luvian, "9" in Cuneiform Luvian, and "7" (?) in Hittite.

### 3.14.2. Ordinals

For 'first', we find in Hitt. *hantezzi(ya)-*, Cuneiform Luv. *hanteli-* and Lycian *\*χñtewe(?)*, Anatolian innovations independent of the cardinal. In the case of 'second', the Anatolian languages show a split: in Hittite the descendant of PIE *\*doyó-* 'twofold, double' (with various derivatives) was used; cf. Hitt. *tā, t/dān, takiya, t/damai*. Luvo-Lycian employed a derivative of the stem *\*dwi-* (*\*dwi-o-* or *\*dwi-yo-*), Luvian (sic) *duianalli-*, Lycian B *tbi*, A *kbi*. Lydian apparently used for 'second' the descendant of PIE *\*alyo-*, see R. Gusmani, *Lydisches Wörterbuch* (1965: 56) (*αλα*). For 'third' there seems to have been a uniform Anatolian formation (*\*tri-o-* or *\*tri-io-* → *\*triyo-* > Proto-Anatolian *\*tariya-*), which appears in Hitt. *teriya-* (with *e* from the cardinal) and Luvian *\*tarriya-* (with *rr* from the cardinal); Hieroglyphic Luv. *tariwana-* 'arbitrator' (← 'third') is a reshaped derivative. An old term for 'fourth' survives, I think, in Hitt. *kutruwan-* 'witness'; the normal ordinal seems however to have been a *-ya*-stem.

An inspection of the Marburg Hittite Thesaurus shows clearly that the Hittite ordinals in *-anna*, which have hitherto been assumed (Friedrich 1940–46: i § 133 b) do not exist; see 3.2.3.2., 3.3.3.2.1., 3.5.1.2., 3.7.1.2.

### 3.14.3. Multiplicatives, etc.

With respect to such forms, the Anatolian languages are widely divergent. For the meaning '*n* times', Hittite uses formations with the suffix *-ki* (also in *mašīyan-ki* 'how many times, how often?'), which, together with Greek *-κι* can be taken back to PIE *\*ki* (taken by itself Hitt. *-ki* is also derivable from *\*gi/ghi*, even, less probably, from *\*ke/ke*). The variant, Hitt. *-kiš*, Greek *-κις*, is due to an assimilation to the type *\*dwis* 'twice, twofold'. We know the complete phonetic form of a Hittite multiplicative adverb only in the case of *ānki* 'once'. In the meaning 'for/at the *n*th time' several possible expressions were available: the unextended nominative-accusative singular neuter of the ordinal (*t/dān, teriyan*) was used adverbially; for clarification the dative sg. (!) *pedi/pidi* to *pedan* 'time, turn' could be added (this use should be listed HW, 168). Furthermore Hitt. *palši* could appear in the meaning 'times', e. g. *hantezzi palši* 'at the first time'. Whether in 9-*anti* KASKAL-*ši* (probably = *palši*) 'for the ninth time' a cardinal or an ordinal is used must remain an open question. *hantezzili* 'for the first time' and *āšma* 'first, at first, for the first time' are outside the fixed series of formation. For further details, see the discussion in 3.1. The group of multiplicative expressions needs still further investigation.

In Luvo-Lycian, formations with the ending *-su* (*\*s-wé*) are usual, note Hieroglyphic Luv. 3/*tari-su*, 4-*su*, Lycian B *thisu*, *trisu*, A *kbihu*. The interpretation '*n* times' has unfortunately not hitherto been rendered certain. Hitt. 1-*ŠU*, 2-*ŠU* etc. can — contrary to Merrigi (1966: 59) — have nothing to do with this type, for the complement is Akkadian, as clearly follows from the graphic variation *ŠU/ŠÚ* (1-*ŠÚ*, e. g. KBo II 4 I 4).

Hitt. 9-*an*, 10-*pa* (adverb) and Hieroglyphic Luv. 5-*was(am?)pa-* and 10-*has(am?)pi-* appear to occur in the meaning '*n*-fold'. In Lycian this value is perhaps to be assigned to the class B *thiplē trpplē*.

### 3.14.4. Fractions

In the meaning 'half, a half', Hittite had the innovation *takšan*. Otherwise nothing is known for certain. Some *-lli*-formations appear either to be themselves fractions or derivatives based on fractions (which are then probably to be equated with the simple ordinal); see 3.3.3.5., 3.11.1. In Hittite the connection of whole numbers with fractions could be expressed

by means of addition, for which I know of only one certain example: VII 24 I 2 1 *še-kan*  $\frac{1}{2}$ *še-kán-na* 'one-and-a-half spans'. For Lycian, I would assume compound formations, see 3.12.1.1.

### 3.14.5. Some other numeral formations

In the meaning 'of the first rank' we have Hitt. *hantezzi(ya)-*, 'of the second, third rank' Hitt. *dān pedaš*, and, of Luvian origin, *duianalli-* and *tarriyanalli-*. The *-nt*-derivatives of the basic numeral (3.14.3.) appear in part to have complex meanings (9-*ant-* 'a complex of nine parts'). In place of the distributives there were perhaps in Hittite iterated groups (1-*aš* 1-*aš*, 1-*an* 1-*an*, 7-*an* 7-*an*). The formations in *-hh-* are not yet quite clear, but they are obviously of the greatest importance for the historical grammar of the Anatolian languages; see 3.9.1.5.

### Note

1. The siglum *KUB* is left out in the case of volume-numbers above 7; thus "XIII 4 III 5" means *Keilschrifturkunden aus Boghazköi*, vol. 13, tablet 4, column 3, line 51.

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#### Note

Further references have been given in the text. I have not been able to consult Kellogg, *Hittite numerals*, mentioned by Sturtevant in *Language* 4 (1928: 6 fn. 2). Citation and abbreviations follow *HW* and *Linguistic Bibliography*.

## Chapter 4 Tocharian

Werner Winter

### 4.0. Introductory remarks

In the following pages, I will try to present a fairly complete survey of the field of Tocharian numerals; gaps in our knowledge prevent the coverage from being truly exhaustive. Wherever possible and useful, reference will be made to the texts, with first preference given to published ones. In case of ample attestation, special attention will be paid to the inclusion of dialectal variants.

The principal emphasis will be on the presentation of forms and on their interpretation in a Tocharian context, with attention paid wherever possible to a discussion of the Indo-European background as I see it. In those cases where competing hypotheses exist in the literature, I will adduce interpretations other than those which I consider acceptable by way of a brief reference unless I feel that a detailed discussion is warranted by the facts. It cannot be avoided that my approach, as obviously that of others, will show a certain amount of personal bias; but as my evaluations have been made against the background of a fairly long tradition of etymological work in the field of Tocharian, it seems reasonable to hope that they may turn out to be more than just subjective. It goes without saying that my preferences will show wherever new proposals are offered.

As sources of information about previous studies, three recent books by van Windekens (1976, 1979, 1982) are of considerable value; the author's original proposals, as well as his assessment of the work of others, should, however, be used with much caution and under no circumstances be taken at face value.

Since quite a few uncertainties in matters of detail still have to be removed, I find it necessary to give preference to the interpretation of individual forms and their derivatives within Tocharian rather than try to embark upon attempts at reconstructing possible Proto-Indo-European systems or subsystems. Whatever Tocharian evidence may contribute to such a discussion, is best relegated to the general chapter of this book.