THE ORIENTAL INSTITUTE
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STUDIES IN ANCIENT ORIENTAL CIVILIZATION

HITTITE HIEROGLYPHS
III

	a	e	i	u
Vowels	a 'a			
Nasals				
ḫ				
i̯	ia iã			
k/g				
l				
m				
n				nu nú
p/b				
r				
s				
ś				
t/d				
w				
z(=ts)				
Syllables of unknown value				

HITTITE HIEROGLYPHS

III

By

IGNACE J. GELB

PREFACE

Hittite Hieroglyphs III is intended to complement my *Elements of Hieroglyphic Hittite,* which is now in preparation. Appearing in the latter are many new readings and interpretations which could not be fully substantiated in a volume designed for the general public. In fulfilment of my obligations, the scientific proofs for the new ideas expressed there are offered in the present volume.

This volume is devoted to the treatment of the writing and to the discussion of certain grammatical problems. On pages 26–29 is offered what I hope may prove to be the final and correct interpretation of the infamous Tarkondemos seal. In the résumé on pages 38–40 are gathered the main findings on the evaluation of the character of the syllabary as a whole and on the reading of individual signs. It is perhaps important to mention here the discovery of syllables containing the consonants *š* (pp. 15–22) and *z* (pp. 22–31). The readings of all syllabic signs are given in approximately the same form as presented in the course on the Hittite hieroglyphs given by myself at the University of Chicago in the winter quarter of 1938.

This study represents the third instalment of my work on the decipherment of the Hittite hieroglyphic writing, but in addition it offers the first serious attempt at systematization of the whole syllabary. I believe the time has come for all scholars working in this field to take a definite stand in relation to the main principles of Hittite hieroglyphic writing and accordingly to revise drastically their readings of individual signs.

To Professor Julian H. Bonfante of Princeton University are due my heartiest thanks and gratitude for his generous and ever ready help in matters pertaining to Indo-European etymology. Dr. T. George Allen and Mrs. Erna S. Hallock of the Oriental Institute have helped greatly in editorial problems. The hieroglyphs have been drawn by Dr. Laurence Lee Howe.

IGNACE J. GELB

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SYMBOLS

Transliterations are given in italics. Proper nouns and proper adjectives are capitalized. Phonetic signs unread are, however, rendered regularly by lower-case x, y, etc., even when initial. Ideograms are given in small capitals. If the object represented by an ideogram seems evident, the name of the object is used, even though a meaning also may be known. When neither object nor meaning seems clear, x serves unless the actual sign is required. When an ideogram or a "rebus" sign (see p. 37) is transliterated by its phonetic value, italics are used; any phonetic complements then follow in parentheses. Otherwise the phonetic complements, if added in full, are separated from the corresponding ideographic symbols by a space (or by an ideogram mark if present). Partial phonetic complements are attached to their ideographic symbols by hyphens.

Common determinatives are indicated by small superior roman letters as follows:

[c] city	[m] masc. name (cuneiform)
[d] deity	[n] personal name
[l] land, country	

The English terms for other determinatives, and even for "city" and "land" when following a name, are spelled in full.

Parentheses are used as above noted and also to mark unpronounced vowels or even consonants (cf. [d]$Kar(k)$-hu-ha-ta-a, p. 43) and to set off enclitics not concerned in a given discussion (e.g. -ha, "and," on p. 3).

Other symbols are:

[ ]	wholly lost	*	hypothetical form
⌐ ¬	partially lost	/	alternative or variant reading
⟨ ⟩	omitted by scribe	+	ligature

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IV. ABBREVIATIONS

A   British Museum. Carchemish; report on the excavations at Djerabis .... conducted by C. LEONARD WOOLLEY and T. E. LAWRENCE (2 vols.; London, 1914–21). Plates of series A.

AAA   Annals of archaeology and anthropology (Liverpool, 1908———).

AJA   American journal of archaeology (Baltimore etc., 1885———).

AJSL   American journal of Semitic languages and literatures (Chicago etc., 1884–1941).

AOF   Archiv für Orientforschung (Berlin, 1923———).

AOr   Archiv orientální. Journal of the Czechoslovak Oriental Institute, Prague (Praha, 1929———).

Assur   ANDRAE, WALTER. Hettitische Inschriften auf Bleistreifen aus Assur (Wissenschaftliche Veröffentlichungen der Deutschen Orient-Gesellschaft, No. 46 [1924]).

CE   Cornell Expedition to Asia Minor and the Assyro-Babylonian Orient ..... Travels and studies in the Nearer East .... (Ithaca, N.Y., 1911).

EHH   GELB, I. J. Elements of hieroglyphic Hittite (in preparation).

HB   FORRER, E. O. Die hethitische Bilderschrift (SAOC No. 3 [1932]).

HH I–III   GELB, I. J. Hittite hieroglyphs. I–III (SAOC Nos. 2 [1931], 14 [1935], and 21 [1942; the present volume]).

HHM   GELB, I. J. Hittite hieroglyphic monuments (OIP XLV [1939]).

IF   Indogermanische Forschungen. Zeitschrift für indogermanische Sprach- und Altertumskunde (Strassburg, 1892———).

IHH   HROZNÝ, B. Les inscriptions hittites hiéroglyphiques. Essai de déchiffrement (Monografie archivu orientálního, Vol. I [Praha, 1933———]).

JRAS   Royal Asiatic Society of Great Britain and Ireland. Journal (London, 1834———).

KUB   Berlin. Staatliche Museen. Vorderasiatische Abteilung. Keilschrifturkunden aus Boghazköi (Berlin, 1921———).

M   MESSERSCHMIDT, L. Corpus inscriptionum Hettiticarum (MVAG,
           5. Jahrg., Nos. 4–5 [1900]).

I M   *Op. cit.*, Erster Nachtrag (MVAG, 7. Jahrg., No. 3 [1902]).

II M   *Op. cit.*, Zweiter Nachtrag (MVAG, 11. Jahrg., No. 5 [1906]).

MDOG   Deutsche Orient-Gesellschaft. Mitteilungen (Berlin, 1899——).

MVAG   Vorderasiatisch-aegyptische Gesellschaft. Mitteilungen (Berlin,
           1896–1908; Leipzig, 1909——).

OIP   Chicago. University. Oriental Institute. Oriental Institute pub-
           lications (Chicago, 1924——).

OLZ   Orientalistische Literaturzeitung (Berlin, 1898–1908; Leipzig,
           1909——).

RHA   Revue hittite et asianique (Paris, 1930——).

SAOC   Chicago. University. Oriental Institute. Studies in ancient
           oriental civilization (Chicago, 1931——).

ŠuK   BOSSERT, H. TH. Šantaš und Kupapa. Neue Beiträge zur Ent-
           zifferung der kretischen und hethitischen Bilderschrift (Mit-
           teilungen der Altorientalischen Gesellschaft VI 3 [1932]).

WZKM   Wiener Zeitschrift für die Kunde des Morgenlandes (Wien,
           1887——).

ZA   Zeitschrift für Assyriologie und verwandte Gebiete (Leipzig,
           1886——).

THE WRITING

THE NORMAL SYLLABARY

SIGNS OF KNOWN VALUE

∩ *a*

⺊ *e*

↑ *i*

⟋⟍ *u*

The readings of these four vowel signs are relatively sure (HH II 12–14). Even Meriggi has finally abandoned his former reading of the second sign as *ra* and now takes it as a vowel, *á* (OLZ XXXIX [1936] 157 f.; RHA IV [1936–38] 96 f.). His diacritic mark over *a* has its origin in the fact that he distinguishes two other *a* signs: the common one, universally read as *a*, and an *á* (OLZ XXXIX 158, n. 1; RHA IV 76), read by myself as ꞌ*a*. However, Meriggi transcribes the latter sign as *á* in only a few cases; normally he reads it as *e* (e.g. in MVAG XXXIX 1 [1934] p. 3 and in RHA IV 96 f.).

〈 ꞌ*a*

There is nothing to add to the discussion of this value as given in HH II 15 f. beyond the observation that this sign interchanges with *a* in ꞌ*a-i-ā-ta* (I M XIX B 15) = *a-i-ā-ta-a* (CE XII 4) and with *e* in ꞌ*a-pa-sa-n(a)* (OLZ XXXVII [1934] 147:8) = *e-pa-sa-n(a)* (*ibid.*). Cf. also hieroglyphic Hittite ꞌ*a-ši-ī-* with cuneiform Hittite *aššiᶖa-*, "to love," discussed below, p. 17.

1

$\text{\textnumero}$ *ā̃*

$\text{\textnumero}$ *ē̃*

$\text{\textnumero}$ *ī̃*

? *ū̃*

In proposing to read the first and third signs in this group as the nasals *ā̃* and *ī̃* respectively, I stand entirely alone (HH II 9–12). Other scholars read these two signs as *ā* and *ī* (Meriggi in ZA XXXIX [1930] 176 and 184; Bossert in AOF IX [1933/34] 111 and 113 [however, later, in AOF X (1935–36) 286, Bossert reads the latter sign as *ja*]; Friedrich in ZA XLII [1934] 189), as *ea* and *ia* (Forrer, HB pp. 39 and 33), or as *ā* and *ja* (Hrozný, IHH pp. 101 and 105). In a review of HH II Meriggi considered my proposed reading of the nasal sounds as being worthy of examination; but, because of a complex of reasons which he was unable to discuss at that time, he believed the theory to be untenable (OLZ XXXIX 156). Friedrich, in his review of HH II, expressed the belief that the possibility of nasal sounds should be taken into serious consideration (*Deutsche Literaturzeitung*, 1936, cols. 1826 f.).

The chief argument in support of the nasal theory is based on the observation that $\text{\textnumero}$ and $\text{\textnumero}$ do not occur in the early Carchemish inscriptions and that in their place the combination *a-e* or *i-e* is often found. This led me to the assumption that $\text{\textnumero}$ and $\text{\textnumero}$ found in the later Carchemish inscriptions and elsewhere are but a late development from $\text{\textnumero}$ and $\text{\textnumero}$, i.e., *a* and *i* plus subscript *e*. In favor of this assumption I cited the development in medieval Latin and Polish of the nasal sounds written *ą* and *ę* from *a+e* and *e+e* respectively.

To the several examples already cited by myself, such as hieroglyphic Hittite *pi-ā-tu* corresponding to cuneiform Hittite *pí-an-du,* "may they give," and the genitive plural ending *-āsa* or *-āśa* in the hieroglyphic inscriptions corresponding to similar Luwian forms ending in *-nzi* or *-nza,* I can now add another important parallel. Meriggi discussed two similar signs which he read as ANDA and ANDU(R)

(WZKM XLI [1934] 37, n. 1; MVAG XXXIX 1, pp. 13 and 93 f.;
RHA IV 78 f., Nos. 51 f.). The way he distinguished the two signs
and his reasons for reading the second sign as ANDU(R) are debatable.
Nevertheless, he has clearly established the meaning of his ANDU(R)
ideogram as "in, into" by comparison with cuneiform Hittite *anda*
with the same meaning. Now the ideogram read by Meriggi as
ANDUR (MVAG XXXIX 1, p. 94) is followed by *a-e-ta-pa-wa* in an
early Carchemish inscription (I M XIV 7:3 f.).[1] This inscription is
preserved in a fragmentary state, and because the ideogram occurs in
line 3 and the phonetic signs in line 4 Meriggi (*loc. cit.*) failed to see
the connection between them.[2] If we disregard the particle *-pawa*,
a-e-ta appears to be the phonetic spelling of the preceding ideogram,
which, as stated above, represents cuneiform Hittite *anda*. Thus this
example provides a further argument for the assumption that the
combination *a-e* expresses nasalized *ã*.

In the examples quoted in HH II and above we have observed
original *n* expressed by nasalization, as in *anta* written *a-e-ta* cor-
responding to *ã-ta*. However, examples of this sort are very rare.[3]
Normally *n* before another consonant is not expressed in the writing at
all.[4]

Much more commonly than I myself realized, nasal signs are used
secondarily in forms where normally simple vowels would suffice.
Thus, of the word *titas*, "father," written *ti-ta-a-s(a)* (II M LII 3) in
nom., the dat.-loc. is *tita*, written *ti-ta-a* (A 2:2) or *ti-ta* (I M X 4 and
8). But from the nom. ᵈ*Ku-papa(pa-pa)-s(a)* (A 15 b** 2) the dat.-loc.
is not only ᵈ*Ku-papa(pa-pa)*(A 11 b 6) but also ᵈ*Ku-papa(pa)-ã(-ḫa)*
(A 13 d 6), just as from nom. ⁿ*Ka-tu-wa-s(a)* (A 2:1 and *passim*)

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[1] The same ideogram, followed by *-ta-pa-wa*, occurs in a recently published
inscription from Çiftlik (HHM 17 rev. 3).

[2] The sign *pa* appears in an unusual form in this early Carchemish inscription;
but Meriggi both in MVAG XXXIX 1, p. 72, and in RHA IV 180 interpreted the
sign correctly as *ba* (our *pa*).

[3] The assumption expressed in HH II 10 f. that the acc. sing. ends either in *-n*
or in a nasal *-ĩ* requires correction in view of the new interpretations offered below,
pp. 41–53, where it is shown that *-n* is used for the acc. masc., *-ĩ* for the acc. neuter.

[4] See HH II 12 and my EHH.

there is a dat.-loc. *Ka-tu-wa-ã* (*ibid.* l. 3).[1] Cf. also *za-a* (A 6:8) and
za-ã (A 6:8 and 9), "he takes," likewise *arḫa(ḫa)* x-*a* (A 2:4) and
arḫa(ḫa) x₂c-*ã* (CE V 3), "he removes." Secondary nasalization before
a consonant can be seen in ᵓ*a-me-ã-ta-a* (A 6:2) or *me-ã-ta-e* (A 11
a 3), abl.-instr. case from ᵓ*ameas* or *meas*, "mine"; *a-i-ã-wa* (Assur e
Vu 4 f.), variant of *a-i-a-wa-a* (IHH Pl. CII 7), "I make"; and *a-i-ã-ḫa*
(M XXIII A 2), variant of *a-i-a-ḫa* (A 6:4), "I made."

It may be recalled that the sign for *ĩ* is a development of *i+e*.
Therefore it is possible that in some cases the compound sign is used
not only with its secondary value of nasal *ĩ* but also with its primary
value *i+e*. The latter is suggested for the demonstrative *ĩ-s(a)* or
ĩ-e-s(a), which is perhaps to be read *i+e-s(a)* or *i+e-e-s(a)*. In the
case of *i+e-e-s(a)* the second *e* would form a phonetic complement to
i+e, just as in the writing *tra(ra)* the *ra* sign forms a phonetic comple-
ment to *tra*.

The second sign of the nasal group, here transliterated as *ẽ*, was
left unread in HH II, although even at that time I could have ac-
cepted the conclusive evidence brought forward by Bossert (AOF IX
114, Fig. 14, n. 2) that this sign interchanges with *ĩ-e*. Interchange of
such forms as ᵓ*a-ze-ma-ĩ* (A 11 c 3)[2] with ᵓ*a-ze-ma-x* (A 18 e 2) and
COURT-*zi-ĩ* (A 11 c 2) with COURT-*zi-x* (A 18 e 3) is beyond doubt.
Meriggi accepts such interchange and gives the sign in question (here
rendered by *x*) the value *ĩ* (MVAG XXXIX 1, pp. 2 f. and 71 f.).
Hrozný (IHH pp. 245 f.) does not distinguish between this sign and
pa, which is similar in form but certainly different in reading. That
the vowel is nasalized is self-evident from the comparisons adduced
above. The vowel itself is not sure, but it can hardly be anything
but *e*.

No sign for *ũ* has yet been discovered. Comparison of such forms
as ᵈ*Tarḫu(ḫu)-ĩ-s(a)* (A 6:2) and ᵈ*Tarḫu(ḫu)-s(a)* (OLZ XXXVII
147:6), both pronounced Tarḫun(t)s, suggests that under certain
conditions *ĩ* could perhaps be used for *ũ* also.

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[1] For other examples of dat.-loc. in -*a* and -*ã* see p. 42 and my EHH.

[2] Cf. also ᵓ*a-ze-ma-e* and ᵓ*a-ze-ma-i* discussed below, p. 49, n. 6.

① *ḫa*

Ⅷ *ḫe*

☊ *ḫi*

ᗯ *ḫu*

These four signs were read thus in HH II 16–19. The value *ḫa* of the first sign is sure, even though Hrozný still occasionally reads it with the value *u* (IHH pp. 363 and 437; AOr IX [1937] 414, n. 4). The sign *ḫe* interchanges with *ḫa*, and its vowel is assigned on the basis of this interchange.[1] The value *ḫi* of the third sign is sure. My reading of the sign *ḫu* has now been accepted by Meriggi (OLZ XXXIX 158; RHA IV 96–98) and Hrozný (AOr IX 411, n. 1).[2]

↟ *ia*

↟ *iã*

On the values of these signs see pp. 54–58 and 60–63.

[1] See also my discussion of the personal name *Ḫe+r(a)-ti-pu-s(a)* in AJA XLI (1937) 290.

[2] The reading of this sign is of great importance because on it depends mainly the correct interpretation of the name of the chief god of the hieroglyphic Hittite people, read by myself as Tarḫuns (HH II 18 f.; cf. HH I 28 and 34). Hrozný now believes that when *ḫu* is added Tarḫuns may be the correct reading, whereas without that phonetic complement Santa/ujas may be meant (IHH p. 411, n. 1). Meriggi definitely adopts the reading Tarḫu(i)s only (RHA IV 98). For this he believes he has found important additional evidence in the Hamath inscription (M VI), in line 3 of which he reads ᵈs *Tar-ḫu-ī(?)-s*. Unfortunately, however, the reading is much more doubtful than he realizes. For many years I myself hoped to find in this passage a proof for the proposed reading Tarḫuns. Both in 1932 and in 1935 I collated this passage, but I could not see the signs I had hoped to find. I did see clearly the divine determinative and the ideogram for Tarḫuns, then a number of phonetic signs: a clear *tra(ra)*, then perhaps *śa*, then *a*, then very doubtful *ta*, and a clear *sa* at the end. My reading of the sign *tra(ra)* (p. 12) also speaks against Meriggi's interpretation.

ka

ke

ki

ku
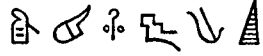
On the signs ka and ku see HH II 19 and 21. Their values are indisputable. On ke and ki see below, pp. 54–66.

la

le

li

lu

These four signs were discussed in HH II 21 f., and their values even in respect to the vowels are almost sure. My belief that the second sign is le (against Hrozný's and Meriggi's $lá$) is now strengthened by the comparison of GATE₃c-le-ni-$ša$-a-i in hieroglyphic Hittite (A 11 c 6) with *bît ḫi-li*(or *le*)-*ni*-*e*-*šu* in an Akkadian inscription of Assurbanipal (Theo Bauer, *Das Inschriftenwerk Assurbanipals* [Leipzig, 1933] I, Pl. 5, A^ vii 17, transliterated in II 6).

ma

me

mi

mu

The signs ma, me, and mu were treated in HH II 22. All scholars agree on the readings of these three signs; only Meriggi reads the sign me slightly differently, as mi.

The remaining sign has been the subject of much discussion. In HH I 48 I read the geographic name (A 1 a 1) as *pá+ri-ka-i-ná-ni* ("city") and, following Frank (cf. HH I 2), identified it with the name of the well known city Barga near Carchemish.

This and some other considerations led me to believe that the sign in question had the value *pd*. Meriggi accepted this value in several of his studies (OLZ XXXV [1932] 565; XXXVI [1933] 78; etc.). The variant forms of this sign are stereotyped and easily distinguished. My original idea that this sign was itself a variant of the "bird" sign

 so commonly used in the writing of the divine name Kupapas (HH I 48 f.)—an idea accepted later by Meriggi (*locis citatis*)—is lacking in support. Nor is Meriggi's identification (in MVAG XXXIX 1, p. 2, and in RHA II [1932–34] 244) of with in the Sultanhanı inscription (HHM 49 A 3) possible, because the former always has a closed horizontal base. In a later study Meriggi correctly separates it from the "bird" signs but includes the Sultanhanı sign (discussed below, p. 36) among variants of the latter (RHA IV 83, Nos. 125 ff.). Hrozný, on the other hand, reads the sign in question as *è* (IHH p. 494, n. 2); with the tang he reads it as *è^(r)* or even *ri* (*ibid.* pp. 145 and 196) and identifies it (*ibid.* pp. 96, 102, and 161) with the similar-looking but entirely different sign discussed below on p. 32.

Yet Hrozný was doubtless right in recognizing that in front of the assumed city name Barga there are two more signs which must be read as part of the name (IHH p. 196). In my later reading ^{bowl}Se-x+ ra-ka-wa-ne-na^{city} (HH II 31) I followed that of Hrozný.[1] The x represents the sign here under discussion and shows that even at that time I had begun to have doubts about the correctness of *pd* as its reading. Hrozný, transliterating the name as $^{lampe}Sd$-$è^{(r)}$-ga- or -ri-ga-, thought of the Hittite city Šerigga.

I now read ^{bowl}Se-mi+ra-ka-wa-ne-$n(a)^{city}$ $^d Tar\hbar u$-$\check{\imath}$-$n(a)$ in A 1 a 1 and ^{bowl}Se-mi+ra-ka-wa-ne-$s(u)^{city}$ $^d Tar\hbar u$-$\check{\imath}$-$s(a)$ in A 1 a 6

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[1] This form is paralleled by $^{bowl}{}^b A$-la-te-$\hbar a$-$n(a)$-$\hbar a$-wa^{city} in the same inscription, line 2. The name is certainly in acc. but acc. *n*, against the common practice, is not assimilated to the following consonant, in this case *ḫ*. A parallel treatment is found in $^d Te$-mu-ri-$n(a)$-$\hbar a$, discussed below, p. 14; for other examples see my EHH. ꞌAlat(e)ḫas can probably be identified with the ancient city Alatḫa or Alalḫa (see most recently W. F. Albright in *Bulletin of the American Schools of Oriental Research*, No. 63 [1936] pp. 24 f.), modern Tell ꜥAṭshāneh in the vicinity of Antioch in Syria. The cuneiform spelling is clearly $^c A$-la-at-$\hbar a$-$ma^{ᴷᴵ}$ as copied by C. Virolleaud, *La légende phénicienne de Danel* ("Mission de Ras-Shamra" I [Paris, 1936]) p. 23; confusion of *at* with *la* such as might occur e.g. in the cuneiform writing from Boğazköy is here hardly possible.

and translate "Tarḫuns of *Se-mi+ra-ka*" in acc. and nom. respectively. This reading is based on comparison with the city name Išmirika in cuneiform Hittite sources from Boğazköy.[1] The hieroglyphic writing *Se-mi+ra-ka* and the cuneiform Hittite *ᶜIš-mi-ri-ka/ga* can be best reconciled if we assume that the original form of the place name was Smireka or similar and that the writings *se-mi-* and *iš-mi-* each attempt to reproduce two contiguous initial consonants. The mention of *ᶜIš-mi-ri-ka/ga* in connection with Kizwatna (Cilicia) at Boğazköy fits well with the occurrence of *Se-mi+ra-ka* in hieroglyphic Hittite at Carchemish.[2]

The correspondence of MOUNTAIN₂*dra(ra)-pa-mi-ĩ-ḫa* (HHM 15:2 and 16:2) with *tra(ra)-pa-a-me-a-s(a)* (Assur a Vu 9 f.) and with FEET₂*dra(ra)-pa-ma-ĩ* (HHM 32:2) may possibly provide another proof for the proposed value *mi*. The root *trapa-* means something like "(re)turn." Its reading and translation find their best confirmation through comparison with Greek τρέπω, "turn," and similar words in other Indo-European languages. The form *trapamĩḫa* is a verbal form standing in the same relation to the past participle *trapameas, trapames,* or *trapamas* as does *te-ni-me-a-ḫa* (A 6:6) to *te-ne-me-a-s(a)* (A 1 a 2).

Decisive for the value *mi* would be the finding anywhere in cuneiform Hittite sources of a divine name or epithet corresponding to ᵈx *Ku-mi+ra-ma-š(i)* in an inscription from Tell Aḫmar (see p. 16).

After this study had been written I discovered one more comparison which may settle the problem in favor of the reading here proposed. In identical context we read in one inscription x+*me-ma-ta-*

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[1] Written *ᶜIš-mi-ri-ka* and *ᶜIš-mi-ri-ga* in a treaty between Arnuwandaš and the people of the city Išmirika (KUB XXIII 68 and XXVI 41).

[2] The ancient city concerned may perhaps be identical in both site and name with the modern Shimmaryḵ, about 10 kilometers south of Killiz (according to Richard Kiepert's *Karte von Kleinasien,* sheet Ḥaleb (2d ed.; Berlin, 1911). R. Dussaud, *Topographie historique de la Syrie antique et médiévale* (Paris, 1927) Map XII, opp. p. 452, calls this site Shimmariq.—A. Goetze, *Kizzuwatna and the Problem of Hittite Geography* ("Yale Oriental Series. Researches," Vol. XXII [New Haven, Conn., 1940]) p. 48, locates Išmirika "to the northwest of a line drawn from Ḥarrān to the Karaca Daǧ" and provisionally identifies it with modern Severek. Before him Forrer placed this city in the upper valley of the Euphrates in northwestern Armenia (*Klio* XXX [1937] 186), while R. Ranoszek put it in the neighborhood of Harput and Malatya (*Comptes rendus des séances de la Société des Sciences et des Lettres de Varsovie* XXXII [1939] Classe I, p. 28).

me-a-s(a) (A 6:1) while in another occurs perhaps x+*me-ma!-ta-mi!-s(a)!* (CE X 1). The sign *mi* is almost clear in the copy; the signs *ma* and *sa* are not so clear. My proposed corrections of CE are based on what I see in the photograph at my disposal. Interchange between the endings -*meas* and -*mis* (=-*mes*) in the mediopassive participle is found often.[1]

It may be added that the sign for *mi* is also used ideographically in x *mu-wa-a-za-n(a)*, "strength, violence," in A 11 c 4. Meriggi interprets this word as *pá-mu-wa-a-tà-an* (MVAG XXXIX 1, p. 55); he reads the first sign phonetically and pays no attention to the fact that already in HH I 70 f. I had interpreted its occurrence in a Malatya inscription (CE XXI; HHM 46 and p. 36) as "great(?)."

$$\text{\\}\quad na$$

$$\text{⌐}\quad ne$$

$$\subset\quad ni$$

$$\text{ɪɪɪɪɪɪɪɪ}\quad nu$$

$$\text{ψ}\quad n\acute{u}$$

All these signs were discussed in HH II 23–25. I am now more persuaded than ever about the correctness of their interpretation. The value *ni* finds additional support in the correspondence of hieroglyphic Hittite *Ku-ku-ni*[2] with cuneiform Hittite Kukkunniš, name of a king of Wiluša,[3] and of ᵈ*Ni-ka+ra-wa-s(i)* (A 6:9) with the name of the Sumerian divinity Ninkarrak.[4]

[1] See my EHH.

[2] The copy in M XLII 5 shows *Ku-ku-ma?*, read as *Ku-[r]-ku-ma* by Meriggi in MVAG XXXIX 1, p. 135. However, the photograph of the seal in D. G. Hogarth, *Hittite Seals, with Particular Reference to the Ashmolean Collection* (Oxford, 1920) Pl. VII 188, favors my interpretation. Hogarth's copy of the seal (*ibid.* p. 37) follows Messerschmidt rather than the photograph.

[3] Written ᵐ*Ku-uk-ku-un-ni-iš;* see J. Friedrich, *Staatsverträge des Ḫatti-Reiches in hethitischer Sprache*, 2. Teil (MVAG XXXIV 1 [1930]) p. 52 B 18 and pp. 88 f., and F. Sommer, *Die Aḫḫijavā-Urkunden* (Abhandlungen der Bayerischen Akademie der Wissenschaften. Philos.-hist. Abt., N.F., No. 6 [München, 1932]) p. 371. The inability of the Hittite hieroglyphic writing to express double consonants accounts for the single writing of *k* and *n*.

[4] See Gelb in AJSL LV (1938) 200–203.

In favor of my previous assumption that the *nú* sign is only a simplified form of *nu* I can now adduce a cuneiform parallel in the writing of the number 9 both as 𒐝 and in abbreviated form as ⟨sign⟩. However, another and perhaps better interpretation is suggested by the observation that in the older inscriptions, e.g. those from Emirgazi, only *nu* is used, while in the younger ones, e.g. the Assur lead strips, only *nú* is used. This may perhaps mean that *nu* and *nú* are independent signs, that originally only *nu* was used, but that in the middle period the simpler sign *nú* was introduced into the system in place of the disproportionately wide sign *nu* and gradually supplanted the latter entirely in the late inscriptions.[1]

 pa

? *pe*

 pi

 pu

The first and third signs were discussed in HH II 25. The correspondence of the personal name ⁿ*Tarḫu(ḫu)-pi-ā-s(a)* (G. Contenau in *Revue des arts asiatiques* XII [1938] Pl. XXIV *b*) or *Tarḫu(ḫu)-pi* (C. L. Woolley in AAA VI [1914] 97) with ᵐ*Tar-ḫu-un-da-pi-i* of Late Assyrian sources[2] further supports the value *pi* assigned in HH II. The name Tarḫu(nt)-piãs means "Tarḫuns (is) giving," parallel to *Tarḫu(ḫu)-n(a)-*ˡⁱᵗᵘᵘˢ⁾*a-ĩ-s(i)* in CE XII 1, "Tarḫuns (is) loving."[3] In some of these examples, as often in names on seals or in short signatures, the nom. ending is omitted.[4]

The value *pu* for the fourth sign was proved by myself in AJA XLI

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[1] It may also be pointed out that a sign almost identical in form with Hittite *nú* occurs also in the Cretan hieroglyphic writing (A. J. Evans, *Scripta Minoa* I [Oxford, 1909] 215 f.), where it may be plausibly interpreted as picturing a pomegranate tree (see Bossert on pomegranate in OLZ XXXIV [1931] 322–28).

[2] K. L. Tallqvist, *Assyrian Personal Names* (Helsingfors, 1914) p. 230.

[3] The occurrence of the present participle in this name was first explained by Bossert in AOF VIII (1932/33) 143.

[4] For another example see the interpretation of the Tarkondemos seal on p. 28.

289–91 on the basis of its occurrence in the name *Pu-tu-ḫa-pa*[1] and was accepted by Hrozný (IHH p. 503), who, however, assumes (*loc. cit.* and *ibid.* pp. 316 and 353) that besides the value *pú* this sign may have also a value *là* or *li* (*li* on p. 503). Meriggi has read it *ri*.[2]

❘	*ra*
⸮	*re*
⟨⁞⟩	*ri*
◉	*ru*

Of these three signs, discussed in HH II 25–30, the first is by far the most important. Even though it seems to me that I have proved convincingly its syllabic character, other scholars still doubt it. Thus Meriggi in a review of HH II in OLZ XXXIX 158 persists in reading the tang as *r*, while Hrozný transliterates this sign in his former fashion as ⁽ʳ⁾, considering it, more often than not, to be an indication of length. Friedrich, in another review of HH II, was unable to choose between my reading *ra* and the *r* of other scholars (*Deutsche Literaturzeitung*, 1936, cols. 1827 f.).

It is generally accepted that the sign *ra* when used phonetically never stands by itself but is regularly attached to the preceding syllable. Thus e.g. the closed syllable *kar* is expressed by *ka+r(a)* in *Ka+r(a)-ka-me-se*[land] (A 4 b 1). In HH II 13 f. and 28 it was shown that the full syllabic value *ra* could be distinguished from *r(a)* by use of the combination *e+ra* or *a+ra* instead of *ra* alone, e.g. in ⁿ*Sá-ka-e+ra-s(a)* = Assyrian cuneiform Sangara. Since then I have collected additional examples favoring my proposed reading:

1. Hittite hieroglyphic ᵈ*Ni-ka+ra-wa-s(i)* in A 6:9 is equated with the name of the Sumerian divinity Ninkarrak (see above, p. 9), where the syllabic value *ra* is required.

2. In *ī+ra-ta-ta-a* (CE V 2) compared with *ī+ra-a-ta-ta-a* (HHM 49 A 2) and in *pa+ra-ḫa-e* compared with *pa+ra-a-ḫa-e* (both in

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[1] This value *pu* also fits well into the interpretation of x⟨ₓ⟩*tra(ra)-pu-na-s(i)* as "tribune" and of the personal name *Ḫe+r(a)-ti-pu-s(a)* = Ḫertipus, discussed in the same article.

[2] RHA IV 96 and 103 f.

A 1 a 2) the tang cannot be read otherwise than as *ra*, for the variants add the phonetic complement *a*.

3. The writings *pa+ra-e+ra-ḫa* (Assur a Vu 1) and *pa+ra-e+ra-wa* (Assur c Vu 8) for *paraḫa* (1st per. sing. pret.; written *pa+ra-ḫe* in A 5 a 1) and *parawa* (1st per. sing. pres.) respectively, from the root *para-*, "to offer,"[1] show that the combination *ra-e+ra* stands for *ra*, hence that addition of *e+ra* is another graphic means of delimiting the reading of the tang as *ra*.

4. Interchange of simple spellings with the tang only and fuller spellings with *e+ra* appears in *ḫa-tu+ra-e* (Assur e Vo 13) and *ḫa-tu+ra-n(a)* (Assur e Vu 8) compared with *ḫa-tu-e+ra* (Assur a Vo 14) and *ḫa-tu-e+ra-s(a)* (Assur f Vu 10).

5. Similar interchange with *a+ra* is found in *u-ĩ+ra-a* (Assur a Ro 7) and *u-ĩ-a+ra* (Assur a Vo 17).

6. Interesting and important from more than one point of view is the identity of *arḫa(ḫa) ḫa+ra-a+ra*, "breaks, ruins, destroys,"[2] in the Karapınar inscription (OLZ XXXVII 147:8) with *arḫa!(ḫa)-e ḫa!-a+ra* in the Bulgarmaden inscription (CE XII 5). Cf. the more simply written *ḫa+ra-tu*, "may (the god) destroy," at Bulgarmaden (*loc. cit.*) and *arḫa(ḫa) ḫa+ra-tu*, "may (the gods) destroy," at Karapınar (l. 8).

Some examples in favor of reading ⫼⅃ (p. 37) as *tra(ra)* likewise prove the correctness of the interpretation of the tang as *ra*. Among the best are the words *trapa-*, "to (re)turn" (p. 8), and *trapunas*, "tribune" (p. 11, n. 1).

In the word *sa-na-wa-sa-tra(ra)-a+ra-ḫa* (HHM 49 A 2), probably pronounced *sanawasatraḫa* and meaning "I made good" or "I improved,"[3] *a+ra*, read as *ra*, seems to be a second phonetic complement of *tra(ra)*.

The writings HAND *a-s(e)-tra(ra)-a* (A 6:5 and 7) as compared with HAND-*tra(ra)* (I M X 3) and x-*tra(ra)-a-n(a)* as compared with

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[1] Identical with cuneiform Hittite *parai-*, "send forth, offer," etc. (E. H. Sturtevant, *A Hittite Glossary* [2d ed.; Philadelphia, 1936] p. 116).

[2] The translation is based on comparison with the cuneiform Hittite verb *ḫarra-* with such meanings (Sturtevant, *A Hittite Glossary*, 2d ed., p. 45).

[3] Following Meriggi's translation in RHA II 243: "(je) les ai perfectionnés(?)."

x-*tra(ra)-n(a)* (both in the Karapınar inscription, OLZ XXXVII
147:8) show the phonetic complement *a* following *tra(ra)*. Meriggi's
reading of such cases as -*tar-a*[1] seems impossible because it is contrary
to the principles of Hittite hieroglyphic writing. Besides that, the
form ending in -*tar* (as transliterated by Meriggi) would be irrec-
oncilable with the one ending in -*tar-a*, just as the form ending in
-*tar-n* could be reconciled with the one ending in -*tar-a-n* only by
assuming the impossible reading *an* for the sign read by myself as *na*.

In the Karapınar passage just cited we find *e-pa-sa-n(a)* x-*tra(ra)-*
a-n(a) and ʾ*a-pa-sa-n(a)* x-*tra(ra)-n(a)*. The word *epasas* or ʾ*apasas*,
here used in the acc., means "his." The second word, x-*tras*, occurs in
its full phonetic spelling, as x₃cʾ*a-tra(ra)-a-n(a)*, in two other inscrip-
tions (II M LII 5 and A 15 b** 2). That ʾ*atran* (acc.) is the full
phonetic spelling of the ideogram x is proved by the fact that ʾ*a-*
tra(ra)-a-n(a) starts with ʾ*a*, which occurs only at the beginning of a
word.[2] The word ʾ*atras* was translated first by Forrer as "Schrift"
(HB p. 15); Meriggi preferred "(Weih)bild" (MVAG XXXIX 1, p.
165). Following these translations hieroglyphic Hittite ʾ*apasas* ʾ*atras*
can probably be compared with Lycian *atla ehbi* or *atra ehbi*, which
means "his person" and serves as the reflexive pronoun "himself."[3] This
comparison not only gives us the correct translation for the Hittite
hieroglyphic word but also furnishes additional evidence for the read-
ing *tra*.

Some problems concerning the use of the tang still defy explana-
tion.[4] For instance, why should only the tang, of all the syllabic

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[1] E.g. in RHA IV 200.

[2] See HH II 15.

[3] Meriggi, "La declinazione del licio," R. Accademia Nazionale dei Lincei,
Rendiconti della classe di scienze morali, storiche e filologiche, Ser. VI, Vol. IV (1929)
428 f.—Incidentally it may be mentioned that the form ʾ*a-pa-sa-tra(ra)-s(i)* in the
Niğde inscription (II M LIII) may stand for ʾ*apas-ʾatras* and likewise mean "his
person." ʾ*Apas* here would of course be the genitive of ʾ*apas*, "he" or "that one."

[4] In HH II 27 f. was discussed the possibility of reading x+*ra* not only in that
order but also as *ra*+x. In favor of that possibility we might compare the forms
x₃cī̄+*ra-ī̄-me-s(a)* (A 7 j 1 f.) and *ī̄-ra*+*ī̄-te*+*ra* (A 14 a 4; written in the order
ī̄-ī̄+*ra-te*+*ra*), participle and 3d per. pl. pret. mediopassive respectively of a verb
īraī- with unknown meaning. The compound ideogram mark used in the first
example shows that the full syllabic spelling follows the ideogram. For this prin-
ciple see my EHH.

signs, never stand by itself but always be attached to another sign? And what is the difference between $e+ra$, read as ra, and $a+ra$, also read as ra? But I hope that this long exposition has helped to solve some difficulties and to convince skeptics that the tang represents the syllable ra and functions just like other signs with the values ma, pa, ta, etc. In closed syllables ra becomes $r(a)$, just as these other syllables become $m(a)$, $p(a)$, $t(a)$, etc.

The reading of ⟨⁞⟩ as rx (HH II 28 f.) was considered "erwägenswert" by Meriggi in his review of HH II in OLZ XXXIX 158; but in RHA IV 96 and 103, n. 30, he reads that sign as l^2. Hrozný (IHH pp. 110, 184, etc.) reads as $lá$, $l(?)$, and $la_1(?)$ the signs ▤, ⬚, ⟨⁞⟩, which should be carefully distinguished.

The value rx or, more exactly, ri for the sign in question is now supported by an additional comparison. A Tell Taʿyīnāt inscription mentions a deity ^dTe-mu-rx-na-$ḫa$ (HHM 58, frag. 2:4), who may well be identical with the deity Timuri named in Ar-timuri, a Hurrian personal name from Nuzi.[1]

Comparison of HOUSE $ḫa+ra$-se-ti-ni-i (A 11 a 5)[2] and X.HOUSE-ri-se-te-ni-$s(a)$ (M XI 5)[3] shows interchange of ra and ri.

[1] Written ^mAr-ti-mu-ri in E. R. Lacheman, *Joint Expedition with the Iraq Museum at Nuzi. Miscellaneous Texts* (American Schools of Oriental Research, "Publications of the Baghdad School. Texts," Vol. VI [New Haven, 1939]) No. 593:3, 6, 11, 28. The divine name Timuri may be connected with the Anatolian city name Timur (D. D. Luckenbill, *Ancient Records of Assyria and Babylonia* I [Chicago, 1926] § 582), identified with Τίμυρα, πόλις περὶ ᾽Ισαυρίαν, of Stephanus of Byzantium by P. Kretschmer in *Glotta* XXI (1933) 234.—Owing to the fragmentary preservation of the Tell Taʿyīnāt inscription it is difficult to determine from the context the grammatical form of ^dTe-mu-ri-na-$ḫa$. Possibly it is one of the rare examples in which the acc. ending -n is not assimilated to the following consonant, in this case the $ḫ$ of -$ḫa$, "and." For a similar example see above, p. 7, n. 1.

[2] Similar forms in A 11 b 5 and 11 c 2 and 6.

[3] Neither Hrozný in his reading . . . .-$la_1(?)$-$sà$-ta-s (IHH p. 242) nor Meriggi in his reading X-HS-l^2-si-ta-s (MVAG XXXIX 1, pp. 68 and 116) pays any attention to the ni, both considering the traces of this sign in Messerschmidt's copy to be purely accidental. However, early copies of this inscription published in *Transactions of the Society of Biblical Archaeology* VII (1882) Pl. III ad p. 436 and in William Wright, *The Empire of the Hittites* (London, 1884) Pl. X, show the ni much more clearly.

　　　　　△△　*sa*

　　　　　⊞　*se*

　　　　　↾ϟ　*si*

　　　　　⊙　*su*

　　　　　Ѱ　*śa*

　　　　　?　*śe*

　　　　　⊟　*śi*

　　　　　⫝̸　*śu*

The values of the first four signs are given here as in HH II 30 f., except that the fourth sign is transliterated as *su* against the more cautious *sx* of the former study. However, no new evidence for the exact values of the four *s* signs has been discovered in the last few years, and it must be remembered that the vowels of all four, except perhaps *sa*, seem to be as doubtful as ever.

Especially troublesome is the very common "goat's head" sign, here transliterated as *se*. It often interchanges with the *sa* and *śa* signs, as in the suffix of the 2d per. sing. present (see p. 19), in x_2*tu-wa+r(a)-se-ĩ* (II M XXXIII 3) as compared with x *tu-wa+r(a)-śa-n(a)* (*ibid.*), and in SEAT$_2$*a-se-nú-wa-ḫa* (A 6:4) etc. as compared with CHAIR.SEAT *'a-sa-s(a)* (A 6:8) etc. The value *se* may find some support from reading the hieroglyphic name on the Indilimma seal (Hogarth, *Hittite Seals*, No. 181) as *Se+r(a)-tu* and comparing it with *Šé-er-du*, a personal name known from the Cappadocian tablets (G. Eisser and J. Lewy, *Die altassyrischen Rechtsurkunden vom Kültepe* [MVAG XXXIII (1930)] Nos. 43:3 and 44:3 and 14). The relationship of hieroglyphic *Se+r(a)-tu* to cuneiform *Še?-er-da-mu* (name of the father of Indilimma) is not yet clear to me.

Already in HH II 30, n. 7, I remarked that the large number of *s* signs there listed (five, one more than the normal four) suggested that some of them may express related sounds. This can now be definitely proved for one of those five and for at least two more signs.

The sign ⊟ was left unread in HH I. Hrozný proposed the value *là* for it,[1] based on such comparisons as that of x *wa-x+ra-nú-ḫa* (A 6:3, read as x-*va-là⁽ʳ⁾-jé-u* by him) with x *wa-li-ā-nu-wa-ḫa* (II M LII 4, read as x-*va-li-ā-je-va-u*). This and some other considerations led Meriggi to accept Hrozný's reading with a slight change from *là* to *li* for x alone and to *li* for x+*ra*.[2] Because all the arguments adduced by Hrozný and Meriggi in favor of these readings were unpersuasive, I left the sign unread in HH II also. That my doubts were well founded will be seen from the following paragraphs, in which evidence is given that this sign has the value *si*.

The sign ⊟ is always closed at the bottom. Different is ⋔, open at the bottom, which is never used as a syllabic sign but occurs only as an ideogram for a very frequent title read *trawanis* and meaning "prince." The distinction between the forms and readings of these two signs was made tentatively by Meriggi in RHA IV 166, n. 61, and in my opinion it is beyond reproach. Evidently Hrozný also now favors keeping separate these two signs (cf. IHH p. 491, n. 2).

In an inscription from Tell Aḥmar, last published by Hrozný (IHH Pl. CII 1 f.), we read BOWL⊃ᴄ-*ša³-a-s(a)* ᵈ*Tarḫu(ḫu)-s(a)* GOD-*a-ā-sa* KING-*ta-a-s(i)* ᵈx *Ku-mi+ra-ma-x* ᵈx⊃ᴄ*Mu-ta-le-s(a)* ᵈx-*lu-pa-s(a)* *Ḫa+ra-na-wa-ne-a-s(a)-ḫa*ᶜⁱᵗʸ ᵈx+*me-s(a)*. The translation of this section is simple: "Tarḫuns of the (sacred) bowl, king of the gods, Kumiramas, Mutales, ...lupas, and ....mes of Ḫarranas." It is clear that the names of all the gods are in the nom., and a priori it may be assumed that x in the name ᵈx *Ku-mi+ra-ma-x* represents the nom. ending *s*.[4] There are several other personal names and words, such as x-*wa-ti-x* (HHM 18 C 1), LORD-*x* (*ibid.* ll. 3 f.), ⁿ*Ka-tu-wa-x* (A 13 d 1), and some occurrences in the İspekçür inscription (HHM

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[1] IHH pp. 32, 110, etc. As observed above (p. 14), Hrozný does not distinguish clearly between this sign and two others.

[2] WZKM XLI 1 and 16; MVAG XXXIX 1, pp. 3 and 9 f.; IF LII (1934) 46; RHA II 245 f. It is probably the existence of such forms as x *wa-x+ra-ta-a* (A 11 c 6) and x-*x+ra-ta* (A 11 a 5) in comparison with x *wa-x-ta-a* (CE XII 3) and x-*x-ta-a* (A 2:4) that led Meriggi to the assumption that *x+ra* (his *li*) must be identical with *x* (his *li*). These forms are still difficult to interpret unless we assume elision of *r* in the last two examples.

[3] On the value *ša* see pp. 18 f.

[4] The adjectival form of the same divine name appears in the acc. as ᵈx-*ma-ša-n(a)* in HHM 58, frag. 1 B 1.

28), in which the same sign x must be read as the nom. ending. There may be mentioned also the opinion reached independently by G. Accorsi and cited by Meriggi (*loc. cit.*) that in ⁿ*Ka-tu-wa-x* (see above) the x sign is the end of the name and should be read -*s*; but Meriggi was unwilling to abandon his old readings of the sign and to approve fully the thoroughly acceptable suggestion of his colleague.

In the Karapınar inscription occurs a form ʾ*a-pa-x-ta* (OLZ XXXVII 147:3) in whose unread syllable x comparison with ʾ*a-pa-sx́-n(a)* (*ibid.* l. 8), *e-pa-sa-n(a)* (*loc. cit.*), ʾ*a-pa-sa-n(a)* (*loc. cit.*), ʾ*a-wi-sx́-n(a)* (*ibid.* l. 6), ʾ*a-pa-ša-n(a)* (A 6:9), ʾ*a-pa-ša-a-n(a)* (HHM 7 D 3), and ʾ*a-pi-ša-n(a)* (M VI 2) speaks in favor of the presence of a sibilant.[1]

The expression ʾ*a-x-ī-me-a-s(i)* HEAD-*ta-s(a)* in A 7 j 2 can be translated from the context itself as "(be)loved chief." Meriggi in WZKM XL (1933) 250 and MVAG XXXIX 1, p. 103, translates the first word (found frequently in the form ʾ*a-x-ī* in the Assur letters) as "geehrt, hervorragend, erhoben, erhaben," etc.; similarly Bossert in AOF VIII 143, n. 8. By comparison with cuneiform Hittite *aššiia-*, "love" (cf. Sturtevant, *A Hittite Glossary*, 2d ed., p. 31, and *Supplement* p. 14), we obtain for x the value *ši*.

In a list of offerings to various divinities occurs ᵈ*x+ra-ku* in the dative (A 11 b 6). By assigning the value *ši* to x we can read the name as ᵈ*Ši+r(a)-ku* and compare it with that of the deity Zirku identified with Ninurta in Late Assyrian lists of gods.[2]

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[1] Meriggi's argument (RHA IV 102 and 104) that this Karapınar occurrence has to be read as *e-ba-li-da* because of such parallel forms as 〔 ⟡ ⊠ 〕 in l. 8, which he reads as *e-ba-lˡ-n*, can easily be proved to be without foundation. First, it has never been proved that the adjectival-genitival *-l-* occurring in some Anatolian languages and found by him in these two forms is actually used in the language of the Hittite hieroglyphic inscriptions. Secondly, the sign ⊠ certainly does not have the value *lˡ* which he assigns to it; when used phonetically at Karapınar it has only the value *sx́* (HH II 28, n. 1, following Bossert and Hrozný). In the group 〔 ⊡ ⟨⟩ 〕, representing the well known geographic name Ḫalpa, Meriggi (*op. cit.* p. 102) still reads the second sign as *lˡ*. Already in HH I 20 I read the first two signs together as the ideogram for *ḫalpa*, taking *pa* (then read *pi*) as the phonetic complement. The interchange of such forms as Ḫalpa(pa)-*runta-s(a)* in M XVI 1 with Ḫalpa-*runta* in CE XXI (= HHM 46) clearly proves this point.

[2] Written ᵈ*Zi-ir-ki* (*Cuneiform Texts from Babylonian Tablets, &c., in the British Museum* XXV [London, 1909] 12:9) = ᵈ*Zi-ir-ku* in an earlier copy (H. C. Rawlin-

The word for "queen "in a Carchemish inscription is, then, written in the nom. as GREAT.QUEEN-*ŝi*+*ra-s(a)* (M IX 2) and in the acc. as GREAT.QUEEN-*ŝi*+*ra-n(a)* (*ibid.* 1. 5). This fem. nominal ending -*ŝiras* may be identical with -*ŝaraŝ*, the corresponding ending in the cuneiform Hittite language.[1] In this particular case the value *ŝa* would match better the parallel -*ŝaraŝ*; but that value would not fit into the words discussed above.

The sign for *ŝi* probably pictures a seal,[2] as may be seen from the occurrence of 〈signs〉, "the seal of *Halpa(pa)-s(i)*," on bullae published in M XXXIX 3 and 7–9 and HHM 39. According to a well known principle, the phonetic value *ŝi* should be developed from an ideogram representing a word similar in sound and having the meaning "seal." Such a word—as far as I know—has not yet been found in hieroglyphic Hittite; but it does occur in the form *ŝiįa-,* "to seal" (really "to press"), in cuneiform Hittite.[3] This is further evidence for the correctness of the reading *ŝi*.

Another sign besides *ŝi* which may contain the consonant *ŝ* is that

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son, *The Cuneiform Inscriptions of Western Asia* II [London, 1866] 57:54 *c*), ^d*Zi-ni-*[. . . .] (*Cuneiform Texts* . . . . XXIV [London, 1908] 6:38), and ^d*Zi-ni-ku* (*ibid.* 23:132 *b*). In the last two examples the sign *ni* may easily be a miscopy of the very similar sign *ir.*—Meriggi's interpretation of this deity as ^d*Li-ku* and comparison with an alleged ^dElkuš named in cuneiform Hittite (RHA II 245, n. 3, and MVAG XXXIX 1, pp. 10 and 137) as well as Hrozný's transliteration ^{dieu}*Là^(r)-gu* and comparison with Tarku (IHH pp. 159, n. 7, and 170) are naturally influenced by their readings of the sign in question.

[1] On this suffix see H. Ehelolf in ZA XLIII (1936) 185 f. The same ending occurs as -*ŝar* in some fem. personal names in the Cappadocian tablets, e.g. Ḫištaḫ-šušar and Niwaḫšušar (as recognized first by A. Götze, Kleinasien ["Handbuch der Altertumswissenschaft," 3. Abt., 1. Teil, 3. Bd.: *Kulturgeschichte des alten Orients,* 3. Abschnitt, 1. Lfg. (München, 1933)] p. 69, n. 2), and in Nuzi names, e.g. ^fAmtašar (E. Chiera, *Joint Expedition with the Iraq Museum at Nuzi. Proceedings in Court* [American Schools of Oriental Research, "Publications of the Baghdad School. Texts," Vol. IV (Philadelphia, 1934)] No. 413:2, 7, 8; also elsewhere), ^fMatkašar (Chiera, *Excavations at Nuzi* . . . . . I. *Texts of Varied Contents* ["Harvard Semitic Series," Vol. V (Cambridge, Mass., 1929)] No. 11:11, 12, 20, 22, 29), and ^f*Aŝ-du-a-ŝar* (G. Contenau, *Contrats et lettres d'Assyrie et de Babylonie* [Paris. Musée National du Louvre, "Textes cunéiformes," Vol. IX (Paris, 1926)] No. 22:4), the last corresponding to ^f*Aŝ-tu-za-ar* at Chagar Bazar (C. J. Gadd in *Iraq* VII [1940] 36).

[2] It is listed among vases by Meriggi in RHA IV 93, No. 346.

[3] Sturtevant, *A Hittite Glossary*, 2d ed., p. 141, and Güterbock in "Studia et documenta ad iura Orientis antiqui pertinentia" II (1939) 32.

read as $s\acute{a}$ in HH II 30 f. Hrozný too reads it as $s\acute{a}$ or s_2 (IHH p. 113), Meriggi similarly as sa (e.g. MVAG XXXIX 1, p. 3).[1] This is the sign which I here transcribe as $\check{s}a$.

A value sx was deduced from its occurrence in the name of Carchemish in such forms as $Karka_1(ka)\text{-}me\text{-}x\text{-}\tilde{\imath}\text{-}s(a)^{\text{city}}$ (HH I 27 f.). A more exact value sa (used *loc. cit.*) was based on the fact that this sign occurs both with and without a following a, e.g. in $^{n}La+\tilde{\imath}\text{-}ma\text{-}\check{s}a\text{-}a\text{-}s(a)$ and $^{n}La+\tilde{\imath}\text{-}ma\text{-}\check{s}a\text{-}s(i)$ (HH I 28). Such forms as BREAD $tu+r(a)\text{-}pa\text{-}\check{s}a\text{-}a$ (A 1 a 5), GOD-$ne\text{-}\check{s}a\text{-}a\text{-}n(a)$ (A 1 a 4), VASE $u\text{-}\check{s}a\text{-}a$ (A 11 b 3) or VASE$_{\supset c}u\text{-}\check{s}a$ (*ibid.* 1. 5), and $tu\text{-}wa+r(a)\text{-}\check{s}a\text{-}a$ (HHM 49 D) also favor the presence of the vowel a.

Very instructive likewise are the interchanges of signs in the forms $x_{\supset c}wa\text{-}\check{s}a\text{-}na\text{-}sa\text{-}ta$ (A 6:9) and $x_{\supset c}u\text{-}\check{s}a\text{-}na\text{-}\check{s}a\text{-}i\text{-}a$ (II M LII 5), GRAND-CHILD-$\check{s}a\text{-}a\text{-}s(a)$ and GRANDCHILD-$sa\text{-}\tilde{\imath}$ (discussed below, p. 25), $^{\flat}a\text{-}pa\text{-}\check{s}a\text{-}n(a)$ and $^{\flat}a\text{-}pa\text{-}sa\text{-}n(a)$ (discussed above, p. 17), BOWL-$sa\text{-}a\text{-}^{\lceil}i^{\rceil}$ and COURT-$ki[+ra]\text{-}\check{s}a\text{-}^{\lceil}i^{\rceil}$ (HHM 9 B 3), in forms of the gen. pl. such as LAND-$ni\text{-}\bar{a}\text{-}\check{s}a$ (A 3:1 and 3) and GOD-$a\text{-}\bar{a}\text{-}sa$ (IHH Pl. CII 2), and in forms of the 2d per. sing. present such as ROAD-$wa\text{-}ni\text{-}\check{s}a$ (Assur d Ro 14 and f Ru 19), $u\text{-}\check{s}a\text{-}ta\text{-}sa$ (Assur c Vu 13) and $u\text{-}\check{s}a\text{-}ta\text{-}se$ (*ibid.* 1. 17), LITUUS-$na\text{-}ta\text{-}sa$ (Assur g Vo 9) and LITUUS-$na\text{-}ta\text{-}se$ (Assur c Ro 13).

The occurrence of $\check{s}a$ in the personal name $^{n}\acute{S}a\text{-}ka\text{-}e+ra\text{-}s(a)$ (A 7 h), which corresponds to the name Sangara in Assyrian historical sources (HH II 31), makes it clear that this sign corresponds to Assyrian sa. But the Late Assyrian sibilants offer problems of their own (cf. p. 22).

We come now to the important sign $\check{\xi}|_{\flat}^{\flat}$, which I propose to read as $\check{s}u$[2] on the basis of arguments furnished by Hrozný and Meriggi. This sign is rare, but its reading is facilitated by its occurrence in three hieroglyphic Hittite words which can be compared with corresponding words in other Indo-European languages. These words are: DOG$_{\supset c}\check{s}u\text{-}wa\text{-}ni\text{-}i\text{-}\underline{h}a$, "and the dogs" (Assur b Vu 15 f.); HORN$_{\supset c}\check{s}u+r(a)\text{-}ni$, "horns" (Assur g Ro 27); and HORSE $^{\flat}a\text{-}\check{s}u\text{-}wa\text{-}\tilde{\imath}$, "horses" (HHM 3:2).[3] Hrozný, to whom all three interpretations are due, believes

[1] Previously Bossert read it as $\check{s}a$ (AOF IX [1933/34] 117, n. 21, Forrer as si (HB p. 23). In AJSL LV (1938) 200 f. I read it as za.

[2] My original interpretation of this sign as a compound, $wa+rx$ (HH II 28 f.), could not stand the test of time.

[3] See also the remarks in HHM pp. 22 f.

in the centum character of the hieroglyphic Hittite language. On that basis he read the sign here discussed as *kú*, first with question marks, later without them (IHH pp. 128 f., 149, 305, 358; AOr IX [1937] 409; X [1938] 44). Meriggi, having interpreted Hrozný's DOG as SWINE and Hrozný's HORN as FLAME, proposed first the reading *su* (MVAG XXXIX 1, pp. 3 and 11 f., and AOF X 266 f.). Later Meriggi was inclined to accept all three of Hrozný's interpretations but preferred to read the sign in question provisionally as *cu*[1] since he felt unable to decide whether hieroglyphic Hittite belongs to the centum or to the satem group. It has to be remembered that Meriggi's original reading *su* was based not on his belief that the language is satem but on his misinterpretation of DOG as SWINE and his consequent reading of its phonetic complements as "*su-wa-na-i*," "swine." In any event presence of the vowel *u* was considered likely by both Hrozný and Meriggi because of the *wa* which follows in two of the three words concerned.

It is clear from Indo-European etymology that the consonantal sound in the three words above mentioned can be only a plain velar *k* or one of the other sounds, such as *k'*, *č*, *c* or *z(ts)*, *s*, *ś*, and *ṯ(th)*, into which that velar can develop. Of these possibilities I would immediately eliminate *k* because the value *ku* has already been established beyond any doubt for a different sign (see HH II 21). The existence of two *ku* signs would be incompatible with the Hittite hieroglyphic system of writing, which, I firmly believe, does not recognize homophony.[2]

With *k* out of consideration, the sign in question must contain a different consonant. As far as the Hittite hieroglyphic syllabary is concerned, the only likely consonants still to be considered are *s*, *ś*, and *z*.[3] But *s* is improbable because we have already four *s* signs with their values fairly well established; and *z* is improbable because it

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[1] RHA IV 85, No. 178, also pp. 96 and 107 f.

[2] The signs *nu* (old) and *nú* (new) are used contemporaneously only in the middle period; see above, p. 10.—I know that in the rigorous rejection of homophony I stand entirely alone. Other scholars, such as Hrozný and Meriggi, regularly employ many homophonous values. But I must repeat what I have said many times before, that with only about sixty signs there is no place for either homophony or polyphony in the Hittite hieroglyphic syllabary.

[3] The existence of palatal or palatalized velars in the Hittite hieroglyphic syllabary seems most improbable in view of the restricted number of its signs.

usually developed from *t* (see pp. 24 f.). The most likely possibility, then, is *ś*.[1]

From my transliterations as *śuwanii*, *śurni*, and *ʾaśuwaï*[2] it is evident that I believe in the satem character of hieroglyphic Hittite. I have held this notion for many years, based on my growing belief that the nearest relative of hieroglyphic Hittite is Lycian, a satem language. But the problem did not become crystallized in my mind until the summer of 1941, when I had the opportunity to review the whole matter with Professor J. H. Bonfante of Princeton University. The results of our talks and correspondence will be published shortly in a separate article under our joint signatures.[3]

We have discussed above seven signs, each beginning with a sibilant. In view of the four-vowel system it is evident that they cannot all contain one and the same consonant; they must, therefore, be subdivided into two groups of related sounds. Each of the four signs *sa*, *se*, *si*, and *su* of the first group is used for the nom. ending; hence they can be safely transliterated with the consonant *s* corresponding to Indo-European *s*.

It is as yet difficult to ascertain the exact character of the three signs of the second group, transliterated as *śa*, *śi*, and *śu*. The chief characteristic that unites them is that they are almost never used to express the nom. ending.[4] One thing is sure: they cannot represent voiced *z* (as in French *zéro*), because the Hittite hieroglyphic writing does not distinguish between voiced and voiceless consonants. Some hints as to the character of *ś* can be obtained from observation of the use of the *śa* and *śu* signs. The former is used regularly in the adjectival (=gen.) formative -*śas*, as in *Luḫiśas nimuwaïs*, "Luḫian son" (= 'son of Luḫis'), and in *ʾapaśas*, "his," from *ʾapas*, "he." This ending -*śas* is evidently the same as that written -*śśaś* in Luwian[5] and

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[1] On the character of this sibilant see below.

[2] Really *ʾaśwaï* (as permitted by the writing), because, as Professor J. H. Bonfante informs me, this word is always dissyllabic in Indo-European.

[3] Professor Bonfante tells me that delabialized forms such as *kis* (p. 59), *ki-ï-ḫa* (p. 65), and *ke-ā-te* etc. (p. 66) are normal in the satem languages.

[4] Of these, only *śi* is used occasionally as the nom. ending; see pp. 16 f. Elsewhere, however, *ś* frequently interchanges with *s*; cf. *tuwarśan* and *tuwarseï* (p. 15), *ʾapaśita*, *ʾapaśan*, and *ʾapasan* (p. 17), *uśanaśaịa* and *waśanasata*, etc. (p. 19).

[5] Forrer in *Zeitschrift der Deutschen Morgenländischen Gesellschaft* LXXVI (1922) 218 ff.

similarly in several other languages.[1] Professor Bonfante suggests that hieroglyphic Hittite -*šas* may be identical with Indo-European -*syos;* if so, hieroglyphic *š* would be a palatal sibilant developed from the original *sy* combination. Comparison of hieroglyphic ⁿ*Sa-ka-e+ra-s(a)* with Assyrian Sangara (p. 19) may point in the same direction if it can be assumed that Late Assyrian *s* was pronounced as *š,* as is suggested by Assyrian transliteration of West Semitic *š* with *s.*[2] A palatal *š* would fit well in *šuwanii, šurni,* and *ʾašwaĩ,* in which *š* stands for an original Indo-European velar.

Our investigation of the sibilants has shown that we have to distinguish between *s* and *š* groups of consonants in the language and writing of the Hittite hieroglyphs. It is as yet difficult to keep these two groups clearly divided because of the frequent interchanges of signs between the two groups. As was observed already in HH II 30 f. and previously in this monograph (p. 15), it is even more difficult to establish the values of the vowels. These difficulties must be kept constantly in mind when and if the values proposed above are used.

⤴	*ta*
𐊛	*te*
🔁	*ti*
⊏🔲	*tu*
🔁	*za*
🔁	*ze*
🔁	*zi*
🔁	*zu*

Of the first group above, the first and fourth signs were read in HH II 32 f. as *ta* and *tu.* The proofs in favor of the reading *ta* for the first

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[1] This problem will be discussed in another publication.

[2] See Tallqvist, *Assyrian Personal Names,* pp. xviii f.

sign are ironclad.[1] For this reason the second and third signs cannot have the value *ta*, and I was satisfied in HH II to give them temporarily the values *tx* and *tẍ*. Since then I have collected some examples which favor the readings *te* and *ti:*

1. ᵈ*Te-mu-ri-na-ḫa* in a Tell Taʿyīnāt inscription (HHM 58, frag. 2:4) probably corresponds to the deity Timuri mentioned at Nuzi (see p. 14).

2. ᵈ*Tu-te-ā-s(a)* of the Jisr el-Ḥadīd inscription HHM 30:2 may correspond to ᵈ*Tu-ti-*[. . . .] in a fragmentary cuneiform inscription from Boğazköy.[2]

3. The personal name *Ḫe+r(a)-ti-pu-s(a)* of the Kara Dağ inscriptions corresponds to ᵐ*Ḫer-ti-pu-u* in Assyrian sources.[3]

These correspondences show that there is still no definite proof that ⟨ʿ is *te* or that ☞ is *ti*. The opposite may possibly be true; cf. the interchange of other syllables containing *e* and *i*, e.g. *ke* and *ki*, *ne* and *ni*, and *ze* and *zi*. Against the cuneiform evidence the first of these two signs is read as *te* (not *ti*) chiefly because the transliteration *Mu-wa-te-li-* or *Mu-wa-te-le-* approximates cuneiform Muwattalli more closely than does the transliteration *Mu-wa-ti-li-* or *Mu-wa-ti-le-*.

Of the four signs in the second group the first three were read as *ti?*, *ke?*, and *ki?* respectively in HH II 33 and 19–21, while the fourth was left unread (*ibid.* frontispiece). The existence of at least five signs containing *t* or the like had led me in HH II to give up the readings *te*

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[1] Meriggi's suggestion in RHA IV 105, based on comparison with other Indo-European languages, that the "foot" sign has the value *ti*, rather than *da* as he reads it elsewhere, is in direct contradiction to the facts and examples gathered in HH II 32 and can hardly be taken seriously. As far as I can see, Meriggi himself does not apply his newly proposed value anywhere in his studies. His further assumption (RHA IV 105 f.) that the vowel of the suffix of the 3d present ending is silent is refuted by such spellings as x *si-ne-ta-a* (M II 6) besides *sa-ni-ta* (HHM 20 edge) or *sa-ni-ta-a* (HHM 21:2) and *a-i-a-ta-a* (CE VII 3) besides *a-i-a-ta* (HHM 40:6).

[2] E. O. Forrer, *Boghazköi-Texte in Umschrift* II ("Wissenschaftliche Veröffentlichungen der Deutschen Orient-Gesellschaft," No. 42 [Leipzig, 1926]) 4B iii 27 = *Keilschrifttexte aus Boghazköi*, autographiert von H. H. Figulla, E. F. Weidner, etc., 3. Heft (in "Wissenschaftliche Veröffentlichungen der Deutschen Orient-Gesellschaft," No. 30 [Leipzig, 1916–23]) No. 19:27.

[3] AJA XLI 290; see also above, pp. 5 and 10 f.

and *tu* proposed for ⧨ and 𝍩 respectively in HH I 35 and to suggest the new readings *ke*? and *ki*? chiefly because hieroglyphic Hittite
ⁿᵊ*A-sa-tu-wa-x-ma-î-sá-a* and ⁿᵊ*A-sa-tu-wa-y-ma-î-sá*[1] seemed comparable to Assyrian ᵐ*As-ta-kú-um-me* (see below, p. 30).

With my belief that the Hittite hieroglyphic syllabary has a four-vowel system, the very occurrence of more than four signs in the *t* group made it seem very unlikely that all the signs contained the sound *t* proper. In the meantime it had become increasingly apparent to me that my readings *ke*? and *ki*? would have to be modified and that my original readings as proposed in HH I were nearer the truth than the new ones suggested in my second study. Thus the occurrence of at least seven signs in the *t* group made it doubly sure that it must be subdivided into two groups of related consonants. As explained below, I now transliterate these with *t* and *z* ($=ts$) respectively.

Of the four signs of the second group by far the most important is ϛ⟋, read as *ti*? in HH II 33. Choice of the vowel *i* was based on a questionable comparison of *ḫuḫa(ḫa)-ti*?-*li-s(a)* (A 11 b 1) with cuneiform Hittite *ḫuḫḫantiš*. The vowel *a*, accepted by Hrozný in his transliteration *ta₂* and by Meriggi in his *tá*, can be proved in various ways:

1. The *za* and *ta* signs interchange in x *u-pa-ta-a-za-ša-n(a)* (II M LII 1) and x *u-pa-ta-ta(-a)* (Hrozný, IHH Pl. CII 3 and 5; comparison made *ibid.* p. 61, n. 2); x-*ta-ā-za-î* (A 11 b 6) and x-*ta-ā-ta-ā-î-ḫa* (A 11 c 4; comparison made by Hrozný, IHH p. 171, n. 1); *ti-za-li-s(a)* (A 11 b 1) and *ti-ta-a-s(a)* (II M LII 3); *ḫuḫa(ḫa)-za-li-s(a)* (A 11 b 1) and *ḫuḫa(ḫa)-ta-i-ḫa* (A 11 b 3).

2. The forms RIVER.LAND-*za-a-s(a)* (M III B 2) as compared with RIVER.LAND-*za-s(e)* (M IV A 2) and *za-ā* (A 6:8 and 9) as compared with *za-ḫa* (A 7 a 2) present the syllable *za* followed by *a* or without it.[2]

The value *za* is best proved by comparing a passage in the Sultan-ham inscription: GOD-*ni-a-i arḫa(ḫa)* ʾ*a-za-tu-u* (HHM 49 C),[3] with a

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[1] Here *x* and *y* stand for *zi* and *ze* respectively; see below, p. 30.

[2] The fact that this is the most common of the four signs containing *z* also favors the vowel *a;* cf. HH II 30 and 32.

[3] Neither Meriggi (RHA II 245) nor Hrozný (IHH p. 292) in treating this passage has recognized this form, although the latter, reading *á-tu-ā-ta₂*, "le dévoreront (? feront dévorer?)," has found from the context the correct translation.

parallel formula in a Carchemish inscription: DOG-*ni-a-i* . . . . *arḫa(ḫa)* EAT-*tu* (A 6:9). The clear parallelism of *ʾa-za-tu-u* with EAT-*tu* necessitates for these clauses the translation "may the gods (or 'dogs') eat away." However, more important than the translation is the correspondence of hieroglyphic Hittite *ʾa-za-tu-u* with cuneiform Hittite *e-ez-za-an-d[u]*.[1] The hieroglyphic form *ʾa-za-tu-u*, pronounced *ʾatsantu*, is, then, to be analyzed as *at-sa-ntu*, i.e., *at-*, "eat," plus formative *-sa-*[2] plus the 3d per. pl. imperative ending *-ntu*.[3]

Read in the most natural order we find in A 11 b 2 *wa-n(a)-e* [n volute]*Tarḫu-t(i)-sa-ĭ* GRANDCHILD-*sa-ĭ* LITUUS.HAND-*n(e)* COURT *pi-te-ḫa-li-ā-ḫa*, "and it I rebuilt (or the like) for the Tarḫuntian grandchildren." Similarly in A 11 c 5 we have [n volute]*Tarḫu-t(e)-sa-ĭ* GRANDCHILD-*sa-ĭ*.[4] The forms [n volute]*Tarḫu-t(i)-sa-ĭ* and [n volute]*Tarḫu-t(e)-sa-ĭ*, each pronounced *Tarḫuntsaĭ*, are dat.-loc. pl. (see below, p. 44) of *Tarḫuntsaĭs*, "Tarḫuntian," and when compared with the nom. sing. *ᵈTarḫu(ḫu)-za-ĭ-s(a)* in II M XXXIV A 1 show interchange of the combinations *t(i)-sa* and *t(e)-sa* with the *za* sign.

Since the signs ⟨sign⟩ and ⟨sign⟩ interchange with each other (HH I 35 and II 19) they must contain related vowels. But my previous readings were inexact (cf. pp. 23 f.). Meriggi in his review of HH II spoke

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[1] In KUB IX 31 iii 2; analyzed by Sturtevant, *A Comparative Grammar of the Hittite Language* (Philadelphia, 1933) p. 246, as 3d per. pl. imperative from *et-*, "eat," plus formative *-sa-*, for cuneiform Hittite *z* is sounded as *ts* (see *ibid.* pp. 71 f.).

[2] On this see my EHH.—A form *ʾa-ta-te* without *-sa-* is discussed below, pp. 64 f.

[3] An *n* before a consonant is usually omitted in the writing; see my EHH.

[4] The word for "grandchild" or "grandson," unrecognized hitherto, is *ḫamaśas* or *ḫamasas.* Cf. CHILD *ḫa-ma-śa-s(a)* (HHM 28 A d), CHILD *ḫa-ma-śa-ś(i)* (*ibid.* B c; previously not clearly copied in CE XVIII), and GRANDCHILD! *ḫal-ma-śa-s(i)-e* (I M XXI 2, collated by myself). Occurrences without ideogram in the phrase *ni-mu-wa-i ni-pa-wa ḫa-ma-śa*, "to(?) the son or grandson" (CE V 2 and 3) settle it definitely that *ḫamaśas* is the full word. On interchange of *śa* and *sa* see above, p. 19.

Since *ḫamaśas* is an *a*-stem noun (cf. e.g. GRANDCHILD-*śa-a-s(a)* in A 11 b 1), it is unjustifiable to take the last two signs in this word and its modifier in A 11 b 2 and c 5 (see text above) in the inverted order *-ĭ-s(a)*, as does Meriggi (MVAG XXXIX 1, pp. 38 and 56). Hrozný, who inverts the order of signs in the modifier only (IHH pp. 166 and 175), translates A 11 b 2 as "et que je l'ai introduit (? enseveli??) dans le vestibule(?) près du petit-fils de . . . .-Santajas(?)"; Meriggi, more simply, as "und (ich, der) Santaische Enkel, habe sie wieder überdacht."

against my values *ke?* and *ki?* and considered my original readings *te* and *tu* nearer the truth (OLZ XXXIX 158). Later (in RHA IV 105) he suggested that these two signs might contain *z* (*ts*). Several examples indicate that they have actually the values *ze* and *zi*.

Occurrence of ¦ʃ *ze-e-s*(*a*) (M I 3) as well as ¦ʃ *ze-s*(*a*) (HHM 4 C) favors the reading of ⤳ with the vowel *e* (so already HH I 35). The value of its consonant is suggested by the following examples:

1. The clause *e-wa te-ne-me anta₁-e* FEET₂*ctra*(*ra*)-*pa-ze* in A 6:4 I would translate "and into the *tenemes* he turned."[1] Hrozný[2] and Meriggi[3] likewise take the verb to be 3d per. sing. preterit. The form *trapaze* evidently corresponds to the form *aḭate, aḭati,* or *aḭaza,* "he made," which occurs frequently.

2. If the translation of *wa-mu-ti* ᵈ*Ku-papa*(*pa-pa*)-*s*(*a*) FOOT₂c*pa-ze-e* HAND-*me-a-n*(*a*) *za-a* in A 15 b** 2 as "and from me Kupapas takes the strength(?) of (my) feet(?)"[4] were sure, then we could analyze the form *paze* as *pat-se*, i.e., the root *pat-* plus *-se* for the gen. pl. ending usually written *-sa* or *-śa*.[5]

If the sign discussed above has the value *ze*, then 𝕸, with which it interchanges, should have the value *zi*.[6] Strange as it may seem, additional evidence for this assertion comes from the Tarkondemos seal. This is no place to give a complete history of the various readings of this infamous seal. But a short review of the latest attempts at its decipherment may be welcome here in order to show the progressive steps by means of which the final solution of the problem may have been reached.

[1] On *trapa-*, "to turn," see above, p. 8.

[2] IHH p. 186: "Lorsqu'il est entré auprès des images(?)."

[3] IF LII 46. In RHA IV 106 he took into consideration the 3d per. sing. present also, for reasons in which I cannot follow him, and cited another possible, but questionable, form with the same ending in Karapınar line 3. He also brought correctly into comparison the cuneiform Hittite ending *-zi* < *-ti*.

[4] Hrozný, IHH p. 178: "Et à moi, la déesse *Kupapas* enlève la force(?) au(x) pied(s)."

[5] See above, p. 19, where the interchange of *-sa/-se/-śa* for the ending of the 2d per. sing. present is also cited.

[6] On the difficulty of distinguishing clearly between syllables with *e* and those with *i* see pp. 23 and 64, n. 1.

In HH I 34 I read the cuneiform as ^mTar-qu-u-tim-me šar mât ^{ali}Me-ra and the hieroglyphic legend 𓏤 𓏤 ‖ ‖ 𓏤 𓏤 𓏤 as $Tarku$-tu+me Me+ri-e "land" "king." In HH II 14 and 26 I improved the decipherment of the geographic name by reading the cuneiform as Me-ra+a, the hieroglyphic as Me+ra-e, and by comparing both with Mêrâ or Mîrâ, a country well known in the Boğazköy cuneiform sources.

However, the reading of the name of the owner of the seal could not be improved so readily. Meriggi at first argued against the reading ^mTar-qu-u-tim-me for the cuneiform and followed Albright's reading ^mTar-qu-mu-wa.[1] The first two hieroglyphic signs he read ideographically as TARQU-MUWA.[2] Later his partial acceptance of my earliest readings of 𓏤 and 𓏤 as te and tu forced him to give up his reading MUWA for the second sign of the name, and he chose to follow me in taking that sign not as an ideogram but as a compound, di+mi, so that his reading of the name became TARGU-di-$m[i]$.[3] In the meantime, however, I gave up my old readings te and tu and proposed the new ones ke? and ki?. Simultaneously I was forced to reject my old interpretation of the name on the seal,[4] and in my new reading of the hieroglyphic as $Tarki(ki)$+me? I naturally followed Albright's reading of the cuneiform as ^mTar-qu-mu-wa, even though the vowels did not agree with each other.

In proposing a new and, I hope, final interpretation of the Tarkondemos name I read the cuneiform as ^mTar-qu-u-tim-me[5] and its hieroglyphic counterpart 𓏤 𓏤 as $Tarḫu$-zi. Reasons for reading the "goat's head" (cf. p. 15) as $Tarku$ were given in HH I 34, and they were found convincing by Meriggi also (RHA II 32). The only possible improvement here would be to read $Tarḫu$ instead of $Tarku$ in agreement with Tarḫuns, the name of the chief god of the hieroglyphic Hittite people. The main difference between my former reading and

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[1] This reading as well as Me-ra was first suggested by Albright in AOF IV (1927) 137 f.

[2] RHA II 32 f.; cf. OLZ XXXV 564.

[3] MVAG XXXIX 1, pp. 7 f., n. 2, and 157.

[4] HH II 20.   [5] As in my first attempt in HH I 34.

the new one lies in the interpretation of the second sign, which I formerly took as a ligature, *tu+me* (HH I 34) or *ki?+me* (HH II 20). Meriggi followed me in this assumption in his later reading *di+m[i]*, in spite of his own observation that the *six* little strokes above his *di* are abnormal. In reality one would expect the compound *zi+me* to be written 🖋, just as 🖋 expresses *ʾa+me* (HHM 15:3 and 4).

That the second sign on the Tarkondemos seal is not a compound, *zi+me*, but is an old form of *zi* alone is proved definitely by comparison of 🖋 in the Suvasa inscription (HHM 50 C=IHH Pl. LXVII C) with 🖋 in the younger inscription from Eğriköy (CE XIII=HHM 19 A 1 and 2), for in the former the six small strokes form part of the sign.

Furthermore, not only the signs and words but even the phrases in which they occur agree with each other. The personal name 🖋, *Tarḫu-zi*, of the seal corresponds to the expression 🖋, *ᵈTarḫu(ḫu)-ta-a-s(i)* ¦ᶘ *zi-s(a)*, of the Eğriköy inscription.[1] The abbreviated writing in the first case as compared with the longer form in the second is self-explanatory in a seal legend (cf. p. 10).[2]

The new reading *Tarḫu-zi* for the name in the hieroglyphic legend can be brought into agreement with the cuneiform ᵐ*Tar-qu-u-tim-me* if we take into account the interchange of such forms as ¦ᶘ *zi-s(a)* (Eğriköy) and ¦ᶘ *ze-e-s(a)* (M I 3), which might suggest an original pronunciation *ziʾes* or *zeʾes*. This in turn, by way of *ziwes* and *zimes* and omission of the nom. ending *-s*, may correspond to cuneiform *tim-me*.[3]

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[1] Cf. also *Tarḫu(ḫu)-ta-a-s(a)* ¦ᶘ *zi-a-s(a)* of the Çiftlik inscription (HHM 17 rev. 2).

[2] The name would mean "descendant of Tarḫuns," following Meriggi's translation of its second element as "Nachkomme" (MVAG XXXIX 1, p. 160). His new interpretation connecting the latter with Latin *divus* (RHA IV 105) has not yet been substantiated.

[3] As so often in cuneiform writing, the spelling *tim-me* in this case does not presuppose a double consonant, which would be assured only by such a spelling as *ti-im-me*. The Greek form Tarkondemos also favors the spelling with single consonant. The spelling with *t* in cuneiform and with *d* in Greek shows that hieroglyphic Hittite *z* was in this case at least nearer a dental than an affricate.

Recapitulating, then, I read the Tarkondemos seal as follows:

The cuneiform legend: ^{m}Tar-qu-u-ti(m)-me šar mât ^{c}Me-ra+a

The hieroglyphic legend: Tarḫu-zi Me+ra-e LAND KING

The translation: "Tarḫu-zi, king of the land of Mêrâ."

The most probable translation of the phrase ^{d}Ku-papa(pa-pa)-ā $^{n⊃}$A-ze-CHILD-la-s(i) HEAD-n(a) LEG-nu-⟨V⟩-e in A 18 j is "⊃Azelas brought for (or 'offered to') Kupapas." The phonetic nature of the sign here pictured was first recognized by Bossert, who questioningly proposed its correspondence with wa, ḫa, or wa-ḫa (AOF IX 110, Fig. 11:6 and n. 5). Meriggi at first took the verb to be passive, without offering any reading of the unusual sign (WZKM XLI 26), then suggested the reading dú and proposed to take the form as 3d per. imperative active (cf. loc. cit.; MVAG XXXIX 1, pp. 3, 12,[1] and 100; RHA IV 91, 96, and 98, n. 15). In either case a value with t or similar seems indicated. Even though some of Meriggi's arguments seem untenable to me, still there are sufficient grounds to justify approximately his reading. Only I would like to change his dú to zu to avoid a case of homophony. However, because this sign occurs so rarely, its value cannot be tested elsewhere.

In résumé of the foregoing it can be said that there are eight syllables which could contain t or a related sound. Hrozný reads with t all these signs (except the eighth) as well as many others which in my opinion have to be read differently.[2] Meriggi on the other hand reads five of them with t and three with d (e.g. in MVAG XXXIX 1, p. 3). However, my disbelief in homophony as well as in the distinction of voiced and voiceless consonants in Hittite hieroglyphic writing prevents me from reasoning as they do. Yet it is clear that with a four-vowel system these eight signs must, like the seven s/š signs, be separated into two groups containing related consonants.

The first group—ta, te, ti, and tu—contains clearly t. At least I myself feel that those readings are safely established, even though minor differences in interpretation still persist among scholars.

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[1] Where he mentions the occurrence of a possible variant form of the same sign in Assur e Ru 11.

[2] Eight different ta signs of his were noted in HH II 33, n. 1. Two more are ta_6 (the leg; IHH p. 200, n. 6) and tā? (what I read as tra(ra); ibid. p. 363., n. 16, and p. 390, n. 5).

Already in 1931 I suggested (in HH I 16) that because of the large number of signs containing *t* or similar (five so interpreted at that time) hieroglyphic Hittite may have had and expressed the sound *th* alongside of *t*. In 1937 Meriggi in turn, because of the disturbingly great number of signs apparently containing *t* or *d*, suggested that some of them may express rather the spirant *th/dh* or the affricate *ts/dz* (RHA IV 105). That the sound concerned is really the affricate *z* (*ts*) is evident from the material gathered above: (1) hieroglyphic Hittite *ʾa-za-tu-u*, "may they eat," analyzed as *ʾat-sa-ntu* by comparison with cuneiform Hittite *e-ez-za-an-d[u]* (pp. 24 f.); (2) hieroglyphic Hittite dat.-loc. pl. forms $^{\text{n volute}}Tarhu-t(i)-sa-\check{\imath}$ and $^{\text{n volute}}Tarhu-t(e)-sa-\check{\imath}$ compared with nom. sing. $^{d}Tarhu(hu)-za-\check{\imath}-s(a)$ (p. 25); (3) hieroglyphic Hittite verbs FEET⊃*tra(ra)-pa-ze, aįaza, aįate, aįati* showing endings cognate with cuneiform Hittite *-zi*(< *-ti*) (p. 26); (4) hieroglyphic Hittite *paze* analyzed as *pat-se* (*ibid.*).

As to the nature of the sound *z*, it has been noted above that it often stands for original *t*, as in *trapaze*, with the ending *-ze* for the usual *-te* found in *aįate* (see above), or even in *tizalis*, "paternal," based on *titas*, "father" (p. 24). In other cases *z* seems to interchange with *s*; compare (1) OPPOSE-*za-ta*, "he/they will oppose" (HHM 5 C and 6 C 3), contrasting with OPPOSE-*le-sa-tu* and OPPOSE *sa-le-sa-tu*, "may he/they oppose" (M XI 5 and A 14 b 5), forms with infixed *-sa-* analogous to *ʾat-sa-ntu* discussed above (p. 25); (2) the ideogram for "exalted" or the like followed by *-za-me-s(i)* in HHM 6 B 1, whereas the word normally ends in *-sames*, as evidenced by oblique cases ending in *-sa-me-a* (A 11 a 5 and c 6) and *-sa-ma-ĭ* (M XI 3).

Much more difficult is the problem of the relationship of the hieroglyphic Hittite personal name written $^{n⊃}A$-*s(a)-tu-wa-zi-ma-ĭ-ša-a* and $^{n⊃}A$-*s(a)-tu-wa-ze-ma-ĭ-ša* (A 11 a 1 and b 1 respectively; cf. A 14 b 1 and CE XXV 2) to Assyrian ^{m}As-*ta-kú-um-me*,[1] compared in my HH II 20 in an attempt to prove the values *ki?* and *ke?* for the two signs which I now read as *zi* and *ze*. The reason why I hesitate to give up this equation lies in the fact that hieroglyphic Hittite seems to offer another case of *k/z* interchange. The Karapınar inscription contains

[1] The vowel *u* in Assyrian instead of the expected *i/e* could naturally be explained by the proximity of *m*.

two forms, COURT$_{\supset C}$-*ki* (OLZ XXXVII 147:5; dat.-loc.)[1] and COURT-*ki-n(a)* (*ibid.* l. 8; acc.), for which no better comparison can be offered than COURT-*zi-ĩ* (A 11 c 2; dat.-loc. pl.) and COURT-*ze-ĩ* (HHM 49 A 1; dat.-loc. pl.).[2] In Lycian there are indeed numerous cases of interchange of *k* with sibilants and palatals.[3]

The first three signs were thus interpreted in HH II 33–36, except that the second sign, read there as *wx*, is here given the value *we* because of its frequent interchange with *wa*. Comparison of the Malatyan royal name written *We-la-runta* or *We-la-ruata* in hieroglyphic Hittite (M XVI A 2) and Ḫilaruada or Ḫelaruada in Urartian inscriptions (JRAS, 1882, pp. 582:6 and 642:2) likewise favors this reading.[4] It is possible that there is no special sign for *wu* and that the sign *u* is used to express this syllable also.

SIGNS OF UNKNOWN OR VERY UNCERTAIN VALUE

In the following pages are discussed the remaining signs of the Hittite hieroglyphic syllabary—signs whose readings are either entirely unknown or for which at best only suggestions can be offered. Every statement in this section must be regarded as tentative. In reality, I would as lief have omitted this entire section had it not been

[1] Photographs at my disposal of both original and squeezes confirm Bossert's copy against Hrozný, who reads with tang (IHH p. 369, n. 1).

[2] Other forms are given by Meriggi in MVAG XXXIX 1, p. 102.—This word is of course different from the word *teskiras*, written with the same ideogram, discussed below, p. 62.

[3] See examples cited by F. W. König, "Die Stele von Xanthos," *Klotho* I (Wien, 1936) 35 ff.

[4] Identification proposed by Meriggi in OLZ XXXVI 82, abandonment suggested in RHA IV 103, n. 29. Cf. also Bossert in AOF IX 331 f. and Hrozný, IHH pp. 103 and 494 f. On interchange of *w* and *ḫ* cf. Nikarawas/Nikaruḫas and Tuwana/Tuḫana discussed in my HH II 16.

for the fact that systematic treatment of the whole syllabary requires discussion of even the most doubtful signs and problems. However, all such discussion will be kept as brief as possible.

From comparison of such identical forms as x.x$_{2c}$wa-x+ra-ma (Assur a Ru 7 f.; again, with e at end, in Assur g Ru 9 f.), x.x$_{2c}$wa-e+ra-ma (Assur b Vu 4 f.), x.x wa-e+ra-ma-a (Assur c Ro 10 f.), and x.x$_{2c}$wa+ra-ma-e (Assur a Ru 17 f.) we see that x+ra interchanges with e+ra (read as ra; cf. p. 11) and with ra alone. The sign here in question never appears without the tang, and the two together should have a value similar to ra.

Meriggi's reading rpa was based on the assumption that in BREAD-ša-n(a) (A 11 a 4) the untransliterated sign would have the value rpa because the word for "bread" is turpas. Meriggi identified that sign with x+ra, which he considered a combination of (WZKM XL 270, n. 1; MVAG XXXIX 1, pp. 2, 3, 27, 64). He read the Assur forms cited above as warp(a)ma and (through elision and contraction) warma (AOF X 125). However, since the forms with e+ra (pronounced ra, not r(a); cf. p. 11) prove that the word is pronounced warama, not warma, this ingenious explanation is ruled out.

Hrozný reads the sign or signs in question, plus the tang, as ê$^{(r)}$ and assumes the same combination of elements (cf. p. 7) as does Meriggi.

The comparison between HOUSE$_1$ -⌈x⌉+ra-nú-w[a-ḫa] in I M XIII 2:2 and HOUSE$_{21c}$. . . .[1]-ḫa+ra-na-wa- in an unpublished text cited by Meriggi in MVAG XXXIX 1, p. 116, could become very important if the readings of the individual signs could be ascertained in both cases.

The phonetic nature of this sign was first recognized in HH II 31 f. from such occurrences as x-x-ša (Assur a Vo 10, b Vo 7, d Vo 10), x-x-nú (Assur f Vo 30), x-x-la (II M XLVIII 3), and x-x-a-te (HHM

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[1] Nothing missing? Cf. p. 13, n. 4, on meaning of the compound ideogram mark.

49 A 1).[1] In form this sign seems to be identical, at least at Assur, with the sign for "child" in CHILD-*ni-n(a)* (Assur e Ru 22, g Vu 23) and related forms (Assur e Ru 29, f Ro 6).[2] But 〽 〽 𝄐 occurs side by side with ⮑ 𝄐 in the Suvasa inscription (HHM 50 C). The first word may be identical with that first mentioned above; the second is without doubt the word for "child." At Suvasa, then, the identification of these two signs seems impossible.

A royal name written ⟨⟩ \\\\ ⮑ ⮑ on the Sirkeli monument (HHM 48) and on two bullae from Boğazköy[3] is interpreted as Muvat(t)alli by Güterbock[4] and Hrozný.[5] The first sign is clearly *u*, the second *me*, the fourth *li;* the third sign too should be phonetic, but to all appearances it is the sign for "child."[6] Originally I read the whole name as *U-me-ne$_x$-li* and identified it with that of the Hittite king Urḫi-tešup[7] written ⟨⟩ ⮑ on bullae from Boğazköy,[8] which I would read as *Umene* + ideogram mark + *li.*[9] Lately Güterbock has again discussed this personal name; but in place of his impossible former reading *Mu-va-ta-li* he proposes now *Mu*(written *u-me*)-*ta-li.*[10] This interpretation looks reasonable in view of the fact, referred to by Güterbock, that the normal sign *mu* seems to be a compound, *u+me*. The "hand" sign which to Güterbock represents *ta* he identifies tentatively with Meriggi's *tà* (my *za*). The same sign *x* occurs in the word for "temple,"

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[1] Meriggi reads the first two signs in these words ideographically as KIND-KIND (MVAG XXXIX 1, p. 132). Hrozný now reads them phonetically as *p/bá-p/bá-* (AOr IX 415 and X 36).

[2] The same sign occurs in *x-a+ra-e* (Assur b Ro 5) or *x-a+ra-a* (Assur e Ro 25).

[3] Published by H. G. Güterbock in MDOG No. 75 (1937) p. 57.

[4] *Ibid.* pp. 56–60; AAA XXIV (1937) 68.

[5] IHH p. 500.

[6] Hrozný *loc. cit.* takes it to be the sign read by myself as *za* (p. 22).

[7] So provisionally in HHM p. 37.

[8] K. Bittel and H. G. Güterbock, *Boğazköy* (Abhandlungen der Preussischen Akademie der Wissenschaften, 1935. Philos.-hist. Klasse, No. 1 [Berlin, 1935]) pp. 64 f.

[9] The reading *umene-* was last discussed in HH II 24.

[10] *Siegel aus Boğazköy.* Erster Teil (Berlin, 1940) pp. 22 f.

VOLUTE.HOUSE-x, in the old inscription from Köylütolu Yayla (HHM 41:3),[1] evidently equivalent to GOD.HOUSE-za in the later Carchemish inscriptions (e.g. A 7 a 2).[2]

<center>ᡓ</center>

From a tentative comparison of x-tu-ma-ni-a-$n(a)$[city] in the Darende inscription (HHM 18 C 4) with $^{c}\check{S}u$-tu-um-ma-na-$a\check{s}$ in a Boğazköy inscription I inferred the syllabic character of the first sign (HH II 32). Although the reading of the hieroglyphic word is not sure,[3] the syllabic character of its first sign can now be definitely proved from its occurrence in the words Za-x-na[land] (M XXX C) and x-lu-na-se-x (HHM 34:2).[4]

<center>⊗</center>

In $x_{\supset c}x+r(a)$-li-$ḫa$ (A 12:4), $^{d}x+r(a)$-ma-na-wa-na-$s(a)$-pa-wa[city] (A 15 b** 2), $x+r(a)$-li-$n(a)$ (Assur d Ro 1), $x+r(a)$-na-wa-$i̯$-$s(a)$-wa (Assur e Vo 4 f.), and $x+r(a)$-na-$wa+ra$-$s(a)$ (Assur g Vo 17) the unread sign at the beginning of each word has a syllabic value. This sign is always accompanied by the tang. Comparison of $x+ra$-na-wa-ni-$s(a)$[city] (CE V 2 and 3) with the geographic name usually written $Ḫa+ra$-na-wa-ni-$s(i)$ (HHM 49 B) or the like and other considerations in which I cannot follow him led Meriggi to draw the conclusion that the initial ligature in the first of these two examples is an older variant of that in the second (MVAG XXXIX 1, pp. 52 and 119). He is now inclined to change his value $ḫdr$ (*ibid.* p. 3 and RHA IV 96) to $ḫor$ (RHA IV 109).

<center>ᚠ</center>

On the basis of such forms as wa-me-x-$ḫa$ (A 15 b*), wa-me-x-te (CE V 1), and wa-me-x-$\check{s}a$ (Assur g Vo 7) the syllabic nature of this sign was

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[1] Similarly in HHM 37, from Karga.

[2] On interchange of the signs VOLUTE and GOD see my EHH.

[3] Meriggi reads TIERKOPF-ma-na-a-$an^{s[r]}$, placing the tu with preceding signs to make e-wa-tu (MVAG XXXIX 1, p. 30). Hrozný takes the first sign to be the head of a horse, fully complemented by Tu-ma-na-a-n, and suggests identification of the city with Tumanna of the Boğazköy sources (IHH p. 492).

[4] This has now been recognized by Meriggi in RHA IV 91, No. 298 = *ibid.* p. 95, No. 416.

recognized already in HH I 15. The reading *rx* proposed there was without foundation, and for that reason the sign was left unread in HH II (frontispiece). Whenever this sign is used ideographically it is transcribed with Latin "lituus" (HH II 8, n. 4). Meriggi's syllabic reading as *ap* (WZKM XLI 24, 25, n. 2, 30, n. 2, 37, n. 1; MVAG XXXIX 1, pp. 2 and 13; RHA IV 101) and Hrozný's suggestion of e_3 (IHH pp. 146, n. 7, 250, 267), later changed to *áp* (IHH pp. 338 and 347), are incompatible with the system of the Hittite hieroglyphic syllabary as I understand it.

Besides the foregoing five signs those discussed below may likewise lay claim to syllabic character. Their occurrences, however, are so rare, and in many respects so uncertain, that they cannot be included among the signs of the normal Hittite hieroglyphic syllabary.

In the unique occurrence LOG₅*hu*-⟨sign⟩-*pa-li* in a Carchemish inscription (A 11 b 4) Meriggi interprets the pictured sign as syllabic (MVAG XXXIX 1, pp. 43 and 174; RHA IV 93, n. 7).[1] According to him the same sign occurs, but without tang, in Assur e Ro 13 and 22.

In the geographic names *E*-⟨sign⟩-LAND-*wa-na-ta*^city (A 15 b** 4), *E*-⟨sign⟩-[LAND]-*wa-ni-*[*s(a)*]^city (HHM 10:3), and *E*-⟨sign⟩-LAND-ᶜwa-niˈ-*ā-n(a)-e*^city (*ibid.*) the untransliterated sign has a phonetic value[2] and may, as here, carry the tang. The same sign appears in the Karapınar inscription (OLZ XXXVII 147:3 and 4) and perhaps in the hieroglyphic legend ⟨signs⟩ on a cuneiform tablet from Boğazköy.[3]

Very doubtful is the occurrence of CHILD-*ni*-⟨sign⟩-*wa-e+ra* in a Tell Ahmar inscription (IHH Pl. CII 1). Hrozný reads the pictured sign as *muva* (IHH p. 466), Meriggi as *mú?* (RHA III 52).

The untransliterated sign in . . . .-*me*-⟨sign⟩-. . . . (HHM 9 B 1) appears to be phonetic, but because of the broken context it is impossible to draw any safe conclusion. The same sign may possibly be used phonetically at Suvasa also (HHM 50 C).

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[1] Hrozný (IHH p. 168) tentatively identifies this sign with the one I read as *ši*.

[2] As recognized by Meriggi in RHA IV 86, nn. 16 and 17.

[3] Sayce in JRAS, 1912, p. 1036 = Götze, *Verstreute Boghazköi-Texte* (Marburg, 1930) No. 87.

The word *se*-◯-*ka-ta* (HHM 41:3), interchanging with *se-la-ka-za-a*
(II M L 2; IHH Pl. LXXVII 2(?), 3, 5, 6) and *se-le-ka-za-a* (IHH Pl.
LXXXIV 3; thus copied by Hrozný, but doubtful), may contain an
unknown syllabic sign. It seems more probable, however, that the
sign in question[1] is simply an older variant of *le*, which in the later
period usually has "ears."

In the word ⟨sign⟩ in inscriptions from Tell Aḥmar (RHA III
Pl. 4:6) and from Boybeyipınarı (HHM 5 C) the first sign after the
ideogram is probably to be read syllabically.[2]

This list could easily be enlarged by such signs as ⟨sign⟩ (I M X 2), ⟨sign⟩
(Assur d Vo 3 and HHM 49 A 3),[3] and ⟨sign⟩ (Hogarth, *Hittite Seals*,
No. 308), which may, in certain rare cases, have phonetic values; but
it is safer perhaps to stop here before becoming completely submerged
in the dangerous problems of *hapax legomena*.

LOCAL SIGNS

Outside the normal syllabary there are some syllabic signs used only
locally. For instance, certain signs—⟨sign⟩, *u*;[4] ⟨sign⟩, *mu*;[4] ⟨sign⟩, *wa*;[5]
⟨sign⟩, *wa*[6]—seem to occur at Karapınar (Topada) only. Others—⟨sign⟩, *sx*,[7]
and ⟨sign⟩, *sẋ*[8]—are found both there and at Suvasa. The sign ⟨sign⟩, *ma*,[9]

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[1] This sign appears also in the word *se-x-ka-* on seal impressions from Boğazköy
published in MDOG No. 74 (1936) p. 75, Abb. 53 d and e, and in the name *ᵓA-pa-x*
on another seal (*Proceedings of the Society of Biblical Archaeology* XXVII [1905]
opp. p. 254, Nos. 8 f.).

[2] Thus Meriggi in RHA IV 79, No. 54. Hrozný identifies it with the certainly
different sign *si*, which he reads as *sa₁* (IHH pp. 325 and 485 and AOr XI [1939]
5, n. 2).

[3] Could this be the cursive form of the bird sign discussed on pp. 37 f.?

[4] Bossert in AOF VIII 303.

[5] Hrozný, IHH pp. 353, n. 1, 356, n. 1, 362, n. 9, 371, n. 2; Meriggi in MVAG
XXXIX 1, p. 4, and RHA IV 88, No. 233.

[6] Hrozný, IHH p. 370, n. 7; Meriggi in RHA IV 90, n. 2.

[7] Hrozný, IHH pp. 359, n. 3, 361, n. 9, 365, n. 1, 382–84; Meriggi in RHA IV
95, No. 393, and 96; for use at Suvasa see also HHM 50 B and C.

[8] See p. 17; for use at Suvasa see HHM 50 B.

[9] Hrozný, IHH p. 383, n. 4; Meriggi in RHA IV 91, No. 301.

appears at Suvasa alone. The sign ⚏, *wa*,[1] is common in the Kayseri inscription; Meriggi[2] identifies it with ⚌ used in the word *ʾa-mu-x* at Karapınar (l. 2) and on a seal (M XLI 2). In the Kayseri inscription occur ⚊ and ⚊ (latter used in Çalapverdi inscription HHM 16:1 also), with the values *a* and *ā* respectively.[3] Similar in form are the signs for *a* and *ā* used in Malatya and Izgın inscriptions.[4] Unique is the occurrence in Kara Dağ inscriptions of the sign ⚏ interchanging with the usual sign for *pu*.[5] This list could be enlarged by some doubtful occurrences of syllabic signs on seals and in certain older inscriptions which are as yet little understood.

"Rebus" Signs

In contrast to the Hittite hieroglyphic syllabary, which contains only signs for vowels and for syllables consisting of consonant plus vowel, there are a few phonetic signs which have been developed on the so-called "rebus" principle. Of these ‖⚊, *tra(ra)*, expressing originally the numeral *tra*, "three," plus the tang *ra* as phonetic complement,[6] is the most commonly used. The rare sign ⚌, perhaps *ara(ra)*,[7] used in the Carchemish inscriptions is another example.

A difficult problem is presented by the bird sign in the name of the goddess Kupapas.[8] This sign, which I formerly interpreted as "swallow" (HH II 8, 21, 25), is taken as "pigeon" by Bossert (ŠuK p. 34) and Meriggi (MVAG XXXIX 1, p. 134). If the latter should prove to be correct, then the value *papa* suggested for this sign by Dr. Ernst Grumach[9] could be taken into consideration. Dr. Grumach deduced

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[1] Bossert in AOF VIII 303 and IX 110; Meriggi in MVAG XXXIX 1, pp. 3 f.; Hrozný, IHH p. 294, n. 15.

[2] RHA IV 92, No. 314, also pp. 96 and 106.

[3] Meriggi in RHA IV 89, Nos. 250 f. and n. 2; Hrozný, IHH p. 389, n. 3. The *ā* sign is of course read as *ā* by both scholars.

[4] Same refs. as in n. 3.   [6] See pp. 12f. and HH II 33.

[5] Cf. Hrozný, IHH p. 440, n. 1.   [7] HH II 13, n. 1.

[8] What is perhaps a cursive form of this bird sign is employed in the word x×x-se-ḫa (II M LII 2) and in other more doubtful cases (cf. p. 36, n. 3). It is shaped like the bird sign used in the name of Kupapas on a seal (M XLIII 8).

[9] In a letter dated January 6, 1936.

this value from the occurrence of a rare Greek word for "pigeon," φάψ, which may be derived from a pre-Greek language and whose root φαβ- fits well the desired value *papa*.

RÉSUMÉ

Unlike HH II, this volume presents a systematic evaluation of the phonetic signs as a whole. Whereas in the former study only signs with known readings were discussed, in the present one all the signs of the normal syllabary have been analyzed and classified. In order to bring them all into a logical picture the problem had to be approached from two sides. First, an attempt had to be made to correlate syllables for which no signs had heretofore been found with signs for which no satisfactory readings had yet been offered. I thus arrive below at the values *ke* and *ki* in this study, just as I determined the values *ne* and *ni*, *tx* and *tẋ* (now read *te* and *ti*), and some others in the former study. Secondly, the groups of syllables to which more than four signs with the same or similar consonants had been assigned had to be broken up in conformity with the four-vowel system of the Hittite syllabary.[1] This has resulted above in the discovery of signs containing the consonants *ś* and *z*, related to *s* and *t* respectively.

The present, still provisional, number of sixty signs in the Hittite hieroglyphic syllabary includes the fifty-seven syllabic signs given in HH II with one omission and four additions. The signs ⌇, ⌇, and the pair ⌇ and ⌇, absent from the table forming the frontispiece of HH II,[2] are added in HH III, while on the other hand the sign ⌇, given in HH II, has been dropped.[3] Of these sixty signs, readings, with or without question mark, have been proposed for fifty-five, while for

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[1] Renewed study has further strengthened my belief in the four-vowel system. I find completely unconvincing Meriggi's attempt to prove the existence of signs containing the vowel *o* (RHA IV 108 f.).

[2] The first of these four was discussed, however, already in HH II 32.

[3] This sign was credited with syllabic character on the basis of its alleged occurrence in the first personal name of a Babylon inscription (M II 1, cited in HH I 45); but the form of the sign is not clear there. On the other hand, it is not certain that the well preserved signs in A 2:3 and in the parallel passage A 11 a 3 are used syllabically.

the remaining five signs only possibilities at most have been suggested.

Nine perhaps syllabic signs in addition to the sixty have also been discussed, but their very rarity and the uncertainties connected with them stand in the way of including them in the normal syllabary, which is based predominantly on the Carchemish inscriptions and the Assur lead strips. Not all the syllabic signs used at Carchemish occur at Assur, but all the syllabic signs in the Assur lead strips recur in the Carchemish inscriptions.

In going over the Hittite hieroglyphic syllabary we see that no signs have yet been found with the values $\tilde{u}$, *pe, re, še,* and *wu* or representing combinations of ʾ or $i̯$ with other than an *a* vowel. Some of these undiscovered values may not even have corresponding signs in the syllabary; $\tilde{u}$ (p. 4) and *wu* (p. 31) are cases in point. Perhaps, also, some signs containing the vowel *i*, such as *pi* and *ri*, were used for syllables containing the vowel *e* as well. Other syllables may still be discovered among the signs with doubtful readings discussed on pages 31 ff.

The writing shows two developments which fall outside the normal Hittite hieroglyphic syllabary: local and "rebus" signs. We have seen above (pp. 36 f.) that the Karapınar, Suvasa, Kayseri, and Kara Dağ inscriptions and certain others from elsewhere employ signs which are of strictly local or regional importance and are unknown outside their respective localities. The development of new signs through the "rebus" principle must have been widespread,[1] although only a few signs in this class have as yet been discovered (p. 37). Some of the five unread signs attributed to the normal syllabary (pp. 31–35) or of the nine rare signs mentioned (pp. 35 f.) may belong to this class.

Many more signs are read phonetically by other scholars, but they have been omitted from my discussion of the syllabary because their proposed readings do not fit the system of Hittite hieroglyphic writing as I understand it. Among these are e.g. ⏐⎖, read as *ar* by Forrer,[2]

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[1] This process is well known in many other systems of writing. Cf. e.g. the Akkadian values *pi₄, qat, riš, ṣir, ṭà,* etc. developed outside the Sumerian syllabary.

[2] HB pp. 39 f. Or does he not imply rather that this sign is *arḫa,* followed by attached phonetic complement *ḫa?* Cf. his ref. to it alone as ideogram for "Fürst, Herrscher."

Meriggi,[1] and Hrozný;[2] ⌇, read as *ḫu* by Forrer[3] and as *ta₆*? by Hrozný;[4] ⌀, read as *te* or *teš* by Bossert[5] and as *dí* (or *dzi, tsi*) by Meriggi;[6] ⌸, read as *tu* by Meriggi[7] and Hrozný;[8] ⌽, read as *gar* by Forrer,[9] as *kar* by Bossert,[10] Meriggi,[11] and Hrozný;[12] and several other less important signs.

It is evidence of the progress being made in decipherment that the number of signs concerning whose reading there is a divergence of opinion is rapidly diminishing from year to year.

In reviewing the main principles of Hittite hieroglyphic writing there is nothing to add here beyond what has already been stated in my former studies. The normal syllabary consists of some sixty syllables, which contain, as in Cypriote, only a vowel or a consonant plus a vowel. Contrary to Meriggi's and Hrozný's statements, there is no evidence for the existence of signs containing a vowel plus a consonant or a consonant plus a vowel plus a consonant.[13] Even less admissible is the opinion likewise held by both of these scholars that alphabetic signs may occur side by side with the syllabic ones.[14] From the restricted number of signs in the Hittite syllabary it necessarily follows that there is no room for either homophony or polyphony of signs. Nothing new can be added to the previously established principle that in the writing no distinction is made between voiced and voiceless consonants (HH II 8 f.). In favor of the principle that double consonants are never expressed in Hittite hieroglyphic writing (HH II 6–8) the additional examples Kukkunnis and perhaps Ninkarrak (p. 9) should be mentioned.

[1] WZKM XLI 14 f.; RHA IV 95, No. 403.

[2] IHH pp. 125, n. 1, and 269, n. 4.   [4] IHH p. 200, n. 6.

[3] HB p. 26.   [5] ŠuK p. 39.

[6] RHA IV 86, No. 185, and 91, n. 1, also 104 f.   [8] IHH pp. 319 and 433.

[7] MVAG XXXIX 1, p. 31.   [9] HB p. 23.

[10] ŠuK pp. 24 and 50. Bossert reads it as *karka* also.

[11] MVAG XXXIX 1, p. 3 etc.

[12] IHH pp. 99 and 109. Hrozný reads it as *ka^r* also.

[13] Cf. pp. 35 (*ap*) and 39 f. (*ar* and *kar*). See further Meriggi in MVAG XXXIX 1, pp. 2 f., 97 (*ᵃs-tar-da* and *ᵃš-tar-da*), and 110 (words beginning with *ᵉs* and *ᵉš*).

[14] Meriggi in MVAG XXXIX 1, p. 3, and Hrozný, IHH p. 99.

THE GRAMMAR

Noun: Declension

	Singular		Plural	
	Masc.-Fem.	Neuter	Masc.-Fem.	Neuter
Nom.	-s		-í, -ía	-ã̃[1]
Gen.	-s		-ṡa, -sa	
Dat.-Loc.	—, -a, -ã̃		-ī̃	
Acc.	-n	-ī̃, -ẽ̃	-í, -ía	-ã̃, -a, -e, -i
Abl.-Instr.	-ta		-ta	

The five cases of the hieroglyphic Hittite nominal declension were correctly established by Hrozný many years ago. Comparison of his paradigms in IHH pp. 77–83 with the table given above will reveal immediately that I have adopted without change Hrozný's nomenclature for the cases and his interpretation of their syntactical functions. Meriggi follows in general the same system[2] but refuses to admit the existence of the abl.-instr. case, which he combines with the dat.-loc.

In contrast to this close agreement on the use of the cases, unanimity on the forms of the individual case endings has not yet been attained.[3] In the following I shall first discuss the differences of opinion on problems which may not require a full documentation of sources, such as the dat.-loc. sing. and pl. and the nom. and acc. pl.

[1] Other neuter pl. nom. endings remain to be discovered.

[2] RHA II 44 f.—That in the following grammatical investigations references to Hrozný and Meriggi are so abundant, as against an almost total lack of references to other decipherers of the Hittite hieroglyphs, is due simply to the preponderance of articles on grammatical subjects written by these two scholars within the last few years.

[3] There are of course considerable differences of opinion concerning the treatment of the nominal stem between Hrozný and Meriggi on the one hand and myself on the other. These scholars read as *na* two signs which I differentiate as *ni* and *ne*, as *ta* two signs which I differentiate as *ti* and *te,* and as *ba* and/or *pa* two signs which I read as *pa* and *pi.* Hence many stems ending in *i* or *e* are taken by Hrozný and Meriggi as ending in *a.* Fortunately these differences in the interpretation of the vowel stems have no influence upon the determination of the case endings, which are unaffected by the final vowel of the stem.—On stems ending in a consonant see below, pp. 42–44.

Then I shall present as fully as possible the difficult question of the neuter.

The nom. and gen. sing. masc.-fem. end in *-s*, with all possible vowel variations before the ending. Hrozný's acceptance of nominatives and genitives without the *-s* ending (IHH pp. 80–82) does not seem to agree with the facts. The acc. sing. masc.-fem. ends in *-n* (cf. p. 45). The abl.-instr. sing. and pl. masc.-fem. end in *-ta*. All these endings are well established, and it is sufficient to glance at the nominal paradigms in my EHH to find many examples for each case.

There is greater disagreement on the form of the dat.-loc. sing. masc.-fem. Both Hrozný and Meriggi think that the dat.-loc. sing. can end in a vowel (or, if we consider the final vowel of the dat.-loc. as corresponding to the final vowel of the stem, it need have no ending at all) or in *-ta*. Hrozný cites hesitantly two examples of the dat.-loc. in *-ta* (IHH p. 83). Meriggi by grouping together the dat.-loc. and the abl.-instr. naturally obtains a considerable number of dat.-loc. examples ending in *-ta*.

If we disregard all the examples showing abl.-instr. use we find that in form the dat.-loc. corresponds normally to the stem, ending in a simple or a secondarily nasalized vowel. In the case of GOD-*ni* (HHM 18:5), GOD-*ne* (M XI 4), or GOD-*ni-a* (M V 4) we find that the dat.-loc. ends in *-i*, *-e*, or *-ia*, just as in many other cases we find that *i* stems interchange with *e* stems and sometimes even with the lengthened *ia* or *ea* stem. Cf. e.g. the nom. PRINCE *tra(ra)-wa-ni-s(a)* (A 11 a 1), PRINCEↄᶜ*tra(ra)-wa-ne-s(a)* (M II 1), PRINCEↄᶜ*-ni-a-s(a)* (A 11 b 1), or PRINCEↄᶜ*-ne-a-s(a)* (A 12:1). Sometimes the final vowel can be secondarily nasalized, as may be seen from comparison of such cases as ᵈ*Ku-papa(pa-pa)* (A 11 b 6) with ᵈ*Ku-papa(pa)-ā-ḫa* (A 13 d 6) or ᵈᵓ*A-tra(ra)-lu-ḫa* (A 4 d) with ᵈ*Ka+r(a)-ḫu-ḫa-ā* (A 13 d 6).

The idea that the dat.-loc. sing. can end not only in a vowel but also in *-ta* had its origin in observations made by Forrer (HB p. 45, where *ta* is read as *pe*) and Bossert (in AOF VIII 136) that in a letter from Assur (f Vo 4) a dat.-loc. form *ma-mu-ta* corresponds to the nom. *ma-mu-s(a)*. This word means something like "company" or "companion," but since we know little about it from comparable languages it has been impossible to do more than state the facts. To interpret this form we must seek other examples of the dat.-loc. allegedly ending

in *-ta* in words which can be analyzed by comparison with cuneiform Hittite.

A clear dat.-loc. example is found in the clause *wa-te* [d]*Tarḫu(ḫu)-ta-a* [d]*x-ta-a* [d]*Ku-papa(pa-pa)-ã-ḫa te-ni-me-a-ḫa*, "and then him (*wa(n)-te*) to Tarḫuns, to X, and to Kupapas I assigned" (A 6:6).[1] At first glance it would seem that forms ending in *-ta* interchange here with the form ending in *-ã*.[2] However, careful analysis of the names reveals that, although all three are dat.-loc., they belong to two different stem classes. The well known divine name Kupapas has a stem containing the vowel *a* and regularly appears in the dat.-loc. as Kupapa or with secondary nasalization as Kupapã. But we know from the form [d]*Tar-ḫu-un-za* in cuneiform Hittite[3] that the stem of the divine name Tarḫuns does not end in a vowel. In fact, from such derivative proper nouns as [m]Tarḫuntiššaš[4] or [c]Tarḫuntašša[5] we know that its stem is consonantal and ends in *-nt*. Parallel to the dat.-loc. sing. *ḫumanti*, from nom. *ḫumanz*, "all, whole," in cuneiform Hittite, we have in hieroglyphic Hittite dat.-loc. Tarḫu(n)ta, from nom. Tarḫu(nt)s.[6]

The dat.-loc. *ma-mu-ta*, then, shows that the nom. *ma-mu-s(a)* also has a consonantal stem and really represents *mamu(nt)s*. The Greek personal names Μαμουτα, Μαμουττα, etc.,[7] evidently based on the same root, support this contention.

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[1] The corresponding abl.-instr. is clearly represented in the phrase [d]*Tarḫu-te-ta-a* [d]*Ku-papa(pa-pa)-ta* [d]*Kar(k)-ḫu-ḫa-ta-a* [d]*x-za-ta-a-ḫa* [lituus]*a-ī-me-s(a)*, "beloved by Tarḫuns, Kupapas, Karḫuḫas, and X" (A 15 b** 1).

[2] As observed by Bossert *op. cit.* p. 140 (where *ta-a* is read as *t⁵+ḫa* and *ã* as *ḫa²*).

[3] Forrer in *Zeitschrift der Deutschen Morgenländischen Gesellschaft* LXXVI (1922) 218, quoted in HH II 19.

[4] Forrer *loc. cit.*

[5] *Ibid.* p. 219.

[6] The gen. is [d]*Tarḫu(ḫu)-ta-a-s(i)* (HHM 19 A 1), [d]*Tarḫu(ḫu)-te-s(i)* (I M XXI 5), or [d]*Tarḫu-ti-s(a)* (A 13 d 2); the abl.-instr. is [d]*Tarḫu-te-ta-a* (A 15 b** 1) or [d]*Tarḫu-ti-ta-a* (A 3:4). The acc. is not Tarḫuntan but Tarḫun (by analogy with nom.), written [d]*Tarḫu(ḫu)-n(a)* (OLZ XXXVII 147:7, twice), [d]*Tarḫu(ḫu)-ī-n(a)* (II M LII 2), [d]*Tarḫu(ḫu)-i-n(a)* (HHM 10:3), etc.

[7] J. Sundwall, *Die einheimischen Namen der Lykier nebst einem Verzeichnisse kleinasiatischer Namenstämme* (*Klio*, 11. Beiheft [Leipzig, 1913]) p. 141, and Bossert *op. cit.* p. 143.

It seems clear that in the examples just cited there is no such thing
as an ending -*ta* for the dat.-loc. but that the writings with -*ta* exhibit
nothing more than a consonantal stem in -*nt* plus the vowel *a*.

The dat.-loc. pronominal forms *ita*, *ᵓapata*, and *kita* from *is*, "this,"
ᵓapas, "that, he," and *kis*, "who," have to be explained as pronouns
with the formative *t*, so frequent in cuneiform Hittite.[1]

The gen. pl. masc.-fem. ending -*śa* or -*sa* was recognized some time
ago by Hrozný,[2] but entirely unnecessarily Hrozný admits also an
ending -*aja*(?) for this case.[3]

The dat.-loc. pl. masc.-fem. ends in -*ī̃* in the normal Hittite hiero-
glyphic inscriptions, that is, those of the period in which the special
nasal signs *ã* and *ĩ* had already been developed. Other scholars, such
as Hrozný and Meriggi, who do not recognize the existence of nasal
signs in the writing, accept for the dat.-loc. pl. not only the ending -*ĩ*[4]
(read by them as *ja* and *ī* respectively) but also simple -*i*. That this
is not true is evident from the Izgın inscription, where -*ĩ* of the dat.-loc.
and -*i* of the acc. pl. masc.-fem. are distinguished with especial clear-
ness: . . . . *arḫa(ḫa)-i arḫa(ḫa)-ĩ apa-n(e) e-ti a-i-a-ḫa* RIVER.LAND-*i-
pa-wa-te* RIVER.LAND-*ĩ apa-n(i) e-ti a-i-a-ḫa*, ". . . . frontiers[5] (or
'provinces, territories'; acc. pl.) to frontiers (dat.-loc. pl.) I added,[6]
and then river lands to river lands I added" (IHH Pl. XCIX 4 C–5 B).[7]

The most difficult problem in the declension of hieroglyphic Hittite
nouns pertains to the neuter. Since no work has been done in this
field heretofore,[8] it is necessary to start at the very beginning and
analyze the individual occurrences of neuter forms as completely as
possible. To make clear the distinction between these and the regular
masc.-fem. forms typical examples of masc.-fem. acc., both sing. and
pl., are given first. In order to provide a double check, only such ex-
amples are chosen as occur in company with the demonstrative *is*,

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[1] Sturtevant, *A Comparative Grammar of the Hittite Language*, § 260.

[2] See HH II 11 f. For examples see the paradigms in my EHH.

[3] IHH pp. 77–82.   [4] See paradigms in my EHH.

[5] Translation follows Forrer, HB p. 40; Meriggi in WZKM XLI 20; and Hrozný,
IHH p. 444.

[6] Translation follows Hrozný *loc. cit.*   [7] Similarly in IHH Pl. XCIX B–A.

[8] Cf., however, the important, although generalized, remarks by Meriggi in
RHA II 43 f.

"this." Then are discussed all the neuter acc. forms known to me. The sing. and pl. examples similarly accompanied by the demonstrative take precedence in their respective groups. Forms assumed by neuter nouns in cases other than the acc. are noted under each noun concerned.

Typical examples of masc.-fem. nouns in the acc. sing. modified by a demonstrative are:

1. *ĭ-n(a)* CHAIR.SEAT$_{\circlearrowright c}$-*ʾa-sa-n(a)* WALL.HAND+*me-ḫa,* "this chair I built" (A 6:7 f.).

2. *ĭ-e-pa-wa* CHAIR.SEAT$_{\circlearrowright c}$-*ʾa-sa-n(a)-e* . . . . WALL.HAND+*me-ḫa,* "and this chair . . . . I built" (A 6:3 f.).

3. *ĭ-pa-wa* SEAT$_{\circlearrowright c}$-*sa-n(a)* . . . . WALL.HAND+*me-ḫa,* "and this chair . . . . I built" (M VI 2).

4. *ĭ-wa* MONUMENT-*lu-n(a)* *Sa-ru-wa-ni-s(i)* *a-i-a-za,* "and this column Saruwanis made" (II M LIII).

The acc. sing. of masc.-fem. nouns clearly ends in -*n.* As to the demonstrative, *n* appears in the first example but is assimilated in Nos. 2–4 to a following consonant (here *p* or *w*). The *e* after the nasal stem in No. 2 occurs often throughout the whole declension of this demonstrative. It is somehow connected with the nasalization.[1]

Analogous examples in the acc. pl. are:

1. *ĭ-e-i* GATE$_{\circlearrowright c}$-*le-ni-ša-a-i* HOUSE.INTERIOR *ḫa+ra-se-ti-ne-i* . . . . WALL.HAND-*me-ḫa,* "these gate-houses . . . . I built" (A 11 c 6).

2. *ĭ-i-pa-wa* HOUSE *ḫa+ra-se-ti-ni-i* . . . . *a-i-a-ḫa,* "and these houses . . . . I made" (A 11 a 5).

These examples show that the acc. pl. of masc.-fem. nouns ends in -*i.*[2] That the nom. likewise ends in -*i* appears from the example GOD-*ni-a-i arḫa(ḫa)* *ʾa-za-tu-u,* "may the gods eat away," cited above (p. 24). Other scholars, such as Hrozný and Meriggi, accept an ending -*ĭ* also (read by them as *ja* and *ī* respectively) for both. Although I myself have not been able to find any decisive examples in favor of the latter, there can be no objection to it, because by a secondary development the ending -*i* could easily have become nasalized.[3]

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[1] But see also the suggestion on p. 4.

[2] Also rarely in -*ia;* see the paradigms in my EHH.

[3] Cf. variant *ã* for *a* (pp. 3 f. and 42).

The acc. sing. neuter examples are:

1. *ĩ a-s(e)-tra(ra)-te-ĩ ĩ-e-ḫa* TABLE-*wa-śa?-ĩ* . . . . *ki¹-s(a)* . . . . *arḫa(ḫa)* x-*a*, ". . . . who(ever) . . . . removes this thone and this table" (HHM 7 DC 2; see also 7 D 1, 4 B, 4 D, 6 A 1). The word for "throne" occurs also in the dat.-loc. form THRONE *a-s(e)-tra(ra)-ta-a* (I M XXI 4; II M LII 5).

2. *ĩ-e* MOUNTAIN₂ᴄ*ḫa+r(a)-ni-se-ĩ La-ka-wa-ni-s(e)-ḫa-wa*ˡᵃⁿᵈ RIVER. LAND-*za-s(e) ki-ĩ a-i-a-za*, "and this *ḫarnises* which the Lakean river land made" (M IV A 2 f.; cf. M III B 2 f., M IV B 2, and CE V 1, twice). The abl.-instr. case MOUNTAIN₂ᴄ*-se-t*[*a*] occurs in I M XIV 4:1; perhaps gen. MOUNTAIN₂ᴄ*-se* in A 12:3; see also in fragmentary context *ki-ā* MOUNTAIN₂ᴄ*ḫa+r(a)-ni-se-*[nothing missing?], "which *ḫarnises*" (HHM 19 A 2).

3. *ĩ wa-ni-ĩ ʾa-mu ki-ĩ-ḫa-e*, "this monument I made" (HHM 20:2); *ĩ-pa-wa* MONUMENT₂ᴄ*wa-ni-ĩ* ᵈ*Pa-ḫ(a)-la-ta-ā* LEG-*nú-ḫa-e*, "and this monument to Baᶜlat I offered" (HHM 47:2). See also acc. *ĩ-pa-wa-te* MONUMENT₂ᴄ*wa-ne-ĩ* (M II 5 f.); *ĩ-pa-wa-te* MONUMENT₂ᴄ*wa-ni-ĩ* (HHM 9 A 2); *ĩ-pa-wa* MONUMENT (HHM 18 C 5); *ĩ-wa* MONUMENT-*ni!-ĩ* (A 5 a 1); *ĩ-wa* MONUMENT-*ni-i* (A 18 f and h).[2] It is impossible to establish the case of MONUMENT-*ni-i* (A 4 c) or of *wa-ni-i* (CE XII 5) because of broken or difficult context. From an early period in which nasalization is not yet expressed in the writing come *i* MONUMENT (Forrer, HB p. 9, Abb. 11 and 12, from Boğazköy) and *i-ḫa-wa* MONUMENT (IHH Pl. LXXVII 2, from Emirgazï); dat.-loc. *i-ta-a* MONUMENT also occurs (*ibid.*). The same word, with change from an *i* stem to an *a* stem, occurs as *wa-na-s(a)* in the nom. (A 18 i, also CE V superscription corrected according to HH II 11). *Wa-na* in HHM 49 A 1 is perhaps a dat.-loc. Important is *ĩ-wa wa-na* in HHM 58, frag. 3:2, should it prove to be a variant form of the acc. The case of HEAD.TONGUE *wa-na-ẽ* in HHM 52, frag. 1:1, cannot be ascertained.

4. *ĩ-pa-wa e+r(a)-ma-ĩ ki-s(a)-e ĩ+ra-a-ta-ta-a*, "and who(ever) removes(?) this *ermas*" (HHM 49 A 2). *Hapax legomenon.*

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[1] On *ki* and *ke* see pp. 54 ff.

[2] Something must be wrong here, because the nasal in the demonstrative does not agree with the *i* of the noun.

5. *ĩ-pa-wa-te-e za-ma-ĩ ke!-s(a) arḫa!(ḫa)-e ḫa!-a+ra*, "and then who(ever) destroys this *zamas*" (CE XII 5).[1] *Hapax legomenon.*

Besides the examples of nouns accompanied by the demonstrative *ĩs*, there are many other examples of nouns occurring alone or with other pronouns or adjectives ending in *-ĩ*:

6. In A 13 d 4 we find *9₃c-wa-a-ĩ-ḫa-wa-tu pi-a*, "to him (*-tu*) also (*-ḫawa-*) nine give!" In ll. 6 f. we read *e-wa* d*Ka+r(a)-ḫu-ḫa-ã* d*Ku-papa(pa)-ã-ḫa 9-wa-a-ĩ*[2] *pi-ã-tu*, "and to Karḫuḫas and to Kupapas nine may he (or 'they') give!" In this case *nuwaĩ* may be the acc. of a noun meaning "ennead," or it may represent the indeclinable numeral "9."

7. In Assur c Vu 14–17 we find *wa-mu-te* x *tu-wa-a-ĩ ki-ĩ u-śa-ta-se*, "and then the *tuwas* which thou shalt buy for me."

8. *wa-mu-e ʾa-ma-ĩ ti-ta-ã-ĩ* LOG *se-la-ḫa-ĩ pi-ã-te-e*, "and to me my paternal *selaḫas* he (or 'they') gave" (A 14 a 2 f.)[3] is analogous to *wa-mu-e ku-ma-n(a)* d*Tarḫu-s(a) ʾa-ma-ĩ ti-ta-ã-⟨ĩ⟩* LOG₃c*se-la-ḫa-ĩ pi-ã-te*, "and when Tarḫuns gave to me my paternal *selaḫas*" (A 2:1 f.). Dat.-loc. LOG₃c*-la-ḫa* is found perhaps in IHH Pl. CII 4, end.[4]

9. The word *usalĩs* occurs in the nom. in x.x₃c*ʾa-s(a)-ḫa+r(a)-me-s(e)-pa-wa-ma-ĩ ĩ-e* GOD-*ne-ĩ* LITUUS.HAND-*ni* VASE-*sa-li-ĩ-s(a)* BREAD₃c *tu+r(a)-pi-s(a)*, "and *ʾasḫarmes* for them,[5] for these gods, also liba-tion (and) bread" (A 11 b 6). The corresponding acc. occurs in *ĩ-e-ta* BOWL d*Tarḫu-ta-a* GOD-*ne-ĩ* LITUUS.HAND-*ne* VASE₃c*u-sa-li-ĩ iã* [. . . .], "for this Tarḫuns of the (sacred) bowl (and) also for the (other) gods if libation [. . . .]" (A 13 d 8 f.). In *ĩ-[ta]-pa-wa* d₃*A-tra(ra)-lu-ḫa* GOD-*ni-ĩ* LITUUS.HAND-*ni* VASE-*sa-li-ĩ* BREAD *tu+ra-pi?-n(a)*, "and

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[1] On the verb see p. 12.

[2] Instead of *9* the text has *8*. If the emendation is correct, then instead of *9-wa-a-ĩ* the simple phonetic reading *nu-wa-a-ĩ* is also possible.—Similarly in A 1 a 2 (twice) the reading *9-ĩ-ḫa-wa-tu pi-ã-ḫa*, "to him also nine I gave," is more plausible than the reading in the order *ĩ-nu-ḫa-wa-tu* of Hrozný, IHH p. 197, and of Meriggi in MVAG XXXIX 1, p. 123.

[3] Similarly A 11 a 2; IHH Pl. CII 2 f.; RHA III Pl. 4:3 f.

[4] Perhaps also *se-la-ḫa* in CE IX 4.

[5] This is also the clearest proof that the enclitic *-ma-ĩ* means "for them" or "to them," a fact as yet recognized by Forrer only (HB p. 53, n. 19). Comparison of the context in A 14 a 4 f. with A 2:2 f. shows likewise that *wa-ma-ĩ-e* in A 14 a 4 means "and for/to them."

for this ꜣAtraluḫas (and) also for the (other) gods libation (and) bread" (A 4 d), a *na* seems to follow VASE-*sa-li-ĩ* in the copy,[1] but I would be inclined rather to include this sign (to be read as *pi?*) in the next word, since I know of no clear interchange of forms ending in -*ĩ* with those ending in -*n*.[2] The form VASE₂ₓ*u-sa-li-ã-pa-wa-tu-u*, occurring in a broken context in M XXIII A 2 f., is probably not a variant of *usalĩ* but differs in number (cf. p. 53).

10. *wa-mu wa+ra-la-ĩ* x *sa-na-wa-s(a) a-i-a-za* ᵈ*Tata-s(a)* KING-*ta-a-s(a)*, "and for me the good king Tatas made a *waralas*" (HHM 58, frag. 1 A 1). *Hapax legomenon.*

11. *wa-tu-u wa-a-ki-ĩ sa-ḫe*, "and I asked him for a bite (of food)" (M I 3). On this translation see pp. 64 f.

12. In the clauses *wa-tu-e* BREAD *tu+r(a)-pi-n(a)* DRINK *ŝi+r(a)-la!-te-ĩ-ḫa* FOOT *pa-ta!-ã-tu*, "and to him bread and wine may they bring"[3] (A 1 a 5), and *wa-tu-te-e* BREAD *tu+r(a)-pi-n(a)* DRINK *ŝi+r(a)-la-te-ĩ-ḫa ia-s(a) arḫa(ḫa) za-ta-a*, "and then who(ever) takes away from him bread and wine" (A 11 a 6 f.), it is impossible to determine whether DRINK *ŝi+r(a)-la-te-ĩ-ḫa* expresses original DRINK *ŝi+r(a)-la-te-ĩ-n(a)-ḫa*, in which acc. *n* is assimilated as usual to a following consonant, or is an acc. in -*ĩ*. An identical form, written with a different ideogram, is found in GRAPES *ŝi+r(a)-la!-te-ĩ!-ḫa* (M VI 4 emended according to collation and photograph in Hrozný, IHH p. 307 and Pl. XV) and GRAPES₂ₓ*ŝi+r(a)-la-te-ĩ-ḫa-wa* (M VI 5).[4]

13. The most frequent and most important noun with the acc. sing. ending -*ĩ* is ꜣ*a-ze-ma-ĩ*. Its use is best attested in such clauses as *ne-pa-wa-te* ꜣ*a-ma-ĩ* ꜣ*a-ze-ma-ĩ-e ki-a-s(i) arḫa(ḫa)* x₂ₓ-*la*, "or then who(ever) removes my ꜣ*azemas*" (A 6:9), and ꜣ*a-ma-ĩ-pa-wa-te* ꜣ*a-ze-ma-ĩ ki-a-s(a) arḫa(ḫa)* x-*a*, "and then who(ever) removes my ꜣ*azemas*" (A 2:4). Meriggi first translated the second example as "meinem Priester aber

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[1] As read originally by Meriggi in MVAG XXXIX 1, p. 47, and Gelb, HH II 11.

[2] See above, p. 3, n. 3.—The two forms x₂ₓ*tu-wa+r(a)-se-ĩ* and x₂ₓ*tu-wa+r(a)-ŝa-n(a)* cited in HH II 11 have to be kept apart, the first one being probably dat.-loc. pl. while the second one is acc. sing.

[3] The hieroglyphic Hittite verb *pata-*, "bring," may correspond to cuneiform Hittite *peda-*, "carry, bring," etc. (Sturtevant, *A Hittite Glossary*, 2d ed., p. 122).

[4] Meriggi's reading in MVAG XXXIX 1, p. 137, of *li-la-[ta]-i* in II M XX 4 is too doubtful.

wer (es?) ent-zieht,"[1] then changed the translation of the first two words from "meinem Priester" to "meiner Verwandschaft" or "meiner Familie,"[2] in both cases taking *ʾa-ma-ı̃ ʾa-ze-ma-ı̃* to be dat.-loc. sing. Hrozný translates the same phrase as "puis qui broie(?) mon image(?),"[3] interpreting those words as acc. sing.

Meriggi's interpretation of *ʾa-ma-ı̃ ʾa-ze-ma-ı̃* as dat.-loc. is based solely on his translation of *ʾa-ze-ma-ı̃*, for which he has offered no good evidence. Hrozný's translation "image" (or perhaps "inscription, stela," or the like) fits much better in all instances. Furthermore, *ʾa-ze-ma-ı̃* cannot be dat.-loc., because the possessive pronominal adjective *ʾa-ma-ı̃* which modifies it is not dat.-loc. The correct dat.-loc. sing. forms of the latter are *ʾa-me-a, ʾa-me, ʾa-ma, e-me-a, e-me, me-a,* and *me,* but never *ʾa-ma-ı̃*.[4] Finally, the verb *arḫa(ḫa)* x₂c-*la* or x-*a,* no matter whether it is translated as "removes" or as "smashes," is always construed with the acc., as is best proved by *ı̃-pa-wa-z(a) arḫa(ḫa)* x-*a,* "and this (=antecedent MONUMENT₂c*wa-ne-ı̃*) he removes" (M II 6).

The form *a-ze-ma-ı̃* is therefore clearly in the acc. Of the four possible interpretations, the acc. sing. masc.-fem. can be eliminated immediately because the latter ends in -*n.*[5] In turn, the acc. pl. masc.-fem. is unlikely, because it ends regularly in -*i.* Even if Hrozný and Meriggi should be right that some acc. pl. forms end in -*ı̃* (see p. 45), the almost total absence of the spelling *ʾa-ze-ma-ı̃*[6] would speak against such an interpretation of this word. Especially in the Carchemish inscriptions, in which the acc. ending of masc.-fem. plurals is so regularly

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[1] WZKM XLI 28.

[2] MVAG XXXIX 1, pp. 8 f.

[3] IHH p. 206.

[4] See paradigms in my EHH.

[5] Except where *n* is assimilated to a following consonant (cf. p. 45).

[6] Meriggi in MVAG XXXIX 1, pp. 111 f., enumerates some fifteen examples of *ʾa-ze-ma-ı̃,* also one example of *ʾa-ze-ma-ë* (A 18 e 2). In addition there is one example of *a-ze-ma-e* in an old inscription from Köylütolu Yayla (HHM 41:2), written before nasalization was yet expressed in writing, and one example of *ʾa-ze-ma-i* in an inscription at Kötükale (HHM 40:5). The latter may possibly be a defective writing, for the Kötükale inscription belongs to the Malatya group of inscriptions, which exhibit notoriously bad grammar. Suffice it to refer here to their frequent writing of nominatives without the normal -*s* ending.

$-i$, the interpretation of ʾa-ze-ma-$ĩ$ (which occurs some eleven times at Carchemish) as such a form would seem quite out of place.

If ʾa-ze-ma-$ĩ$ cannot be acc. sing. or pl. of a masc.-fem. noun, then nothing remains but to take it as neuter. The problem now remains to determine whether it is sing. or pl. This problem can be solved if we analyze some forms, still to be discussed, of the same word. In a Boybeyipınarı inscription we read ni-pa-wa-te ʾa-ma-$ĩ$ ti-ta-$ã$-$ĩ$ ⁿᵈA-$ĩ$-me-$s(a)$ ʾa-ze-ma-$ĩ$ $arḫa(ḫa)$ x-a ni-pa-wa-$z(a)$[1] . . . .[2] x-$ḫa$-me-$ŝa$?-$s(a)$ ⁿPa-na-mu-wa-ta-$s(a)$-$ḫa$ $Ḫattusi$+li-$s(a)$-$ḫa$ ʾa-ze-ma-ni x ze-$s(a)$-$tra(ra)$-ta LITUUS.HAND-ni $arḫa(ḫa)$ za-ˊaˋ, "or then removes the ʾa-ze-ma-$ĩ$ of my father ʾAĩmes[3] or . . . . takes away the ʾa-ze-ma-ni of xḫames and of Panamuwatas and of Ḫattusilis from the $zestras$" (HHM 7 BC 3). In comparing ʾa-ze-ma-$ĩ$, used where one person is concerned,[4] with ʾa-ze-ma-ni, used where three men are concerned, we cannot escape the conclusion that the first form expresses the sing., while the second denotes the corresponding pl. In an inscription from Tell Taˤyīnāt appears ʾa-ze-ma-ni-a (HHM 55:2), which seems to be a variant form of ʾa-ze-ma-ni.

The acc. pl. neuter examples are:

1. $ĩ$-$ã$ ᵈ$Tarḫunta$-$s(a)$ GOD.HOUSE-za . . . . BUILDING.FIST-ru-$ḫa$, "these temples of Tarḫuns . . . . I strengthened(?)" (A 2:4); ki-$s(a)$ $ĩ$-e-$ã$ GOD.HOUSE-$ḫa$-za e-ti BUILDING-te-pa-a, "who(ever) . . . .s these temples" (A 2:5). The word for "temple" occurs also as GOD.HOUSE-$s(a)$ in gen. sing. (A 11 a 4); GOD.HOUSE-za in dat.-loc. sing. (A 7 a 2); GOD.HOUSE-za in acc. pl. (A 11 a 4; A 15 b** 2); same in an undefinable case (I M XII 3:3). Another spelling, in the difficult form VOLUTE.HOUSE-za_x (see pp. 33 f.) is found in the old inscription from Köylütolu Yayla (HHM 41:3) and perhaps in that from Karga (HHM 37).

2. $ĩ$-$ã$-pa-wa-te HOUSE-na-e ki-$s(a)$ . . . . [ar]$ḫa(ḫa)$ [$ḫa$?+ra?]-$ã$ (cf. p. 12), "and then who(ever) . . . . destroys(?) these houses" (A 4 a 2). Other forms: gen. sing., HOUSE-na-$s(a)$ (II M XXXIII A 2); dat.-loc. sing., HOUSE-ni (M IX 5), HOUSE-ne (A 16 e 1; A 17 c 2:3), HOUSE-ni-a

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[1] For pl. as well as sing. (cf. p. 49) use of -az see p. 53, also my EHH.

[2] Here ni-pa-wa-$z(a)$ is followed by some words difficult to understand, read as me-a-s_1 x-s and translated "de mon maître" by Hrozný, IHH p. 337.

[3] Literally, "removes my paternal ʾa-ze-ma-$ĩ$ of ʾAĩmes."

[4] Cf. also HHM 6 B 2 and 7 B 2.

(Assur g Ru 18); acc. pl., HOUSE-*na-e* (HHM 38 C 2) and HOUSE-*na* (*ibid.* B 6). Acc. sing. perhaps occurs in *ti-ta-ā-ĩ* HOUSE-*ni-ĩ,* "the paternal house" (A 2:6), and strangely in *e-pa-sa-ḫa* HOUSE-*na-i* . . . . *arḫa(ḫa) ḫa+ra-tu,* "and his house . . . . may (the gods) destroy" (OLZ XXXVII 147:8; latter example is too early for use of *ĩ*). A difficult form is X.HOUSE-*sa-ḫa* (M VII 2). Evidently the same word occurs as *pir*, pl. *parna,* in cuneiform Hittite.[1] Cf. also *Pa+r(a)-na-s(a)-pa-wa-te-e*[city][2] (HHM 10:2) and questionable *pa+r(a)-na-i-ḫa* (HHM 60:2).

3. *ĩ-ā-ḫa-wa* GATE_{ɔc}-*le-na* . . . . LEGS-*te,* "and these gates . . . . he passed through" (A 11 a 4); *ĩ-ā* GATE_{ɔc}-*na* MONUMENT-*ši+ra-ḫa,* "these gates I walled up(?)" (A 11 a 5). Other forms: gen. (or nom.) sing., GATE-*le-ne-s(a)-e* (M II 5); dat.-loc. pl., *ĩ-ta-ā-ĩ* GATE-*na-ĩ,* "in these gates" (A 11 a 5). An adjectival formation is found in GATE_{ɔc}-*le-ni-ša-a-i* HOUSE.INTERIOR *ḫa+ra-se-ti-ne-i* (A 11 c 6), which proves that the root of the word ends in *-lena/e/i.* According to Bossert in AOF IX 127, this is the word borrowed as *ḫilani* by the Assyrians.

4. *ĩ-ā-wa* MONUMENT_{ɔc}*ka-ta-na* ¦ç*Ze-e-s(a)* [lituus]BOWL-*n(a)* [d]*Tarḫu-ta-a a-i-ā-za,* "and these . . . .s Ze'es made (into?) a bowl for Tarḫuns" (M I 3); *ĩ-ā-wa-a* MONUMENT_{ɔc}*ka-ta-na Runta(ta)-ā-s(a) Ḫalpa(pa)-ni* [d]*Tarḫu(ḫu)-ta* . . . .-*te,* "and these . . . .s Runtās . . . .ed for the Aleppine Tarḫuns" (Assur Pl. 8). This word does not occur elsewhere. To read *katan,* upon the assumption that the word is acc. sing. of a masc.-fem. noun *katas,* is impossible, because then instead of *ĩ-ā* we should expect *ĩ-n(a).* Hence I read *katana* and take it as neuter pl.

5. *ĩ-ā* SPEAK_{ɔc}*mi+ra-te ki-s(a) iā* X+*me-ta-ta,* "whoever changes(?) these words" (M XI 5). Acc. is written *ĩ-ā mi+ra-te* in HHM 9 C 2 and in AOF VII (1931/32) 185:1. In *1-ta-n(a) ĩ-n(a)* SPEAK_{ɔc}*ma-e+ra-ta-n(a)* LITUUS.HAND-*ni a-i-ā-e,* "this one thing (word) do!" (Assur b Vo 14–20), the word *maratan,* because of the demonstrative *ĩn* with which it is construed, should be taken as acc. sing. of a masc.-fem. noun *maratas.* Still different is SPEAK *mi+ra-li-a* in HHM 32:2.

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[1] Sturtevant, *A Hittite Glossary,* 2d ed., pp. 118 and 124, and *Supplement* pp. 34 and 36.

[2] Cf. [c]*Bar-na-aš-š[a]* in a cuneiform text from Boğazköy, KUB XVI 10:15.

6. *ĭ-ā-pa-wa-te ki-ĭ-ma-ā ki-s(a) arḫa(ḫa)* x_{ɔc}-*ā*, "and then who-(ever) removes these *kĭmas*" (CE V 3). *Hapax legomenon.*

7. *ĭ-ā-wa* BUILDING *ḫi?-sa-li-ā* (the rest difficult) (M XVI A 1 and II M XLVII). This word does not occur elsewhere.

Besides the foregoing examples which include the demonstrative *ĭ-ā*, we may cite also two examples of an acc. in -*ā* without it:

8. *e-wa* x-*me-ā* GOD.HOUSE-*s(a) ku-ma-n(a)* WALL.HAND+*me-ḫa*, "and when I built the . . . .s of the temple" (A 11 a 4). Same word perhaps also in CE VII 2 and 6.

9. *e-wa pa-ā-e* LAND-*ni-ā* WALL_{ɔ|c}*e-na-ti-ḫa*, "and those lands I . . . .ed" (A 11 b 4). Same word in dat.-loc. sing.: LAND-*ne-ā* (A 11 a 2 and 3) and LAND-*ni-a* (A 2:3); in abl.-instr.: LAND-*ni-ā-ta* (A 11 b 5); in gen. pl.: LAND-*ni-ā-śa* (A 3:1 and 3) and LAND-*ne-ā-śa* (A 16 a 6); etc.

The Assur letters contain quite a number of forms with endings which might well be classified in this group. The most important of these are found in the following two passages: *e-wa ᵓa-pi ku-ru-pi ki-ā* x.x_{ɔ|c}*wa-e+ra-ma* HARE-*pa-se-la-ā arḫa(ḫa)-e* HAND_{ɔc}*sa-ḫa-na wa-e+ra* HAND_{ɔc}-*ḫa+ra-ĭ wa-ma-e+ra arḫa(ḫa)-a* ROAD-*wa-ni*, "and those *kurupis* which for the . . . .ed ruler I request(?), prepare(?) them and send them to me!" (Assur b Vo 20–Vu 14); *ᵓa-pi-ḫa-wa-e* HARE_{ɔc}*e-pa-se-la-ā* x.x_{ɔc}*wa-x+ra-ma-e ku-ru-pi ᵓa-me-a e-te-ta arḫa(ḫa)-e* HAND_{ɔc}*sa-ḫa-na ᵓa-pa-a-ā-pa-wa* HOUSE-*ni-a e-te-ta arḫa(ḫa)-e* HAND_{ɔc}*sa-ḫa-na! wa-e+ra-a* HAND_{ɔc}-*ḫa+ra-ĭ wa-ma-e+ra arḫa(ḫa)-e* ROAD-*wa-ni*, "also those *kurupis* of mine for the . . . .ed ruler I request(?), and in addition those for the house I request(?). Prepare(?) them and send them to me!" (Assur g Ru 5–26).

Among other words in the Assur letters we may cite *u-ĭ-a+ra* (a Vo 17) or *u-ĭ+ra-a* (a Ro 7); PAWS?_{ɔc}-*wa+ra* (b Ro 3); *sa-na-wa* (e Ro 23); x_{ɔc}-*wa-pa-wa* (f Vo 31; again, but without ɔc, F. Thureau-Dangin and M. Dunand, *Til-Barsib*, Album [Paris, 1936] Pl. VIII 5:2); *tu-wa-a+ra* (f Vu 14); *pa+ra-la-a+ra-ḫa-wa-tu-u* x_{ɔc}ᵓ*a-tu-na-a+ra* (f Ro 14–17; cf. x ᵓ*a-tu-ni-n(a)-wa-mu*, a Vu 15 f.); FOOT_{ɔc}-*pa+ra-a+ra* (f Ru 10); ⌜x⌝ ᵓ*a-mu+ra-le+ra-e* (g Ro 16 f.); HORN_{ɔc}*śu+r(a)-ni* (g Ro 27).

In comparing the two groups of neuter nouns modified by the demonstrative *ĩs*, one thing stands out clearly: the demonstrative occurs in the form *ĩ* with nouns ending in *-ĩ*, in the form *ĩ-ā* with nouns ending in *-ā, -a, -e,* or *-i*. The nouns of these two groups differ not only in form but, in at least one clear instance, in number also: *ʾa-ze-ma-ĩ* is sing., and *ʾa-ze-ma-ni-(a)* is pl. In addition, the occurrences of MOUNTAIN₂c*ḫa+r(a)-ni-se-ĩ* besides MOUNTAIN₂c*ḫa+r(a)-ni-se-*[nothing missing?] (modified by *ki-ā*, p. 46), of VASE₂c*u-sa-li-ĩ* besides VASE₂c*u-sa-li-ā-* (pp. 47 f.), and of HOUSE-*ni-ĩ* besides HOUSE-*na-(e)* (pp. 50 f.) favor differentiating these forms as sing. and pl. respectively.[1]

As can be seen from the examples *wa-na-s(a)* (p. 46) and VASE-*sa-li-ĩ-s(a)* (p. 47), the nom. sing. neuter, contrary to expectations, ends in *-s*, evidently taken over from masc.-fem.

It might be expected that the nom. pl. of a neuter noun would be identical with the acc. pl. Unfortunately, the Hittite hieroglyphic inscriptions offer hardly any examples to prove this point. In A 11 a 5 we read *e-wa ĩ-ā* GATE₂c*-na* MONUMENT-*ŝi+ra-ḫa wa-z(a)-e* EYE-*le x-pi-ŝa-ā s(a)-ti-e*, which could be translated "and these gates I walled up(?), and they[2] were to the eye(?) beautiful(?)." I read the individual signs here in almost the same order as do Hrozný and Meriggi; the great differences between their interpretations[3] and my own are due chiefly to differences in word division.[4] As read and divided above, the syntax of the two clauses appears simple. My question marks do not refer to the general meanings of the words to which they are attached but are intended merely to warn that the exact translations are not sure.

[1] Since Assur *a* is full of requests for many and various things (observe the several numerals used in the letter), it seems very reasonable to translate its final clause *ĩ-ā* ROAD-*wa-ni* as "send these (things)!" Meriggi translates "sende diese(s)!" (AOF X 133); Hrozný: "envoie ici!" (AOr X 42). However, Meriggi also translates *ĩ-ā* as "diese (Sachen)" with question mark (MVAG XXXIX 1, p. 124).

[2] On this pl. use of *-az* see my EHH.

[3] Hrozný, IHH pp. 161 f.: "Lorsque j'ai bâti les murs de cette porte, on(?) lui a fait un devant(?)." Meriggi in MVAG XXXIX 1, p. 33: "und (an?) diesem Torturm die Bildwerke auch da(nn) . . . . wurden aufgestellt."

[4] Thus Meriggi reads the fourth and fifth words as one, while Hrozný takes the sixth, seventh, and eighth words as one word.

PRONOUN: RELATIVE, INDEFINITE, ETC.

ki

ke

ia

iā

I doubt whether in all the years that I have devoted to the decipherment of the Hittite hieroglyphs I ever confronted a more difficult problem than that of the reading and interpretation of the relative pronoun. One thing is certain, that I have spent more time in trying to solve this problem than on any other phase of the decipherment. In view of the difficulties involved and in view of the fact that I do not feel that even now the problem has been solved completely, I find it hard to understand the prevalent complacency of other scholars with respect to the readings of the signs involved. The following long exposition is an outgrowth of my feeling that such complacency is ill-founded. The readings of the signs used in relative pronouns are not so well established as has sometimes been assumed. The very assumption that three or four signs with the value *ia* occur in a writing system which does not recognize homophony makes the whole current reconstruction subject to suspicion.

My exposition is divided into three parts. The first part contains a historical account of the various scholars' readings of the signs used in relative pronouns. At the same time it endeavors to show how groundless and in many respects how fallacious have been the proofs offered for a basic value *ia* for all four signs here to be discussed. In the second part is brought together all the available evidence in favor of the readings proposed by myself. In the third part are discussed the relative pronominal roots and derivatives.

In order to save printing costs the four signs at the head of this section are often mentioned by number as first, second, third, and fourth sign respectively. In some of the transliterations they are represented by the letters *x*, *y*, *z*, and $\bar{z}$ respectively.

PREVIOUS READINGS OF SIGNS

To Forrer belongs the credit for having discovered occurrences of the relative pronoun in the Hittite hieroglyphic inscriptions.[1] His reading of the first sign as *ki* was based on an alleged interchange of this sign with *ku*, which he promised to discuss[2] but did not. Forrer also thought that, since the sign pictures a column, he could derive the value *ki* by acrophony from a presumed Hittite word which passed later to the Greeks in the form κίων.[3] This derivation requires more convincing evidence than that offered by Forrer. The second sign was read by Forrer as a combination, *ki+i*.[4] He offered no reading for the third sign, but since he considered the fourth sign to be a compound of the first sign plus *ā* (read on his p. 42 as *ki+ea*) it is reasonable to assume that he would have taken the third sign to be a compound of the first sign plus *a* and would have read it as *ki+e*.

Hrozný began his discussion of the relative pronoun by stating that the first sign is so similar in form to the signs for *i* and *ī* (read by him as *i* and *ja* respectively) that in his opinion it was legitimate to assign to it a similar phonetic value.[5] He therefore transliterated the first sign as *já* and thereby obtained a relative pronoun *jas* phonetically like a demonstrative pronoun which he had compared with the Indo-European relative pronoun **i̯os*.[6] His case seemed strengthened by such inferred relationships. The second sign also he transliterated as *já* because of a supposed occurrence in A 3:4[7] which he took to be a variant for the first sign, the one normally used in the relative pronoun. Hrozný also expressed the opinion that the third sign was a compound of the second (or of *i*) with *a* and that the fourth sign was correspondingly a compound of the second (or of *i*) with his *ā*.[8] Hence in his table of signs he placed the first three signs together, transliterating them all as *já*, and differentiated only the fourth sign, calling it *jā*.[9] Now Hrozný had offered no real proofs for reading the

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[1] HB pp. 41 f. and 50–53.   [2] *Ibid.* p. 41.

[3] *Loc. cit.*—On his p. 50, n. 17, he read this sign as *ku* also, without giving any proofs.

[4] *Ibid.* p. 50, n. 9.   [5] IHH p. 37.   [6] *Ibid.* pp. 36 f.

[7] That the sign there is actually our third seems probable from the photograph on A 3.

[8] IHH p. 37. Cf. Cowley's earlier interpretation, referred to below.

[9] *Ibid.* p. 105, Nos. 22 and 23.

signs in question as *ia*, since the mere fact that one sign resembles another cannot be taken as favoring similar readings.

Weak as his arguments were, they seem to have proved sufficiently persuasive to bring about the unfortunately all too common acceptance of the value *ia* for all four signs. Only once did Hrozný later try to offer an additional argument in favor of *ia*,[1] and then his evidence was based on an unfortunate misreading; for his comparison of *ī+ra-ta-a-te* (read by him as *j[a]⁽ʳ⁾-tà-a-[t]a*) and *ī+ra-ta-ta-a* (read by him as *ja⁽ʳ⁾-tà-tà-a*) with an alleged 𐤀 𐤀 𐤀 𐤀 𐤀 (read by him as *jà⁽ʳ⁾-a-tà-tà-a*) is inadmissible because in the latter case too the text (HHM 49 A 2) has clearly *ī+ra-a-ta-ta-a*.

It is exceedingly difficult to follow Meriggi's discussions of the four signs not only because his proofs are scattered through many articles but also because of the changes in readings which he felt obliged to adopt from time to time.

Originally Meriggi failed to include the first two signs in his lists of phonetic signs, evidently because he had not yet recognized their syllabic character.[2] The third sign was at first read by him as *e* (from *a+i*) and the fourth sign as *ē* (from *a+ī*),[3] partially following Cowley, who had read these two signs as ligatures, *i+a* and *ī+a* or *ī+ā* respectively.[4] Though Meriggi himself offered no evidence for these readings, he continued to use them in two other articles.[5]

Meriggi then changed his viewpoint. He began to believe that the relative pronoun in the language of the Hittite hieroglyphs was *ịa-*, as in Old Indic;[6] hence he was forced to change his readings of the third and fourth signs, used for the relative pronoun, from his former *e* (*a+i*) and *ē* (*a+ī*) to *i*✕*a* and *i*✕*ā* respectively, following the order in which Cowley had read these "ligatures."

In the same article Meriggi treated the first sign as an ideogram, QUI, without venturing any definite reading.[7] For the second sign he

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[1] *Ibid.* p. 476, n. 2.   [2] ZA XXXIX 176 ff.   [3] *Ibid.* p. 186.

[4] A. E. Cowley, *The Hittites* (London, 1920) pp. 60, 81, 90. Cowley's own readings for Meriggi's *ā* and *ī* are "*wa* (or *ya?*)" and "*wi*."

[5] RHA II 29 and Pl. 1; OLZ XXXVI 83.

[6] RHA II 107; cf. also Hrozný, IHH pp. 36 ff.

[7] RHA II 107 and 109.

now offered a reading é,[1] with perhaps another value, $a \times i$ or $i \times a$, also. In favor of such value or values Meriggi adduced two comparisons. One was of ⟨signs⟩ (A 6:4) with ⟨signs⟩ (A 6:7), read by him as VEN-*é-é-ta* and VEN-*é-ā-ta* respectively.[2] It appeared to him that the two verb forms were identical and that *é-é* in the first example interchanged with *é-ā* in the second.[3] In the other comparison Meriggi considered ⟨signs⟩ (M II 2) a variant writing of *a-i-ā-ta*, "he made." In reality no proofs for the reading of our second sign can be drawn from comparison of the A 6:4 and A 6:7 passages. In my own readings of these forms as FOOT₃*ke-ke-te* and FOOT *ke-ā-te* respectively (p. 66) I take the first as containing a reduplicated form, *ke-ke-*, the second as having a simple stem, *ke-* or *kea-*. Again, the word *ke-ā-te* in M II 2, against Meriggi, is a variant writing not of his *a-i-ā-ta* but of the word FOOT *ke-ā-te* cited from A 6:7. The comparison of A 6:7 with M II 2 establishes the fact that A 6:7 gives the full phonetic spelling of the verb meaning "to come," preceded by the ideogram FOOT.[4] Further evidence can be found in the equation of *arḫa(ḫa) ke-ḫa* (HHM 32:3) with *arḫa(ḫa)* FOOT *ke-ḫa* (HHM 58, frag. 4:1), in each of which the form of *ke* is unusual.

In another article Meriggi assigns to the third sign not only the value $i \times a$ but also the value $a \times i$, and to the fourth sign besides the value $i \times \bar{a}$ the value $\bar{a} \times i$ or $a \times \bar{\imath}$.[5] For the first sign he cites ⟨signs⟩ from the Izgın inscription (Hrozný, IHH Pl. XCIX A 2), which he reads as $i \times a$-*a-ḫa* or $a \times i$-*a-ḫa* or QUI-*a-ḫa* and equates with *aįaḫa*, "I made."[6] This is impossible, because the Izgın inscription has not

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[1] *Ibid.* pp. 108 f.

[2] VEN (for VENIR, "come") is Meriggi's rendering of the ideogram. He translates both forms as "il revint." These two forms were brought together already in HH I 9.

[3] Later he read these two forms as AD₃*iá-iá-ta* and AD-*iá-ā-ta* respectively (MVAG XXXIX 1, p. 98).

[4] It may be mentioned also that the translation "he came" fits the context in M II 2 better than does Meriggi's "he made."

[5] WZKM XL 235. See also *ibid.* pp. 237, 259, 275, 277 and *ibid.* XLI 4, 21, 29 on these and other arguments.

[6] WZKM XLI 21.

aiaḫa but two words, *ki* SEAT-*ḫa*.[1] For the fourth sign Meriggi adduces ⇑ ⋂ ↑ from a Carchemish inscription (A 5 a 1) and reads it as *ē-ā-ī*, *ā×i-ā-ī*, or *ā×ī-ā-ī*.[2] The whole inscription is, however, so sketchily engraved that readings derived therefrom must be considered too doubtful for discussion.

On the basis of Hrozný's[3] as well as of his own[4] claim that the third sign interchanges with the first sign in a relative pronoun, Meriggi later transliterated the first sign as *ia*,[5] while he called the second sign *iá*. In his latest article[6] the four signs continue to be rendered as *ia*, *iá*, *i×a*, and *i×ā*.

To summarize Meriggi's various ideas on the values of the four signs, it can be said that he has made no serious effort to prove the values of the first and second signs. Most of his arguments have concerned the third and fourth signs. He has taken over from Cowley the belief that these two signs are compounded of *i* and *a* or their derivatives and agrees with Hrozný that a relative pronoun based on the root *ia-* could well be explained from the Indo-European point of view. But the examples that Meriggi adduces have failed to stand the test.

Bossert in his original study nowhere expressed an opinion on the phonetic values of any of the four signs. Only later did he accept from Hrozný and Meriggi the value *iá* (Meriggi: *ia*) for the first sign.[7]

In my own first study I recognized the phonetic nature of the second sign but did not offer any reading.[8] I took the fourth sign to be a compound, *wā+wa* (the signs now read by me as *ī* and *i*).[9] Later Hrozný and Meriggi suggested *ia* as the basic content of all four signs. Being aware of the difficulties, in HH II I refused to accept the values those scholars suggested. Since at that time I myself had nothing better to offer, I left the first two signs unread in my list.[10] How well founded were my doubts will be seen from what follows.

[1] Cf. Hrozný, IHH p. 444.

[2] WZKM XL 259.

[3] IHH p. 37.

[4] WZKM XLI 29.

[5] MVAG XXXIX 1, pp. 2 f.

[6] RHA IV 96.

[7] AOF X 286.

[8] HH I frontispiece.

[9] *Ibid.* pp. 24 f.

[10] HH II frontispiece.

The clearest examples of the use of the relative pronoun can be observed in the curse formulas of building inscriptions, such as x-a-$s(i)$[1] $arḫa(ḫa)$ x$_{ɔc}$-la, "who(ever) removes," or x-$s(a)$ LITUUS.HAND-ni $arḫa(ḫa)$ za-$ā$, "who(ever) takes away," both in A 6:9.

The same pronoun with the enclitic particle -$ḫa$, "and," as in x-$s(e)$-$ḫa$ e-$s(a)$-ta, "anybody (anything) is" (Assur e Ro 5 f.; f Vu 29 f.), serves as the indefinite pronoun. With the negative ni, "not," the same pronoun occurs with the meaning "nobody," as in ni x-a-$s(a)$-$ḫa$ (HHM 20:2) or ni x-a-$s(e)$-$ḫa$ (HHM 21:2).

In its reduplicated form the pronoun x-$s(i)$-x-$s(i)$ occurs with the meaning "whoever" (HHM 49 A 1). It is also found in the dat.-loc. with the particle -$ḫa$, as in x-e-ta-x-ta-a-$ḫa$ (A 6:8).

One can hardly fail to observe the exact parallelism in formation between hieroglyphic Hittite xs, $xsḫa$, and $xsxs$ on the one hand and Latin $quis$, $quisque$, and $quisquis$ on the other. To be sure, this parallelism in formation does not in itself offer any basis for reading x in hieroglyphic Hittite as ki or the like. The relative pronoun in hieroglyphic Hittite could just as well be tis, pis, cis, $čis$, or similar, as in other Indo-European languages; or it could even be based on an entirely different root. Nevertheless, in tentatively proposing here the reading ki for the sign in question I feel that I may have found the most suitable basis on which to work out the whole problem. In the course of this exposition several arguments in favor of the proposed reading will be offered.

Before going into the detailed discussion of the reading ki for the sign x, I may say that a priori there is nothing which could be taken as opposing this value,[2] whereas an offhand argument in favor of it can be based on the two facts (1) that ke and ki are the most important

[1] In the following pages x, y, z, and $\bar{z}$ are used as explained on p. 54.

[2] Meriggi (IF LII 46) took the interchange of the forms xs and xas to mean that the stem of the relative pronoun should end in a; in fact, this was one of his proofs for the reading ias of the relative pronoun in hieroglyphic Hittite. However, one need but glance at the paradigms of i-stem nouns to realize how regularly the i-stem forms interchange with ia-stem forms. Only a few examples from among the paradigms in my EHH need be mentioned: ⁿKa-ma-ni-$s(a)$ and ⁿKa-ma-ni-a-$s(a)$, PRINCE $tra(ra)$-wa-ni-$s(a)$ and PRINCE$_x$-ni-a-$s(a)$, for the nom.; GOD-ni and GOD-ni-a, LORD na-ni and LORD-ni-a, for the dat.-loc.; etc.

syllables not yet identified with particular signs in the Hittite hiero-
glyphic syllabary and (2) that among the few undeciphered phonetic
signs only the sign x is as common as one might expect ke or ki to be.[1]

Besides the forms xs, $xsha$, $xsxs$, and $xsxsha$ cited above, there are
also such forms as $\bar{z}$-e x-$s(e)$-ha (e.g. Assur g Ro 1 f.) with the meaning
"whoever."[2] Meriggi took such forms to be equivalent to $xsxs$ (p. 59)[3]
and thought to have found in this comparison the best proof for the
equality of $\bar{z}$ and x. From these occurrences alone I would have drawn
just the opposite conclusion, namely that $\bar{z}$ and x are not equal to
each other. The compound pronoun $\bar{z}$-e x-$s(e)$-ha in its various forms
is found almost a dozen times in different inscriptions from different
periods and localities (cf. p. 69). The $\bar{z}$ and x are always written in the
indicated order. It would seem that if they were equal in value they
should occasionally appear in reverse order; but not a single example
of the latter kind has ever been found anywhere.[4] It is my conviction,
therefore, that $\bar{z}$ and x should be read differently. If $\bar{z}$ has the value ia
or the like, then x should be something else. Vice versa, if x can
be proved to have the value ki, then $\bar{z}$ should not be read as ki. After
these preliminary remarks we may proceed to test the readings of
these signs on the basis of the facts involved.

Apart from its use in the pronoun referred to above, $\dot{z}$ is found but
rarely in the Hittite hieroglyphic inscriptions. Four examples known
to me occur in two Carchemish inscriptions and four more at Kara-
pınar.

We find this sign in the words CITY+me-ni A-pa-ni-$ša$-$\bar{z}^{\text{city}}$, which
I would like to translate as "in the Apanišean city" (A 11 b 2), taking

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[1] It may also be said that the reading kis for the relative pronoun is satisfactory
from the Indo-European point of view, for the delabialized form is the one required
in the satem languages (see p. 21, n. 3).

[2] In this last compound the initial sign $\bar{z}$ is a nasal of z, and their relationship
to each other is the same as that of $\tilde{a}$ to a or $\bar{\imath}$ to i.

[3] WZKM XL 277.

[4] Furthermore, the occurrence of a word in which two identical syllables are
written with different signs would a priori be open to suspicion. One could hardly
conceive of cuneiform Akkadian $šadûša$, "her mountain," for instance, being
written as $šá$-du-$ša$ or $ša$-du-$šá$, with two different $ša$ signs in the same word. And
last but not least it should be mentioned that the lack of homophones in the Hittite
hieroglyphic writing makes the occurrence of two ia signs seem extremely im-
probable.

the two words to be in the dat.-loc. case.[1] The form suggests that this geographic name represents a gentilic formation of the same type as exemplified by $Karka_1(ka)$-me-$\check{s}a$-$\tilde{\imath}$-$s(a)^{\text{city}}$ GREAT.QUEEN-$\check{s}i$+ra-$s(a)$, "the Carchemisian queen," in the nom. sing. (M IX 2). The nouns of this formation end in -$\tilde{\imath}$ in the dat.-loc., as in $Karka_1(ka)$-me-$\check{s}a$-$\tilde{\imath}^{\text{city}}$ $^{\text{d}}Tar\hbar u$-ta-a, "to the Carchemisian Tarḫuns" (A 3:1), or A-$l(a)$-pa-$\tilde{\imath}$-$\hbar a$-wa-e^{city} $^{\text{d}}Tar\hbar u(\hbar u)$-$ta$, "and also to the Aleppine Tarḫuns" (HHM 10:4).[2] This fact suggests that in the form A-pa-ni-$\check{s}a$-$\tilde{z}^{\text{city}}$ the untransliterated sign should have a phonetic value parallel to $\tilde{\imath}$ in use. With a changed stem vowel (cf. p. 59, n. 2) a value $i\tilde{a}$ for this sign would fit well here. We shall so read it from here on.

The same ending is found in the word CHARIOT wa+ra-$\tilde{\imath}$-ni-$i\tilde{a}$ (A 11 b 3) in the dat.-loc. sing. as compared with CHARIOT wa+ra-$\tilde{\imath}$-ne-$n(a)$ (A 12:2) in the acc. sing.[3] The sign $i\tilde{a}$ is found twice in another Carchemish inscription in the word wa-$i\tilde{a}$ (A 6:4 and 6), but its context is too difficult to allow of any sure interpretation. The occurrences of ia and $i\tilde{a}$ in the Karapınar inscription are discussed below after identification of sign forms used there.

From the interchange in the Karapınar inscription (HHM 36) of the form ⊓ ⊃ᴄ 🜿 (OLZ XXXVII 147:3 and 5, latter without the ideogram mark) with ⊓ ⊃ᴄ 🜊 (*ibid.* l. 4) we find that two signs, 🜿 and 🜊, are there used interchangeably for two similar sounds.[4]

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[1] Translated by Hrozný, IHH p. 167, as "dans le pays de la ville d'Ap/banasa," by Meriggi in MVAG XXXIX 1, p. 39, as "(zu?) der . . . .en Stadt." The latter transliterated these two words as ST-mi-na-a ba-na-sa-$i \times \bar{a}^{sr}$, with different division, not supported by the text. Also extremely improbable is Meriggi's contention (*loc. cit.* pp. 39–41) that the second of the two words here discussed and the words Mu-i-ri-$\bar{a}^{\text{city}}$ and Ka-wa-$\tilde{\imath}$-na^{city} (in ll. 2 and 3) are not real geographic names but are merely general expressions for some sites at Carchemish.

[2] The adjective can precede or follow the noun with which it is construed; see my EHH.

[3] The word $wara\tilde{\imath}nes$ or $wara\tilde{\imath}nias$ (cf. p. 59, n. 2), "chariot," may possibly be cognate with Egyptian $wrry.t$ (also written $wry.t$ and $wr.t$; see e.g. *Urkunden des ägyptischen Altertums* IV [2. Aufl.; Leipzig, 1930——] 9 and 3 respectively) with the same meaning. The Egyptian and hieroglyphic Hittite words may have a common Indo-European origin.

[4] The same interchange can be observed in ki-$\bar{a}$-[. .] KING-ta-$s(a)$ . . . . ke-[. .]-pa-wa-[. .] FOLLOW⊦$s(a)$ HEAD-ta-$s(a)$, "whether (he be) a king . . . . or a following chief" (OLZ XXXVII 147:8). This transliteration utilizes the values derived below.

It is possible to determine immediately the sign in the later inscriptions to which one of these two Karapınar signs corresponds, because the same word appears in other sources as ⌐ ⊃ᴄ 𝔍 ⟆𝔍 ∬, i.e., COURT₃ᴄ-*ki*+*ra-ta-a*, in the abl.-instr. case.[1]

Furthermore, in Karapınar l. 6 we find 𝔖 ⱱ ⊕, which in view of the correspondences just given must represent some such form as the acc. sing. *iã ki-e-ḫa* of a later inscription (M IX 4). A unique but very important pronominal form from the Sultanhanı inscription is *iã-e ke-s(a)-ḫa* (HHM 49 A 2), which on comparison with *iã-e ki-s(e)-ḫa* (Assur g Ro 1 f.; see p. 60) shows clearly the interchange of *ke* and *ki* in the later period.

Reconstructing the corresponding forms from Karapınar and later inscriptions, we obtain the following picture:

Karapınar Inscription	Later Inscriptions
𝔍	𝔍
ⱱ	⟆𝔍
𝔗	𝔗
𝔖, 𝔖	𝔗

The differences between the Karapınar signs and those of the later inscriptions can be regarded in two different ways. One alternative would be that four signs phonetically equivalent to the four used in the later inscriptions but not identical with them in origin were invented independently and used at Karapınar. In favor of this supposition it may be mentioned that the Karapınar inscription employs several signs not found anywhere else (see p. 36). However, in my opinion the other alternative, namely that the Karapınar signs are not independent inventions but merely exhibit peculiar variations of local origin, seems more likely. This view is supported by the close resemblances in form between the four signs of the Karapınar group and the equivalent four signs of the later inscriptions—resemblances which cannot be purely accidental. But in the long run this

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[1] HHM 32:3; similarly *ibid.* 58, frag. 4:1; more fully, COURT₃ᴄ-*te-s(e)-ki*+*ra-ša-i-ḫa*, "and (the gods) of the *teskiras*" (HHM 49 D). Other forms are given by Meriggi in MVAG XXXIX 1, p. 102.

problem of direct or indirect correspondences is not in itself impor-
tant, because the reading of the signs is in no way influenced by it.

At Karapınar in the words *iã ke-ḫa* (l. 6; cited above) and *iã* (l. 3)
the sign for *iã* occurs with three strokes on each side. In two other
words, *iã-[. .]-mi-ã+ra* (l. 6) and *ʾa-ku-ã-iã* (l. 2), this sign is found
with only two strokes on each side. The last word, in the dat.-loc.
sing.,[1] would again favor the reading *iã* for the sign here discussed.

In ⧫ ⧫ ɪɪɪ ⧫ (l. 5), read as *va⁽ʳ⁾pameja*(?) by Hrozný[2] and as
warbamija by Meriggi,[3] both scholars take the last sign as *ia*. Besides
their interpretation a division into two words, *warpa meįa*, "to/for my
warpas," is possible. In either case the reading *ia* is plausible.

The last two examples together indicate that the Karapınar signs
⧫ (or ⧫) and ⧫ bear the same relation to each other and have the
same values respectively as do the later signs read here as *iã* and *ia*.

Very similar in form to Karapınar ⧫ are ⧫ in old inscriptions
from Emirgazi and ⧫, slightly different in form, in old inscriptions
from Carchemish. In the inscriptions from Emirgazi this sign is
found in the compound ⧫ ⧫ ⧫ ⧫ ⧫ ⧫ (IHH pp. 408 f.) and in
⧫ ⧫ (*ibid.* pp. 416, 418, 420, 422); in the inscriptions from
Carchemish, in ⧫ ⧫ (I M X 5; XII 2:2). These three forms from
the same stem are later written with *iã*; but, since nasalization is not
expressed in the early writing, the foregoing examples use a sign which
corresponds to later *ia*, without nasalization.

In view of the correspondence of the early forms just illustrated
with one another and of these as a group with the later form of *ia*,
it may be pointed out once more that Cowley's supposition, in which
he was followed by Hrozný and Meriggi, that *ia* is a compound of *i*
and *a* or the like may not be correct. It seems much simpler to assume
that all these forms represent the same sign. They certainly do not
look like compound signs. The old Carchemish form with the curved
prolongations at sides and top is especially important, because the
later normal form of this sign could easily have developed from it.

[1] See Hrozný, IHH p. 358, n. 6, who compares nom. sing. *ʾa-ku-s(u)* found in
Karapınar l. 4.

[2] *Ibid.* p. 368, n. 9.   [3] RHA IV 197.

Finally, by way of commentary on the table of correspondences between the Karapınar signs and those of the later inscriptions, it should be noted that there is no definite support for equation of Karapınar 𝕝 with later 𝕡 or of Karapınar 𝕨 with later 𝕢. In fact, the opposite connection may possibly be correct.[1] The correlations made in the table are based on certain similarities of form. In particular, if 𝕡 developed into 𝕢, then 𝕨, with three protrusions at sides and top, was more likely to develop into 𝕢 than into 𝕡. The fact that 𝕝 is so much like the old Emirgazi form 𝕩 used for later 𝕡 likewise played a certain role in this reconstruction.

The signs *ki* and *ke* occur in only a few words, but fortunately in some of these the interpretation or translation is self-evident from the context. On p. 31 COURT⊃ᶜ-*ki* and COURT-*ki-n(a)* were tentatively compared with COURT-*zi/ze-ĩ*. The values *ke* and *ki* can be tested in the following additional instances:

1. In the relatively well preserved bowl inscription from Babylon (M I 3) we read *wa-tu-u wa-a-ki-ĩ sa-ḫe wa-mu ʾa-ta-te*.[2] This was interpreted by Meriggi as "und ihm (dem ᵈS.) war ich . . . . . (So) . . . .-te er mi(ch? -r?)." Meriggi reads the verb in the first clause as *ᵉs-ḫá* and takes it to be the first person preterit of the auxiliary verb "to be." However, his reading of the sign *sa* as *ᵉs* is completely out of harmony with the system of values, and the corresponding translation "I was" does not fit the context. In my interpretation *saḫe* stands for *sanḫe*,[3] which may be identical with the root *sanḫ-* in cuneiform Hittite, meaning "to approach, attack, ask for, inquire for, try,"[4] since absence of *n* in the writing is a well known feature in hieroglyphic Hittite.[5] The object *wa-a-ki-ĩ* (acc. sing. neuter) may well be com-

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[1] For the time being this problem is of as little importance as is the distinction of *ne* and *ni*, *te* and *ti*, or *ze* and *zi*. The two signs of each of these pairs interchange so extensively that, in spite of the readings we have assigned, we cannot yet say positively which of the signs we call *ne* and *ni*, for example, really has the value *ne* and which the value *ni*. Such niceties can perhaps be established later.

[2] In MVAG XXXIX 1, p. 89, transliterated by Meriggi as *wa-tu-u* ᵏ*wa-a-ia-ĩ* ᵏ *ᵉs-ḫá wa -mu eʾ-da-ta*.

[3] The forms HAND⊃ᶜ*tu-wa-ḫe* and HAND-*wa-ḫa(-e)* in A 6:5 provide the best example of the interchange of -*ḫa* and -*ḫe* as 1st per. sing. verbal suffix.

[4] Sturtevant, *A Hittite Glossary*, 2d ed., p. 132.

[5] Some examples are cited in HH II 12.

pared with the cuneiform Hittite verb *wak-*, "to bite, to eat break-
fast(?)."[1] Thus the first clause would mean "and I asked him[2] for a
bite (of food)." The second clause is relatively easy: "and he gave me
(dat.-loc. or acc.) (food) to eat."[3] The natural and logical sequence of
ideas just obtained by correlating hieroglyphic Hittite *wakiī*, *saḫe*, and
ʾ*atate* with the cuneiform Hittite roots *wak-*, *sanḫ-*, and *et-/at-* supports
the value *ki* used in my reading *wa-a-ki-ī*.

2. In the phrase *ī wa-ni-ī ʾa-mu ki-ī-ḫa-e* in the Erkilet inscription
(HHM 20:2) the last two words are translated by Bossert,[4] by Merig-
gi,[5] and hesitantly by Hrozný[6] as "I made." All these scholars take
the value of my *ki* sign as *ia* and connect the last word with the verb
aịa-, "make." This translation naturally fits the context well, but
there are some difficulties. First, the verb *aịa-* is regularly written
with initial *a;* even though the change of *aịa-* through *iịa-* to *ịa-* is a
priori admissible, there are as yet no examples to prove it in this par-
ticular case.[7] A much greater obstacle is the discrepancy between the
a stem in *aịa-*, "make," and the *ī* stem in our Erkilet verb. I myself
did not know how to translate my reading *ki-ī-ḫa-e* until Professor
Bonfante suggested connection with Indo-European *$*k^wei$-*, translated
as "aufschichten; aufhäufen, sammeln; der Ordnung nach auf oder zu
einander legen; aufbauen; machen."[8] The last meaning, best exempli-
fied in Greek ποιέω, "make," and Old Bulgarian *činiti*, "ordnen,
reihen, bilden," also "make," as in Polish, fits marvelously in our
case. Hieroglyphic Hittite shows the delabialized consonant normal
in the satem languages (see p. 21, n. 3).

3. We saw above (pp. 62 and 64, n. 1) that *ki* interchanges with *ke*.

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[1] Sturtevant, *A Hittite Glossary*, 2d ed., p. 175. There also the noun *wagessar*
or *wakkisar* is given the meaning "a bite of bread, breakfast bread," or the like.
Cf. *Supplement*, p. 46.

[2] In cuneiform Hittite too this verb is construed with the dat.-loc., as can be
seen from some examples cited by F. Sommer, *Hethitisches* II ("Boghazköi-
Studien" VII [1932]) 45 ff.

[3] On the root *at-*, "to eat, to give to eat," see above, p. 25. For the correspond-
ing cuneiform Hittite root *et-*, *at-*, see Sturtevant, *A Hittite Glossary*, 2d ed., p. 38.

[4] AOF X 286.   [5] MVAG XXXIX 1, p. 127.   [6] IHH p. 316.

[7] Every one of the six examples cited by Meriggi under the root *ia(ī)-* in MVAG
XXXIX 1, p. 127, is impossible; cf. above, pp. 57 f.

[8] Alois Walde, *Vergleichendes Wörterbuch der indogermanischen Sprachen*,
hrsg. und bearb. von Julius Pokorny, I (Berlin und Leipzig, 1930) 509 f.

The latter sign is rare in the Hittite hieroglyphic writing. In the relative-indefinite pronoun it occurs only in *iā-e ke-s(a)-ḫa* (HHM 49 A 2), cited above (p. 62), and perhaps twice in *ke-s(a)* in the Bulgarmaden inscription (CE XII 4 and 5).[1] Elsewhere it occurs in the frequently used word for "come," in the simple forms FOOT *ke-ā-te* (A 6:7; A 11 b 4) and *ke-ā-te* (M II 2), FOOT *ke-ḫa* (HHM 58, frag. 4:1) and *ke-ḫa* (HHM 32:3),[2] and in the reduplicated forms FOOT₅*ke-ke-te* (A 6:4), FOOT *ke-ke-se-ti-ša* (A 11 b 3), and FOOT *ke-ke-se-te-ša* (A 12:2). The same root may also be found in *ki-sa-te* (CE IX 3). Originally I tried to identify the root of these words with cuneiform Hittite *i̯a-*, "to go,"[3] and thus prove the value *ia* for the signs here read as *ke* and *ki*; but this turned out to be impossible. Professor Bonfante would connect the hieroglyphic Hittite root with the Indo-European root *$^{*}g^{w}em$-*, *$^{*}g^{w}ā$-*, "gehen, kommen."[4]

<div align="center">ROOTS AND ACCIDENCE</div>

The normal relative pronoun in the language of the Hittite hieroglyphic inscriptions is *kis* or *kias*, written with *ki* as its first sign. The declension of this pronoun is like that of the demonstrative *īs*, "this." The regular forms of the sing. are: dat.-loc. *ki-ta*, acc. masc.-fem. *ki-n(a)*, acc. neuter *ki-ī*; of the pl., nom. and acc. masc.-fem. *ki-i* or *ki-a-i*.[5] Some simple relative clauses, such as *ki-a-s(i) arḫa(ḫa)* x₅c-*la*, "who(ever) removes," have been mentioned on page 59. From this pronoun were developed other forms, such as *kisḫa, kiskis, kiskisḫa,* "whoever" or "anybody" (*ibid.*).

Besides clauses using *kis* there are others in which we find instead of *kis* the word *i̯as*, e.g. *wa-tu-te-e* BREAD *tu+r(a)-pi-n(a)* DRINK *ši+*

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[1] Copy doubtful in both cases. Instead of *ke-s(a)* read probably *ia-s(a)* in A 3:4 (see above, p. 55, n. 7).

[2] These two examples have this sign in very unusual forms.

[3] Sturtevant, *A Hittite Glossary*, 2d ed., p. 184.

[4] Walde-Pokorny *op. cit.* pp. 675–78. Especially interesting is the comparison of reduplicated *ke-ke-te* and of analogous hieroglyphic Hittite forms with Greek βέβηκε and the like. The delabialized hieroglyphic Hittite form is of course in conformity with the normal tendency in the satem languages (p. 21, n. 3).—To connect the hieroglyphic Hittite words *ke-*, *keke-*, and *kisa-* with cuneiform Hittite *ki-*, *kikki-*, *kikkis-*, *kis-*, *kisa-*, "be, become," and the like (Sturtevant *op. cit.* pp. 78 f.), offers at present certain difficulties which need further investigation.

[5] See the paradigms in my EHH.

r(a)-la-te-ĭ-ḫa ia-s(a) arḫa(ḫa) za-ta-a, "and then *ia-s(a)* takes away from him bread and wine" (A 11 a 6 f.).

From the interchange of the form *ki-a-s(a) arḫa(ḫa)* x-a in A 2:4 with *ia-s(a)* LITUUS.HAND-*a* in A 2:5 Meriggi drew the conclusion that the two signs here transliterated *ki* and *ia* respectively must have the same value, because each is used in a word which according to him expresses the relative pronoun.[1] There is no doubt that at first glance comparison of such clauses as those referred to above seems to point toward complete parallelism in the use of *kis* and *ias*, and naturally one is tempted to see in them examples of one and the same relative pronoun.

The difficulty begins when we try to analyze such clauses as those in A 6:8 f.:[2]

wa-ara?(ra) "and it(?)	x₁ down(?)[3]	*za-a* takes	*ki-s(a)* . . . . ,

i-a-pa-wa and one[4]	MON.ᴐᴄ-*lu-wa-ta-a* from the monuments	MON.ᴐᴄ-*lu-n(a)-e-a* monument	*ia*	LITUUS.HAND-*ne* also[5]	*arḫa(ḫa)* away	*za-ã* takes,
te-s(e)-pa-wa-e te-śa and this (or) that[6]			*ia*	LITUUS.HAND-*ni* also[5]	*arḫa(ḫa)* away	*za-ã* takes,
ne-pa-wa-te or then	ᵓ*a-ma-ı* my	ᵓ*a-ze-ma-ĭ-e* ᵓ*azemas*	*ki-a-s(i)*		*arḫa(ḫa)* away	xᴐᴄ-*la* moves,
ni-pa-wa or	CHILD-*ni-na-ta-a* from the children	*i-a-n(a)* one[4] (child)				
ni-pa-wa or	xᴐᴄ*wa-śa-na-sa-ta* from the *waśanasas*	*i-n(a)* one[4] (*waśanasas*)	*ki-s(a)*	LITUUS.HAND-*ni* also[5]	*arḫa(ḫa)* away	*za-ã* takes."[7]

[1] WZKM XLI 29. The first example was translated by him as "wer (es?) entzieht," the second as "wer entgegenhandelt." See also Hrozný, IHH p. 37.

[2] For practical purposes the following text is so divided as to exhibit its parallelisms.

[3] Meriggi in MVAG XXXIX 1, pp. 35 f., translates this word as "herunter(?)."

[4] No other translation for the word *ias* or *is* fits here so well as "one."

[5] Meriggi reads this word as *ap-pà-ná/na* and translates it as "wieder" (MVAG XXXIX 1, p. 95).

[6] Translated by Hrozný as "ceci (ou) cela" (IHH p. 189).

[7] Based on the discussion that follows, a somewhat free translation of the foregoing as a whole, plus the curse that accompanies these clauses, would be: "and who(ever) takes it down(?), if he takes away one monument from the monuments

In this arrangement *ki-s(a), ia, ia, ki-a-s(i),* and *ki-s(a)* all appear to be construed alike and to be forms of the relative pronoun. The striking fact, however, is that, while the first, fourth, and fifth forms, based on *ki,* have the expected nom. ending, the second and third forms, *ia,* lack the nom. ending. Hrozný in his transliteration of this passage[1] was not disturbed by that lack, as he often takes forms without any ending to be nominatives.[2] Meriggi has never published a translation of this particular Carchemish inscription, but he has interpreted the second and third forms (my *ia*) as a compound of $i \times a \times s$.[3] I do not understand how Meriggi could see in this sign[4] a compound with *s(a),* but in all fairness to him it must be mentioned that he at least saw the difficulty involved in the alleged existence of relative pronouns without the necessary ending and tried to surmount it in some fashion.

Since the nom. sing. of the relative pronoun *kis* never appears in the form *ki* without the *-s* ending, it is impossible to explain the lack of case ending in the forms written as *ia* except by admitting that they do not correspond to the normal relative pronoun.

That the words based on the root *i̯a-* are not equivalent to those based on the root *ki-* can be gathered also from an additional observation strangely overlooked by those scholars who read both roots as *i̯a-*. It has been noted (p. 66) that the relative pronoun written with the sign *ki* is declinable and that from it are developed the compounds *kisḫa, kiskis,* and *kiskisḫa.* On the other hand, the word *i̯a* or *i̯as* is not completely declinable, for no corresponding dat.-loc. **i̯ata* nor any pl. form has ever been discovered. Also, in contrast to the forms *kisḫa, kiskis,* and *kiskisḫa,* no such secondary formations as **i̯asḫa, *i̯asi̯as,* and **i̯asi̯asḫa* occur in the language of the Hittite hieroglyphs.

In examining the forms based on the root *i̯a-* it can be observed that they serve chiefly as conjunctions or adverbs. The two occurrences of

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(or) if he takes away this (or) that, or then who(ever) removes my *ʾazemas* (sing.) or who(ever) takes away one of the children or one of the *wašanasas* (pl.), may the dogs of Nikarawas eat away his head.''

[1] *Ibid.* pp. 189 f.

[2] See his paradigms and discussion in IHH pp. 77 ff.

[3] MVAG XXXIX 1, p. 125; cf. RHA IV 85, No. 168.

[4] Such slightly different forms as those in A 6:8 are surely mere variants of that found e.g. in A 11 a 7.

ia in A 6:8, cited above, could possibly be translated as "if."[1] The form *ia-s(a)* alone occurs four times (A 2:5; A 3:4; A 11 a 7; M II 6). In the older period there is the form *ia-s(a) ki-a-s(a)-ḫa* in the nom. sing. (Hrozný, IHH pp. 408 f.), which later became *iã-e ki-s(e)-ḫa* (Assur g Ro 1 f.) or *iã-e ke-s(a)-ḫa* (HHM 49 A 2), with dropping of the nom. ending in the first word and subsequent nasalization. The same combination occurs in the acc. sing. in the forms *iã-n(a) ki-ḫa-n(a)* (CE X 4; unique!), *iã ki-ḫa-n(a)* (CE X 3), *iã-e ki-ḫa-n(a)* (Assur c Vu 11 f.; d Vu 2 f.; f Ro 26 f.), *iã-e ki-a-ḫa* (Assur e Vo 19 f.), *iã ki-e-ḫa* (M IX 4), and *iã ke-ḫa* (Karapınar l. 6). A word written *iã* or *iã-e* is used frequently as a conjunction or as an adverb with meanings which are often difficult to establish.[2] Two examples may be mentioned here: *ni-wa-mu-a ʾa-pi iã-e* ROAD-*wa-ni-śa*, "and why do you not send those to me?" (Assur d Ro 11–14; cf. Assur f Ru 15–19), and x *ʾa-tu-ni-n(a)-wa-mu ki-ĩ iã-e ma-nú-ḫa* ROAD-*wa-ni-te*, "and why did he ever send an *ʾatunis* to me here(?)?" (Assur a Vu 15–Ro 1).

This long exposition can best be brought to an end with the following résumé: The relative pronoun in the language of the Hittite hieroglyphic inscriptions is *kis*. It is completely declinable, and from it such secondary formations as *kisḫa*, *kiskis*, and *kiskisḫa* were developed. Originally also *ias* may have been a real relative or demonstrative pronoun, as in some other Indo-European languages; but, if so, in the course of time it was gradually dislodged by *kis*, and its use became restricted to certain specific formations.

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[1] This translation is favored by the existence of such correlative forms as *iã-pa-wa-ti* . . . . *iã-pa-wa-ti* (A 11 a 6) and *iã-e-pa-wa* . . . . *iã-e-pa-wa* (RHA III Pl. 4:7 f.) with the meaning "whether . . . . or." According to Sigmund Feist, *Etymologisches Wörterbuch der gotischen Sprache* (2d ed.; Halle, 1923) p. 224, the Gothic conjunction *jabai*, "if," is based on the Indo-European root **i̯o-*, "who."

[2] See the examples (with some translations) given by Meriggi in MVAG XXXIX 1, pp. 126 f.

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NAMES DISCUSSED

[1] An ẋ is used for an unread syllable, an x for an unidentified ideogram. In ᵓapasṫ- and ᵓawisṫ- the ṫ stands for an unknown vowel.

Vocabulary[2]

[2] Words written with ideograms plus full phonetic spellings are entered under their phonetic spellings (e.g. HAND *a-s(e)-tra(ra)-a* under *astra-*). Words written with ideograms plus only partial phonetic spellings are entered under the former (e.g. ROAD-*wa-ni-* under ROAD*wani-*). Adjectives derived by addition of *-śa-* (cf. pp. 21 f.) are regularly entered directly under the corresponding nouns.