HITTITE HIEROGLYPHS

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Syllables of unknown value
HITTITE HIEROGLYPHICS

III

By

IGNACE J. GELB

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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
- `1` 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. 4Kar(k)-bu-ṭa-ta-a, p. 43) and to set off enclitics not concerned in a given discussion (e.g. -ḥa, “and,” on p. 3).

Other symbols are:

- [ ] wholly lost * hypothetical form
- `1` partially lost / alternative or variant reading
- `>` omitted by scribe + ligature
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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 orientalíni. Journal of the Czechoslovak Oriental Institute, Prague (Praha, 1929—).

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MVAG
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OIP

OLZ
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THE WRITING

THE NORMAL SYLLABARY

SIGNS OF KNOWN VALUE

\[ \begin{align*}
& \circlearrowleft \ a \\
& \downarrow \ e \\
& \uparrow \ i \\
& \rightsquigarrow \ u \\
\end{align*} \]

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 \( rα \) and now takes it as a vowel, \( d \) (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 \( d \) (OLZ XXXIX 158, n. 1; RHA IV 76), read by myself as \( ṡa \). However, Meriggi transcribes the latter sign as \( d \) 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.).

\[ \begin{align*}
& \begin{array}{c}
& \text{\( ṡa \)}
\end{array}
\end{align*} \]

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 \( ṡa-ĩ-ĩ-la \) (I M XIX B 15) = \( a-ĩ-ĩ-la-a \) (CE XII 4) and with \( e \) in \( ṡa-pa-sa-n(a) \) (OLZ XXXVII [1934] 147:8) = \( e-pa-sa-n(a) \) (ibid.). Cf. also hieroglyphic Hittite \( ṡa-ši-ṭ- \) with cuneiform Hittite \( aššiqa- \), “to love,” discussed below, p. 17.
In proposing to read the first and third signs in this group as the nasals ā and ī 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 -dollar and dollar do not occur in the early Carchemish inscriptions and that in their place the combination ā-e or ī-e is often found. This led me to the assumption that dollar and dollar found in the later Carchemish inscriptions and elsewhere are but a late development from dollar and dollar, i.e., ā and ī plus subscript e. In favor of this assumption I cited the development in medieval Latin and Polish of the nasal sounds written q and e from ā+e and e+e respectively.

To the several examples already cited by myself, such as hieroglyphic Hittite pi-ā-tu corresponding to cuneiform Hittite pi-an-du, "may they give," and the genitive plural ending -āsa or -āsā 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)
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 7:3f.). 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. 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 á.

In the examples quoted in HH II and above we have observed original n expressed by nasalization, as in anda written a-e-ta corresponding to a-ta. However, examples of this sort are very rare. Normally n before another consonant is not expressed in the writing at all.

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 tì-la-a-s(a) (II M LII 3) in nom., the dat.-loc. is tì-la-a (A 2:2) or tì-la (I M X 4 and 8). But from the nom. Ku-papa(pa-pa)-s(a) (A 15 b** 2) the dat.-loc. is not only Ku-papa(pa-pa) (A 11 b 6) but also Ku-papa(pa)-a(-fa) (A 13 d 6), just as from nom. Ku-tu-wa-s(a) (A 2:1 and passim)

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 -t 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., -t for the acc. neuter.

4 See HH II 12 and my EHH.
there is a dat.-loc. Ka-tu-wa-a (ibid. 1. 3).\textsuperscript{1} Cf. also za-a (A 6:8) and za-a (A 6:8 and 9), "he takes," likewise arha(ḥa) x-a (A 2:4) and arha(ḥa) x-a (CE V 3), "he removes." Secondary nasalization before a consonant can be seen in ẓa-me-a-ta-a (A 6:2) or me-a-ta-e (A 11 a 3), abl.-instr. case from ẓameas or meas, "mine"; a-i-a-wa (Assur e Vu 4 f.), variant of a-i-a-wa-a (IHH Pl. CII 7), "I make"; and a-i-a-ḥa (M XXIII A 2), variant of a-i-a-ḥa (A 6:4), "I made."

It may be recalled that the sign for ẓ 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 ẓ but also with its primary value i+e. The latter is suggested for the demonstrative ẓ-s(a) or ẓ-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 complement to tra.

The second sign of the nasal group, here transliterated as ẓ, was left unread in HH II, although even at that time I could have accepted the conclusive evidence brought forward by Bossert (AOF IX 114, Fig. 14, n. 2) that this sign interchanges with ẓ-e. Interchange of such forms as ẓa-ze-ma-t (A 11 c 3)\textsuperscript{2} with ẓa-ze-ma-x (A 18 c 2) and court-zi-t (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 ẓ (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 u has yet been discovered. Comparison of such forms as ẓTarḥu(ḥu)-i-s(a) (A 6:2) and ẓTarḥu(ḥu)-s(a) (OLZ XXXVII 147:6), both pronounced Tarḥun(t)s, suggests that under certain conditions ẓ could perhaps be used for u also.

\textsuperscript{1} For other examples of dat.-loc. in -a and -a see p. 42 and my EHH.

\textsuperscript{2} Cf. also ẓa-ze-ma-e and ẓa-ze-ma-i discussed below, p. 49, n. 6.
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).\(^2\)

\[\begin{align*}
⊙ &  ḫa \\
\downarrow &  ḫe \\
\bigcirc &  ḫi \\
\bigcirc\bigcirc &  ḫu
\end{align*}\]

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

\(^1\) See also my discussion of the personal name ḥe+ṝ(a)-ṭi-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(!)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 ḫu Tar-hu-l(?)-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 ṭra(ra), then perhaps ṭa, then a, then very doubtful ṭa, and a clear sa at the end. My reading of the sign ṭra(ra) (p. 12) also speaks against Meriggi's interpretation.
The signs ka and ku see HH II 19 and 21. Their values are indisputable. On ke and ki see below, pp. 54–66.

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 lā) is now strengthened by the comparison of gate₂-le-ni-ša-a-i in hieroglyphic Hittite (A 11 c 6) with bit hi-li (or le)-ni-e-šu in an Akkadian inscription of Assurbanipal (Theo Bauer, Das Inschriftenwerk Assurbanipals [Leipzig, 1933] I, Pl. 5, A² vii 17, transliterated in II 6).

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 pā-ri-ka-i-nā-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 $e$ with $a$ in the Sultanham 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 Sultanham 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 $\text{e}$. With the tang he reads it as $e^{(r)}$ 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 $\text{bowl}Se-x+\text{ra-ka-wa-ne-na}{\text{city}}$ (HH II 31) I followed that of Hrozný.\footnote{This form is paralleled by $\text{bowl}A-la-te-\text{ba-n(a)-\text{ba-wa\text{city}}}$ 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 $h$. A parallel treatment is found in $\text{bowl}Te-mu-ri-n(a)-\text{ba}$, discussed below, p. 14; for other examples see my EHH. $\text{Alat(e)}$ has can probably be identified with the ancient city Alathâ or Alalî (see most recently W. F. Albright in Bulletin of the American Schools of Oriental Research, No. 63 [1936] pp. 24 f.), modern Tell 'Atshâneh in the vicinity of Antioch in Syria. The cuneiform spelling is clearly $A-la-at-\text{ba-ma}$ 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 Bogazköy is here hardly possible.} 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 $\text{lampa}Sd-e^{(r)}-\text{ga- or -ri-ga-}$, thought of the Hittite city Šerigga.

I now read $\text{bowl}Se-mi+\text{ra-ka-wa-ne-n(a)}\text{city}$ $\text{dTarhu-ti-n(a)}$ in A 1 a 1 and $\text{bowl}Se-mi+\text{ra-ka-wa-ne-s(u)}\text{city}$ $\text{dTarhu-ti-s(a)}$ in A 1 a 6

1 This form is paralleled by $\text{bowl}A-la-te-\text{ba-n(a)-\text{ba-wa\text{city}}}$ 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 $h$. A parallel treatment is found in $\text{bowl}Te-mu-ri-n(a)-\text{ba}$, discussed below, p. 14; for other examples see my EHH. $\text{Alat(e)}$ has can probably be identified with the ancient city Alathâ or Alalî (see most recently W. F. Albright in Bulletin of the American Schools of Oriental Research, No. 63 [1936] pp. 24 f.), modern Tell 'Atshâneh in the vicinity of Antioch in Syria. The cuneiform spelling is clearly $A-la-at-\text{ba-ma}$ 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 Bogazköy is here hardly possible.
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and translate “Tarḥuns 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. The hieroglyphic writing Se-mi+ra-ka and the cuneiform Hittite ḫš-mi-ri-ka/ ga can be best reconceived if we assume that the original form of the place name was Smireka or similar and that the writings se-mi- and ḫš-mi- each attempt to reproduce two contiguous initial consonants. The mention of ḫš-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.

The correspondence of mountain(Mountain)tra(ra)-pa-mi-ta (HHM 15:2 and 16:2) with tra(ra)-pa-a-me-a-s(a) (Assur a Vu 9 f.) and with feet(Mountain)tra(ra)-pa-ma-t (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 τρέω, “turn,” and similar words in other Indo-European languages. The form trapamīša is a verbal form standing in the same relation to the past participle trapameas, trapames, or trapamas as does te-mi-me-a-ta (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 ḫš Ku-mi+ra-ma-ḏ(i) in an inscription from Tell Aḥmar (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-

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

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 pd-mu-wa-a-la-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(?)"

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-ni² with cuneiform Hittite Kukkunniš, name of a king of Wiluša,³ and of a 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.
⁴ See Gelb in AJSL LV (1938) 200–203.
In favor of my previous assumption that the $nu$ sign is only a simplified form of $nu$ I can now adduce a cuneiform parallel in the writing of the number 9 both as $\text{𒐊𒐐}$ and in abbreviated form as $\text{𒐊}$.

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 $nu$ is used. This may perhaps mean that $nu$ and $nu$ are independent signs, that originally only $nu$ was used, but that in the middle period the simpler sign $nu$ was introduced into the system in place of the disproportionately wide sign $nu$ and gradually supplanted the latter entirely in the late inscriptions.\(^1\)

The first and third signs were discussed in HH II 25. The correspondence of the personal name "Tarḫu(hu)-pi-a-s(a) (G. Contenau in Revue des arts asiatiques XII [1938] Pl. XXIV b) or Tarḫu(hu)-pi (C. L. Woolley in AAA VI [1931] 97) with "Tar-ḫu-un-da-pi-i of Late Assyrian sources\(^2\) further supports the value $pi$ assigned in HH II. The name Tarḫu(nt)-piâs means "Tarḫuns (is) giving," parallel to $Tarḫu(hu)-n(a)-tiwa3[a]-i-s(a)$ 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

\(^1\) It may also be pointed out that a sign almost identical in form with Hittite $nu$ 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).


\(^3\) 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-ha-pa* 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 *lî* (lî on p. 503). Meriggi has read it *ri*.  

1 *ra*  
2 *re*  
3 *ri*  
4 *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* and (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 *Sá-ka-e+ra-s(a) = Assyrian cuneiform Sangara*. Since then I have collected additional examples favoring my proposed reading:

1. Hittite hieroglyphic *dNi-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 *i+ra-ta-ta-a* (CE V 2) compared with *i+ra-a-ta-ta-a* (HHM 49 A 2) and in *pa+ra-ha-e* compared with *pa+ra-a-ha-e* (both in

1 This value *pu* also fits well into the interpretation of *x-tra(ra)-pu-na-s(i)* as “tribune” and of the personal name *H-e+r(a)-ti-pu-s(a) = Hertipus*, 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-ε+ra- hà (Assur a Vu 1) and pa+ra-ε+ra-wa (Assur e Vu 8) for para hà (1st per. sing. pret.; written pa+ra-ReturnType in A 5 a 1) and parawa (1st per. sing. pres.) respectively, from the root para- , "to offer," show that the combination ra-ε+ra stands for ra, hence that addition of ε+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 ε+ra appears in hà-tu+ra-ε (Assur e Vo 13) and hà-tu+ ra-n(a) (Assur e Vu 8) compared with hà-tu-ε+ra (Assur a Vo 14) and hà-tu-ε+ra-s(a) (Assur f Vu 10).

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

6. Interesting and important from more than one point of view is the identity of arba(ha) hà+ra-a+ra, "breaks, ruins, destroys," in the Karapnar inscription (OLZ XXXVII 147:8) with arba!(ha)-e hà-la+a+ra in the Bulgarmaden inscription (CE XII 5). Cf. the more simply written hà+ra-tu, "may (the god) destroy," at Bulgarmaden (loc. cit.) and arba(ha) hà+ra-tu, "may (the gods) destroy," at Karapnar (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 trapaka-, "to (re)turn" (p. 8), and trapunas, "tribune" (p. 11, n. 1).

In the word sa-na-va-sa-tra(ra)-a+ra- hà (HHM 49 A 2), probably pronounced sanawasatra hà and meaning "I made good" or "I improved," 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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2 The translation is based on comparison with the cuneiform Hittite verb bárara- 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 Karapmar 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 irreconcilable 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 Karapmar passage just cited we find e-pa-sa-n(a) x-tra(ra)-a-n(a) and a-pa-sa-n(a) x-tra(ra)-n(a). The word epasas or apasas, here used in the acc., means “his.” The second word, x-tras, occurs in its full phonetic spelling, as x:a-tra(ra)-a-n(a), in two other inscriptions (II M LII 5 and A 15 b** 2). That atra (acc.) is the full phonetic spelling of the ideogram x is proved by the fact that a-tra(ra)-a-n(a) starts with a, which occurs only at the beginning of a word.\(^2\) The word 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 apasas atras can probably be compared with Lycian alla 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 reading tra.

Some problems concerning the use of the tang still defy explanation.\(^4\) For instance, why should only the tang, of all the syllabic

\(^{1}\) 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 a-pa-sa-tra(ra)-s(t) in the Nigde inscription (II M LIII) may stand for apas-atras and likewise mean “his person.” Apas here would of course be the genitive of 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 x:ra+i-me-s(a) (A 7 j 1 f.) and i-ra+i-te+ra (A 14 a 4; written in the order i-i+ra-te+ra), participle and 3d per. pl. pret. mediopassive respectively of a verb tra- with unknown meaning. The compound ideogram mark used in the first example shows that the full syllabic spelling follows the ideogram. For this principle 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 $\mu$ 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 $l$. Hrozný (IHH pp. 110, 184, etc.) reads as $ř$, $u(?)$, and $la(?)$ the signs $\overline{\text{ı}}, \overline{\text{ř}}, \overline{\text{u}}$, 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 Ta'ynāt inscription mentions a deity $Te-mu-rx-na-ha$ (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 $řa-ra-se-ti-ni-i$ (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 "Ar-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. Lueckenbill, Ancient Records of Assyria and Babylonia I [Chicago, 1926] § 582), identified with $\tau_{\mu} \nu \omega \rho$, $\pi \omega \mu \nu \rho \nu \rho \mu \iota \lambda \iota \alpha$, of Stephanus of Byzantium by P. Kretschmer in Glotta XXI (1933) 234.—Owing to the fragmentary preservation of the Tell Ta'ynāt inscription it is difficult to determine from the context the grammatical form of $Te-mu-ri-na-ha$. 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 $h$ of $-ha$, "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 $\ldots-la(?)-s\tilde{a}-ta-s$ (IHH p. 242) nor Meriggi in his reading $x-na-b\tilde{a}-si-ta-s$ (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.
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 ša signs, as in the suffix of the 2d per. sing. present (see p. 19), in xtu-wa+ r(a)-se-t (II M XXXIII 3) as compared with x tu-wa+r(a)-ša-n(a) (ibid.), and in seat-xa-se-nú-wa-ḫa (A 6:4) etc. as compared with chair.seat ʔa-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 Še+er-da, a personal name known from the Cappadocian tablets (G. Eisser and J. Lewy, Die all assyrischen Rechtsurkunden vom Kültepe [MVAG XXXIII (1930)] Nos. 43:3 and 44:3 and 14). The relationship of hieroglyphic Še+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.
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The sign $\Box$ was left unread in HH I. Hrozny proposed the value $l\dot{a}$ for it,1 based on such comparisons as that of $x\ wa-x+ra-n\dot{u}-\dot{b}a$ (A 6:3, read as $x-va-l\dot{a}-j\dot{e}-u$ by him) with $x\ wa-li-\dot{a}-nu-wa-\dot{b}a$ (II M LII 4, read as $x-va-li-\dot{a}-je-va-u$). This and some other considerations led Meriggi to accept Hrozny’s reading with a slight change from $l\dot{a}$ to $l\dot{i}$ for $x$ alone and to $l\dot{i}$ for $x+ra$.2 Because all the arguments adduced by Hrozny 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 $\dot{s}i$.

The sign $\Box$ is always closed at the bottom. Different is $\Box$, 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 Hrozny also now favors keeping separate these two signs (cf. IHH p. 491, n. 2).

In an inscription from Tell Ašmar, last published by Hrozny (IHH Pl. CII 1 f.), we read $bowl_2-sa^3-a-s(a)\ d^3Tar\dot{hu}(\dot{h}u)-s(a)\ god-a-\dot{a}-sa\ king-la-a-s(i)\ d^3x\ Ku-mi+ra-ma-x\ d^3x_2-Mu-la-le-s(a)\ d^3x-ku-pa-s(a)\ Ha+ra-na-va-\dot{a}-s(a)-\dot{b}a^{iv}\ d^3x-\dot{m}e-s(a)$. The translation of this section is simple: “Tar&uns of the (sacred) bowl, king of the gods, Kumiramas, Mutales, . . . lupas, and . . . mes of Harran.” 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 $d^3x\ Ku-mi+ra-ma-x$ represents the nom. ending $s$.4 There are several other personal names and words, such as $x-va-li-x$ (HHM 18 C 1), $lord-x$ (ibid. II. 3 f.), $Ka-tu-wa-x$ (A 13 d 1), and some occurrences in the Ḫṣekṣur inscription (HHM 16). As observed above (p. 14), Hrozny does not distinguish clearly between this sign and two others.

1 WZKM XI 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 $l\dot{i}$) must be identical with $x$ (his $\dot{b}$). These forms are still difficult to interpret unless we assume elision of $r$ in the last two examples.

2 On the value $\dot{s}a$ see pp. 18 f.

3 The adjectival form of the same divine name appears in the acc. as $4x\ ma-\dot{a}-n(a)$ 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 "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 Karapmar inscription occurs a form $\varepsilon$A-pa-x-ta (OLZ XXXVII 147:3) in whose unread syllable $x$ comparison with $\varepsilon$A-pa-$\acute{s}x$-$n(a)$ (ibid. 1. 8), $\varepsilon$A-pa-$\acute{a}$-$n(a)$ (loc. cit.), $\varepsilon$A-wi-$\acute{s}x$-$n(a)$ (ibid. 1. 6), $\varepsilon$A-pa-$\acute{s}a$-$n(a)$ (A 6:9), $\varepsilon$A-pa-$\acute{a}$-$n(a)$ (HHM 7 D 3), and $\varepsilon$A-pi-$\acute{s}a$-$n(a)$ (M VI 2) speaks in favor of the presence of a sibilant.\footnote{Meriggi's argument (RHA IV 102 and 104) that this Karapmar occurrence has to be read as $\varepsilon$ba-\textit{ll}-\textit{ta} because of such parallel forms as $\varepsilon$ba-$\textit{ll}$-$n$, can easily be proved to be without foundation. First, it has never been proved that the adjectival-genitival -\textit{Z}- 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 $\varepsilon$ certainly does not have the value $\textit{l}$ which he assigns to it; when used phonetically at Karapmar it has only the value $\acute{s}x$ (HH I 28, n. 1, following Bossert and Hrozný). In the group $\urcorner \varepsilon$, representing the well known geographic name $\text{Halpa}$, Meriggi (op. cit. p. 102) still reads the second sign as $\textit{l}$. Already in HH I 20 I read the first two signs together as the ideogram for $\text{halpa}$, taking $\text{pa}$ (then read $\text{pi}$) as the phonetic complement. The interchange of such forms as $\text{Halpa}(\text{pa})$-$\text{runta}$-$s(a)$ in M XVI 1 with $\text{Halpa}$-$\text{runta}$ in CE XXI (=HHM 46) clearly proves this point.}

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

In a list of offerings to various divinities occurs $\varepsilon^4x+r$-$a$-$ku$ in the dative (A 11 b 6). By assigning the value $\textit{s}i$ to $x$ we can read the name as $\varepsilon^4\text{Si}+r(a)$-$ku$ and compare it with that of the deity Zirku identified with Ninurta in Late Assyrian lists of gods.\footnote{Written $\text{Zi-ir-ki}$ (Cuneiform Texts from Babylonian Tablets, &c., in the British Museum XXV [London, 1909]) 12:9 = $\varepsilon$Zi-\textit{ir}-\textit{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-št-ra-š(a)** (M IX 2) and in the acc. as **GREAT.QUEEN-št-ra-n(a)** (*ibid.* I. 5). This fem. nominal ending -šaras may be identical with -šaras, the corresponding ending in the cuneiform Hittite language.¹ In this particular case the value ša would match better the parallel -šaras; but that value would not fit into the words discussed above.

The sign for ši probably pictures a seal,² as may be seen from the occurrence of 𒅔Š𒅔Š, “the seal of Ḫalpa(pa)-š(ī),” on bullae published in M XXXIX 3 and 7–9 and HHM 39. According to a well known principle, the phonetic value ši 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 šiša-, “to seal” (really “to press”), in cuneiform Hittite.³ This is further evidence for the correctness of the reading ši.

Another sign besides ši which may contain the consonant š is that son, The Cuneiform Inscriptions of Western Asia II [London, 1866] 57:54 c), ⁴Zi-ni-[ . . . ] (Cuneiform Texts . . . . XXIV [London, 1908] 6:38), and ⁵Zi-ni-šu (ibid. 23:132 b). In the last two examples the sign ni may easily be a miscopy of the very similar sign it.—Meriggi’s interpretation of this deity as ⁶La-šu and comparison with an alleged ⁷Elkuš named in cuneiform Hittite (RHA II 245, n. 3, and MVAG XXXIX 1, pp. 10 and 137) as well as Hrozny’s transliteration ⁸Laš-su and comparison with Tarku (IHJ pp. 159, n. 7, and 170) are naturally influenced by their readings of the sign in question.


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

read as *sa* in HH II 30 f. Hrozný too reads it as *sá* or *sá* (IHH p. 113), Meriggi similarly as *sa* (e.g. MVAG XXXIX 1, p. 3).1 This is the sign which I here transcribe as *sa*.

A value *sx* was deduced from its occurrence in the name of Carchemish in such forms as Karka(ka)-me-x-s(a) (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 *La+t-ša-a-s(a) and *La+i-ša-s(s)* (HH I 28). Such forms as BREAD tu+r(a)-pa-ša-a (A I a 5), GOD-ne-ša-a-n(a) (A I a 4), VASE u-ša-a (A I 1 b 3) or VASE u-ša-a (ibid. l. 5), and tu-wa+r(a)-ša-a (HHM 49 D) also favor the presence of the vowel *a*.

Very instructive likewise are the interchanges of signs in the forms x×wa-ša-na-sa-ta (A 6:9) and x×u-ša-na-ša-i-a (II M LII 5), grandchild-ša-a-s(a) and grandchild-ša-t (discussed below, p. 25), *a-pa-ša-n(a) and *a-pa-so-n(a) (discussed above, p. 17), bowl-ša-a-i and court-ki[+ra]-ša-s (HHM 9 B 3), in forms of the gen. pl. such as land-ni-ša (A 3:1 and 3) and god-a-ša-sa (IHH Pl. CII 2), and in forms of the 2d per. sing. present such as road-wa-na-ša (Assur d Ro 14 and f Ru 19), u-ša-ta-sa (Assur c Vu 13) and u-ša-ta-s (ibid. l. 17), LITUUS-na-ta-sa (Assur g Vo 9) and LITUUS-na-ta-se (Assur c Ro 13).

The occurrence of *ša* in the personal name *Ša-ka-e-ra-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 ^jj, which I propose to read as *šu* 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: dog3-šu-wa-ni-i-ša, "and the dogs" (Assur b Vu 15 f.); horn3-šu+r(a)-ni, "horns" (Assur g Ro 27); and horse 3-šu-wa-i, "horses" (HHM 3:2).3 Hrozný, to whom all three interpretations are due, believes

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1 Previously Bossert read it as *ša* (AOF IX [1933/34] 117, n. 21, Forrer as *si* (HB p. 23). In AJSL LV (1938) 200 f. I read it as *sa*.

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 ku, 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 I, 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 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, š, and ě(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, š, 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

1 RHA IV 85, No. 178, also pp. 96 and 107 f.
2 The signs nu (old) and nu (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 $s$.

From my transliterations as $šuwanii, šurni, and ʿašuwaît$ 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.

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 $§a, §i,$ and $§u$. The chief characteristic that unites them is that they are almost never used to express the nom. ending. 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 $§$ can be obtained from observation of the use of the $sa$ and $su$ signs. The former is used regularly in the adjectival (= gen.) formative $-šas$, as in $ℓuḫišaš $nimuwašt$, “Lübían son” (=‘son of Lübís’), and in $i̯pašas, “his,” from $i̯pas, “he.” This ending $-šas$ is evidently the same as that written $-ššas$ in Luwian and

1 On the character of this sibilant see below.

2 Really $ašwaît$ (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 $kiš$ (p. 59), $ki-ša$ (p. 65), and $ke-á-te$ etc. (p. 66) are normal in the satem languages.

4 Of these, only $ši$ is used occasionally as the nom. ending; see pp. 16 f. Elsewhere, however, $š$ frequently interchanges with $s$; cf. $tuwaršaš$ and $tuwaršaš$ (p. 15), $i̯paśšaš, i̯paššaš$, and $i̯pašaš$ (p. 17), $ušaššašaš$ and $ušaššašaš$, etc. (p. 19).

5 Forrer in Zeitschrift der Deutschen Morgenländischen Gesellschaft LXXVI (1922) 218 ff.
similarly in several other languages. Professor Bonfante suggests that hieroglyphic Hittite -sas may be identical with Indo-European -syos; if so, hieroglyphic ş would be a palatal sibilant developed from the original sy combination. Comparison of hieroglyphic *Ša-ka-e+ra-s(s) with Assyrian Sangara (p. 19) may point in the same direction if it can be assumed that Late Assyrian s was pronounced as ş, as is suggested by Assyrian transliteration of West Semitic ş with s. A palatal ş would fit well in šuwani, šurni, and šašwaš, in which ş stands for an original Indo-European velar.

Our investigation of the sibilants has shown that we have to distinguish between s and ş 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.

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. 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 tī. Since then I have collected some examples which favor the readings te and ti:


2. "Tu-te-aš(a)" of the Jisr el-Ḥadīd inscription HHM 30:2 may correspond to "Tu-ši-[...]

3. The personal name Heš(a)-puš(a) of the Kara Dağ inscriptions corresponds to "Heš-ti-pu-u" in Assyrian sources.

These correspondences show that there is still no definite proof that ṭ is te or that į 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 Muvattalli 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 te?, 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.

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).


3 AJA XLI 290; see also above, pp. 5 and 10 f.
and *tu proposed for り and よ respectively in HH I 35 and to suggest the new readings *ke? and *ki? chiefly because hieroglyphic Hittite ²A-sa-tu-wa-x-ma-t-šª and ²A-sa-tu-wa-y-ma-t-šª seemed comparable to Assyrian ²As-la-kû-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 り, read as *ti? in HH II 33. Choice of the vowel *i was based on a questionable comparison of ḫuḫa(ḫa)-ti?-li-s(ā) (A 11 b 1) with cuneiform Hittite ḫuḫḫantīš. The vowel *a, accepted by Hrozny in his transliteration ta₂ and by Meriggi in his td, can be proved in various ways:

1. The za and ta signs interchange in u-pa-la-a-za-šª-n(a) (II M LII 1) and x u-pa-la-ta(-a) (Hrozny, IHH Pl. CII 3 and 5; comparison made ibid. p. 61, n. 2); x-ta-ā-zā-t (A 11 b 6) and x-ta-ā-ta-ā-ī-ša (A 11 c 4; comparison made by Hrozny, 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(ḥa)-ta-i-ša (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-ḥa (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 Sultanhami inscription: god-ni-a-i arḥa(ḥa) ḫa³-a-ta-tu-u (HHM 49 C),³ with a

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 Hrozny (IHH p. 292) in treating this passage has recognized this form, although the latter, reading d-tu-d-ta₂, "le dévoreront (? feront dévorer?)" has found from the context the correct translation.
parallel formula in a Carchemish inscription: DOG-ni-a-i .... arha(ha) EAT-tu (A 6:9). The clear parallelism of ṣa-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 ṣa-za-tu-u with cuneiform Hittite e-ez-za-an-d[u]. 1 The hieroglyphic form ṣa-za-tu-u, pronounced ṣatsan-tu, 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-ī GRANDCHILD-sa-ī LITUUS.HAND-n(e) COURT pi-te-ha-li-ā-ha, "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-ī GRANDCHILD-sa-ī.4 The forms n volute Tarḫu-t(i)-sa-ī and n volute Tarḫu-t(e)-sa-ī, each pronounced Tarḫuntsai, are dat.-loc. pl. (see below, p. 44) of Tarḫuntsaïs, "Tarhuntian," and when compared with the nom. sing. Tarḫu(ḫu)-za-ī-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 and 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

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 ṣ is sounded as ts (see ibid. pp. 71 f.).

2 On this see my EHH.—A form ṣa-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 hamasas or hamasas. Cf. CHILD ha-ma-ša-s(a) (HHM 28 A d), CHILD ha-ma-ša-s(i) (ibid. B c; previously not clearly copied in CE XVIII), and GRANDCHILD hał-ma-ša-s(i)-e (I M XXI 2, collated by myself). Occurrences without ideogram in the phrase ni-mu-wa-i ni-pa-wa ha-ma-ša, "to(?) the son or grandson" (CE V 2 and 3) settle it definitely that hamasas is the full word. On interchange of ṣa and sa see above, p. 19.

Since hamasas is an a-stem noun (cf. e.g. GRANDCHILD-ša-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 -s(a), as does Meriggi (MVAG XXXIX 1, pp. 38 and 56). Hrozny, 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 \textit{ke}? and \textit{kt}? and considered my original readings \textit{te} and \textit{tu} nearer the truth (OLZ XXXIX 158). Later (in RHA IV 105) he suggested that these two signs might contain \textit{z} (\textit{ts}). Several examples indicate that they have actually the values \textit{ze} and \textit{zi}.

Occurrence of \textit{\textasciitilde}{\textit{ze-e-s}(a)} (M I 3) as well as \textit{\textasciitilde}{\textit{ze-s}(a)} (HHM 4 C) favors the reading of \textit{\textasciitilde}{\textit{ts}} with the vowel \textit{e} (so already HH I 35). The value of its consonant is suggested by the following examples:

1. The clause \textit{e-wa te-ne-me anta-e FEET>tra(ra)-pa-ze} in A 6:4 I would translate “and into the \textit{tenemes} he turned.”\textsuperscript{1} Hrozný\textsuperscript{2} and Meriggi\textsuperscript{3} likewise take the verb to be 3d per. sing. preterit. The form \textit{trapaze} evidently corresponds to the form \textit{ajate}, \textit{ajati}, or \textit{ajaza}, “he made,” which occurs frequently.

2. If the translation of \textit{wa-mu-ti} \textsuperscript{4} Ku-papa(pa-pa)-s(a) FOOT>pa-ze-e HAND-me-a-n(a) \textit{za-a} in A 15 b** 2 as “and from me Kupapas takes the strength(?) of (my) feet(?)”\textsuperscript{4} were sure, then we could analyze the form \textit{paze} as \textit{pal-se}, i.e., the root \textit{pat}- plus -\textit{se} for the gen. pl. ending usually written -\textit{sa} or -\textit{t}a.\textsuperscript{5}

If the sign discussed above has the value \textit{ze}, then \textit{\textasciitilde}{\textit{ts}}, with which it interchanges, should have the value \textit{zi}.\textsuperscript{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.

\textsuperscript{1} On \textit{trapa-}, “to turn,” see above, p. 8.
\textsuperscript{2} IHH p. 186: “Lorsqu’il est entré auprès des images(?)”
\textsuperscript{3} IF LII 46. In RHA IV 106 he took into consideration the 3d per. sing. present also, for reasons 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 -\textit{zi} < *\textit{ti}.
\textsuperscript{4} Hrozný, IHH p. 178: “Et à moi, la déesse Ku-papas enlève la force(?) au(x) pied(s).”
\textsuperscript{5} See above, p. 19, where the interchange of -\textit{sa}/-\textit{se}/-\textit{t}a for the ending of the 2d per. sing. present is also cited.
\textsuperscript{6} On the difficulty of distinguishing clearly between syllables with \textit{e} and those with \textit{i} see pp. 23 and 64, n. 1.
In HH I 34 I read the cuneiform as "Tar-qu-u-tim-me šar māt Me-ra and the hieroglyphic legend "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 Mērā or Mîrā, 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 "Tar-qu-u-tim-me for the cuneiform and followed Albright's reading "Tar-qu-mu-va.¹ The first two hieroglyphic signs he read ideographically as TARQU-MUWA.² Later his partial acceptance of my earliest readings of  and  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 "Tar-qu-mu-va, even though the vowels did not agree with each other.

In proposing a new and, I hope, final interpretation of the Tar-kondemos name I read the cuneiform as "Tar-qu-u-tim-me" and its hieroglyphic counterpart as Tarḫu-zī. 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

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.
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 $di+me$, 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 $\text{\textcopyright}^{\text{\textregistered}}$, just as $\text{\textcopyright}^{\text{\textregistered}}$ expresses $\text{\textregistered}a+me$ (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 $\text{\textcopyright}^{\text{\textregistered}}$ in the Suvassia inscription (HHM 50 C = IHH Pl. LXVII C) with $\text{\textcopyright}^{\text{\textregistered}}\text{\textcopyright}^{\text{\textregistered}}$ in the younger inscription from Egriköy (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 $\text{\textcopyright}^{\text{\textregistered}}$, $\text{\textcopyright}^{\text{\textregistered}}$, $\text{\textcopyright}^{\text{\textregistered}}$, of the seal corresponds to the expression $\text{\textcopyright}^{\text{\textregistered}}\text{\textcopyright}^{\text{\textregistered}}\text{\textcopyright}^{\text{\textregistered}}\text{\textcopyright}^{\text{\textregistered}}$ of the Egriköy inscription. 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).

The new reading $\text{\textcopyright}^{\text{\textregistered}}$ for the name in the hieroglyphic legend can be brought into agreement with the cuneiform $\text{\textcopyright}^{\text{\textregistered}}$ if we take into account the interchange of such forms as $\text{\textcopyright}^{\text{\textregistered}}$ (Egriköy) and $\text{\textcopyright}^{\text{\textregistered}}$ (M I 3), which might suggest an original pronunciation $*zi\text{\textregistered}es$ or $*ze\text{\textregistered}es$. This in turn, by way of $*zi\text{\textregistered}es$ and $*zime$ and omission of the nom. ending $-s$, may correspond to cuneiform $tim-me$.

1 Cf. also $\text{\textcopyright}^{\text{\textregistered}}\text{\textcopyright}^{\text{\textregistered}}\text{\textcopyright}^{\text{\textregistered}}\text{\textcopyright}^{\text{\textregistered}}\text{\textcopyright}^{\text{\textregistered}}\text{\textcopyright}^{\text{\textregistered}}\text{\textcopyright}^{\text{\textregistered}}$ of the Çiftlik inscription (HHM 17 rev. 2).

2 The name would mean "descendant of Tarkuns," following Meriggi's translation of its second element as "Nachkomme" (MVAG XXXIX 1, p. 160). His new interpretation connecting the latter with Latin $\text{\textregistered}$ (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: *mTar-qu-u-ti(m)-me šar mât *Me-ra+a

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

The translation: “Tarḫu-zi, king of the land of Mērā.”

The most probable translation of the phrase *4Ku-papa(pa-pa)-ā

m°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, ha, or wa-ḥa (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 dū 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 dū 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/s 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.

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% (the leg; IHH p. 200, n. 6) and ṭa? (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 "a-za-tu-u, "may they eat," analyzed as "at-sa-ntu by comparison with cuneiform Hittite e-ez-za-an-d[u] (pp. 24 f.); (2) hieroglyphic Hittite dat.-loc. pl. forms n volute,Tarḫu-t(e)-sa-i and n volute,Tarḫu-t(e)-sa-i compared with nom. sing.  Ṭarḫuḫu)-za-i-s(a) (p. 25); (3) hieroglyphic Hittite verbs FEET octra(ra)-pa-ze, ajaža, ajaže, ajaži 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 ajaža (see above), or even in tisalis, “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 ḫat-sa-ntu discussed above (p. 25); (2) the ideogram for “exalted” or the like followed by -sa-me-s(ı) 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-ı (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-zı-ma-ı-sa-a and n A-s(a)-tu-wa-ze-ma-ı-sa (A 11 a 1 and b 1 respectively; cf. A 14 b 1 and CE XXV 2) to Assyrian n As-la-ki-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, courtx-ifo' (OLZ XXXVI 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-i (A 11 c 2; dat.-loc. pl.) and court-ze-i (HHM 49 A 1; dat.-loc. pl.).\(^2\) In Lycian there are indeed numerous cases of interchange of \(k\) with sibilants and palatals.\(^3\)

\[
\begin{array}{c}
\circ \mathrm{?} & \text{wa} \\
\mathcal{C} & \text{we} \\
\text{w} & \text{wi} \\
? & \text{wu}
\end{array}
\]

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

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\(^1\) 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 XXXVIII 1, p. 102.—This word is of course different from the word teškiras, written with the same ideogram, discussed below, p. 62.

\(^3\) See examples cited by F. W. König, "Die Stele von Xanthos," *Klotho* 1 (Wien, 1930) 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 \(h\) cf. Nikarawas/Nikarułas and Tuwana/Tuğana 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 $x.x\overline{a}wa-x+ra-ma$ (Assur a Ru 7 f.; again, with $e$ at end, in Assur g Ru 9 f.), $x.x\overline{a}wa-e+ra-ma$ (Assur b Vu 4 f.), $x.x\overline{a}wa-e+ra-ma-a$ (Assur c Ro 10 f.), and $x.x\overline{a}wa+ra-ma-e$ (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-$\overline{a}-\overline{s}a-n(a)$ (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 $\overline{a}$ (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 $\overline{e}$ and assumes the same combination of elements (cf. p. 7) as does Meriggi.

The comparison between HOUSE$_1$ $x+ra-nu-w[a-ha]$ in I M XIII 2: 2 and HOUSE$_2$ . . . $x+ra-na-wa$- 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 $x-x-\overline{a}a$ (Assur a Vo 10, b Vo 7, d Vo 10), $x-x-nu$ (Assur f Vo 30), $x-x-la$ (II M XLVIII 3), and $x-x-a-te$ (HHM

$^1$ Nothing missing? Cf. p. 13, n. 4, on meaning of the compound ideogram mark.
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). 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 Bogazköy is interpreted as Muvat(t)alli by Güterbock and Hrozný. The first sign is clearly  the second  the fourth li; the third sign too should be phonetic, but to all appearances it is the sign for "child." Originally I read the whole name as U-me-ne-li and identified it with that of the Hittite king Urḫi-tešup written  on bullae from Bogazköy, which I would read as Umene + ideogram mark + li. 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. 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 td (my za). The same sign x occurs in the word for "temple,"

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/bd-p/bd- (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.


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

volute.house-x, in the old inscription from Köylütolu Yayla (HHM 41:3), evidently equivalent to god.house-za in the later Carchemish inscriptions (e.g. A 7 a 2).

From a tentative comparison of x-tu-ma-ni-a-n(a) in the Darende inscription (HHM 18 C 4) with šu-tu-um-na-na-š 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, the syllabic character of its first sign can now be definitely proved from its occurrence in the words Za-x-na\textsuperscript{land} (M XXX C) and x-lu-na-se-x (HHM 34:2).

In x+r(a)-li-ša (A 12:4), x+r(a)-ma-na-wa-na-s(a)-pa-wa\textsuperscript{cityy} (A 15 b* 2), x+r(a)-li-n(a) (Assur d Ro 1), x+r(a)-na-wa-i-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)\textsuperscript{cityy} (CE V 2 and 3) with the geographic name usually written Ha+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 ẖdr (ibid. p. 3 and RHA IV 96) to ḫor (RHA IV 109).

On the basis of such forms as wa-me-x-ša (A 15 b*), wa-me-x-te (CE V 1), and wa-me-x-so (Assur g Vo 7) the syllabic nature of this sign was

\(^{1}\) 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\textsuperscript{em}, placing the tu with preceding signs to make e-wa-tu (MVAG XXXIX I, p. 30). Hrozň\v y 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 Bogasköy 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 “ltuus” (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 e₃ (IHH pp. 146, n. 7, 250, 267), later changed to dp (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 log₃chuw-š-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-land-wa-na-taⁿ² (A 15 b** 4), E-[land]-wa-ni-[s(a)]ⁿ (HHM 10:3), and E-land-ja-ni-lā-n(a)-eⁿ (ibid.) the untransliterated sign has a phonetic value² and may, as here, carry the tang. The same sign appears in the Karapinar inscription (OLZ XXXVII 147:3 and 4) and perhaps in the hieroglyphic legend on a cuneiform tablet from Bogazköy.³

Very doubtful is the occurrence of CHiLD-ra-š-wa-e-ra in a Tell Âmar 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-Î•- . . . (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).

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 = Götzse, Verstreute Boghazkoi-Texte (Marburg, 1930) No. 87.
The word se-Q-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 is simply an older variant of le, which in the later period usually has “ears.”

In the word  in inscriptions from Tell Aḥmar (RHA III Pl. 4:6) and from Boybeyipmarr (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  (I M X 2),  (Assur d Vo 3 and HHM 49 A 3),\(^3\) and  (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—w, u;\(^4\) w, \(\mu\);\(^4\) \(\varphi\), \(\vartheta\);\(^5\) \(\digamma\), \(\omega\);\(^6\) \(\gamma\), \(\omega\);—seem to occur at Karapinar (Topada) only. Others—\(\sigma\), \(\varkappa\),\(^7\) and \(\Phi\), \(\mu\), \(\nu\);\(^8\)—are found both there and at Suvasa. The sign \(\varphi\), \(\nu\),\(^9\)

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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 A-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 \(\sigma\), which he reads as \(\sigma\) (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.?\(^4\)


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 \( \sigma \) is common in the Kayseri inscription; Meriggi identifies it with \( \sigma \) used in the word \( \gamma-amu-x \) at Karapinar (I. 2) and on a seal (M XLI 2). In the Kayseri inscription occur \( \sigma \) and \( \sigma \) (latter used in Çalapverdi inscription HHM 16:1 also), with the values \( a \) and \( \bar{a} \) respectively. Similar in form are the signs for \( a \) and \( \bar{a} \) used in Malatya and Izgin inscriptions.

Unique is the occurrence in Kara Dağ inscriptions of the sign \( \sigma \) interchanging with the usual sign for \( pu \). 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 \( \sigma \), \( tra(ra) \), expressing originally the numeral \( tra \), “three,” plus the tang \( ra \) as phonetic complement, is the most commonly used. The rare sign \( \sigma \), perhaps \( ara(ra) \), used in the Carchemish inscriptions is another example.

A difficult problem is presented by the bird sign in the name of the goddess Kupapas. This sign, which I formerly interpreted as “swallow” (HH II 8, 21, 25), is taken as “pigeon” by Bossert (SuK 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 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.; Hrozny, 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; Hrozny, IHH p. 389, n. 3. The \( \bar{a} \) sign is of course read as \( \bar{a} \) by both scholars.
4 Same refs. as in n. 3.
5 See pp. 12f. and HH II 33.
7 HH II 13, n. 1.
8 What is perhaps a cursive form of this bird sign is employed in the word \( \sigma \) (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.
The Writing

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 φαψ-/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 kr in this study, just as I determined the values ne and ni, tx and ts (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. This has resulted above in the discovery of signs containing the consonants s 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 عقب, چ and the pair چ and چ, absent from the table forming the frontispiece of HH II, are added in HH III, while on the other hand the sign چ, given in HH II, has been dropped. Of these sixty signs, readings, with or without question mark, have been proposed for fifty-five, while for

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 ۆ (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 $i$, pe, re, se, and $wu$ or representing combinations of $\ddot{a}$ or $\dddot{a}$ with other than an $a$ vowel. Some of these undiscovered values may not even have corresponding signs in the syllabary; $\dddot{a}$ (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, 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. $\text{\textlangle{\dddot{a}}\rangle}$, read as $ar$ by Forrer,\textsuperscript{2}

\textsuperscript{1} This process is well known in many other systems of writing. Cf. e.g. the Akkadian values $\text{pē}, \text{qē}, \text{rē}, \text{sē}, \text{tē}, \text{etc.}$ developed outside the Sumerian syllabary.

\textsuperscript{2} HB pp. 39 f. Or does he not imply rather that this sign is $\text{arba}$, followed by attached phonetic complement $\text{ba}$? Cf. his ref. to it alone as ideogram for "Füirst, Herrscher."
Meriggi,1 and Hrozný;2 mentioned, read as *hu by Forrer3 and as *teš by Hrozný;4 (ęb), read as *te or *teš by Bossert5 and as *di (or *dzi, *tsí) by Meriggi;6 (ęp), read as *tu by Meriggi7 and Hrozný;8 (ęp), 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.
4 RHA IV 86, No. 185, and 91, n. 1, also 104 f. 8 IHH pp. 319 and 433.
5 MVAG XXXIX 1, p. 31. 9 HB p. 23.
10 SuK pp. 24 and 50. Bossert reads it as kärka also.
11 MVAG XXXIX 1, p. 3 etc.
12 IHH pp. 99 and 109. Hrozný reads it as kär also.
13 Cf. pp. 35 (ap) and 39 f. (ar and kar). See further Meriggi in MVAG XXXIX 1, pp. 2 f., 97 (*š-tar-da and *š-tar-da), and 110 (words beginning with *š and *§).
14 Meriggi in MVAG XXXIX 1, p. 3, and Hrozný, IHH p. 99.
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NOUN: DECLEMION

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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 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. 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 pı. 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), prince2-tra(ra)-wa-ne-s(a) (M II 1), prince2-ni-a-s(a) (A 11 b 1), or prince2-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 dKu-papa(pa-pa) (A 11 b 6) with dKu-papa(pa)-a-a (A 13 d 6) or A-tra(ra)-lu-ba (A 4 d) with dKa+r(a)-hu-ba-a (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-la 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 ⁿTarh₃u(ḥu)-ta-a ⁿx-ta-a ⁿKu-papa(pa-pa)-a-ḥa te-ni-me-a-ḥa, “and then him (wa(n)-te) to Tarḥuns, to X, and to Kupapas I assigned” (A 6:6). At first glance it would seem that forms ending in -ta interchange here with the form ending in -a. 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 Kupapā. But we know from the form ⁿTarḥu-un-za in cuneiform Hittite that the stem of the divine name Tarḥuns does not end in a vowel. In fact, from such derivative proper nouns as Ṯaṭaruntušša⁴ or Ṯaṭaruntuṭšša⁵ we know that its stem is consonantal and ends in -nt. Parallel to the dat.-loc. sing. ṭumanti, from nom. ṭumanz, “all, whole,” in cuneiform Hittite, we have in hieroglyphic Hittite dat.-loc. Tarḥu(n)ta, from nom. Tarḥu(nt)a.⁶

The dat.-loc. ma-mu-ta, then, shows that the nom. ma-mu-s(a) also has a consonantal stem and really represents ma(mu(n)ta). The Greek personal names Ma(mou)ta, Ma(mou)ta, etc.,⁷ evidently based on the same root, support this contention.

¹ The corresponding abl.-instr. is clearly represented in the phrase ⁿTarḥu-te-ta-a ⁿKu-papa(pa-pa)-ta ⁿKar(k)-ḥu-ḥa-ta-a ⁿx-za-ta-a-ḥa ṭaraาร-ḥa-ṭir-ṭa-s(a), “be­loved by Tarḥuns, Kupapas, Karḫuḫas, and X” (A 15 b** 1).
² As observed by Bossert op. cit. p. 140 (where ta-a is read as Ṯaṭa-ḥa and a as ḫa). ⁴ 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 ⁿTarḥu(ḥu)-ta-a-s(i) (HHM 19 A 1), ⁿTarḥu(ḥu)-te-s(i) (I M XXI 5), or ⁿTarḥu-ti-s(a) (A 13 d 2); the abl.-instr. is ⁿTarḥu-te-ta-a (A 15 b** 1) or ⁿTarḥu-ti-ta-a (A 3:4). The acc. is not Tarḥuntan but Tarḥun (by analogy with nom.), written ⁿTarḥu(ḥu)-n(a) (OLZ XXXVII 147:7, twice), ⁿTarḥu(ḥu)-ṭi-n(a) (II M LI 2), ⁿTarḥu(ḥu)-ṭi-n(a) (HHM 10:3), etc.
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, ąpata, and kita from ęs, "this," ąpas, "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 -sa 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 -ı in the normal Hittite hieroglyphic inscriptions, that is, those of the period in which the special nasal signs ą and ḫ 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 -ı (read by them as ja and ḫ respectively) but also simple -ı. That this is not true is evident from the Izgm inscription, where -ı of the dat.-loc. and -ı of the acc. pl. masc.-fem. are distinguished with especial clearness: ..... arba(ḥa)-ı arba(ḥa)-ı apa-n(ı) e-li a-i-a-ḥa RIVER.LAND-ı- pa-u-a-te RIVER.LAND-ı apa-n(ı) e-li a-i-a-ḥa, "..... frontiers" (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 examples are chosen as occur in company with the demonstrative ęs,

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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 XL 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. \( i-n(a) \) CHAIR.SEAT\( \times a\)-sa-n(a) WALL.HAND+me-\( \bar{a} \), “this chair I built” (A 6:7 f.).
2. \( i-e-pa-wa \) CHAIR.SEAT\( \times a\)-sa-n(a)-e . . . . WALL.HAND+me-\( \bar{a} \), “and this chair . . . . I built” (A 6:3 f.).
3. \( i-pa-wa \) SEAT\( \times c\)-sa-n(a) . . . . WALL.HAND+me-\( \bar{a} \), “and this chair . . . . I built” (M VI 2).
4. \( i-wa \) MONUMENT-\( \bar{u}\)-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. \( i-e-i \) GATE\( \times c\)-le-ni-sa-a-i HOUSE.INTERIOR \( \bar{a} \)+ra-se-li-ne-i . . . . WALL.HAND+me-\( \bar{a} \), “these gate-houses . . . . I built” (A 11 c 6).
2. \( i-i-pa-wa \) HOUSE \( \bar{a} \)+ra-se-li-ni-i . . . . a-i-a-\( \bar{a} \), “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 godni-a-i arba(\( \bar{a} \)) 7a-za-tu-u, “may the gods eat away,” cited above (p. 24). Other scholars, such as Hrozný and Meriggi, accept an ending \(-i\) also (read by them as \( ja \) and \( i \) 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

1 But see also the suggestion on p. 4.
2 Also rarely in \(-ia\); see the paradigms in my EHH.
3 Cf. variant \( a \) for \( a \) (pp. 3 f. and 42).
The acc. sing. neuter examples are:

1. i a-s(e)-tra(ra)-te-z t-e-ha TABLE-wa-ša?-i ... ki$^1$-s(a) ... arḥa(ḥa) 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(ṛa)-la-a (I M XXI 4; II M LII 5).

2. i-e MOUNTAIN+ḥa+r(a)-ni-se-ī La-ka-wa-ni-s(e)-ḥa-wa LAND-RIVER. LAND-z[a]-s(e) ki-ī a-i-a-zA, “and this harnises 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 MOUNTAIN+se-[a] occurs in I M XIV 4:1; perhaps gen. MOUNTAIN in A 12:3; see also in fragmentary context ki-ā MOUNTAIN+ḥa+r(a)-ni-se-[nothing missing?], “which harnises” (HHM 19 A 2).

3. i wa-ni-ī a-mu ki-ī-ḥa-e, “this monument I made” (HHM 20:2); i-pa-wa MONUMENT+wa-ni-ī $^4$Pa-h(ḥa)-la-ta-ā LEG-nū-ḥa-ē, “and this monument to Ba’lat I offered” (HHM 47:2). See also acc. i-pa-wa-te MONUMENT+wa-ne-ī (M II 5 f.); i-pa-wa-te MONUMENT+wa-ni-ī (HHM 9 A 2); i-pa-wa MONUMENT (HHM 18 C 5); i-wa MONUMENT-ni-ī (A 5 a 1); i-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-ḥa-wa MONUMENT (IHH Pl. LXXVII 2, from Emirgazi); 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 i-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-ē in HHM 52, frag. 1:1, cannot be ascertained.

4. i-pa-wa e+$^4$r(a)-ma-ī ki-s(a)-e i+-rā-a-la-ta-a, “and who(ever) removes(?) this ermas” (HHM 49 A 2). Hapax legomenon.

$^1$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. тировати э зама-э кел-с(а) арха(ха)-э ха-а+ра, “and then who(ever) destroys this zamas” (CE XII 5). 1 Hapax legomenon.

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

6. In A 13 d 4 we find 9ве-ва-и-ха-ва-ту пи-а, “to him (-tu) also (-uada) nine give!” In ll. 6 f. we read e-ва 4Ka+r(а)-шу-ха-а 4Ku-papa(pa)-а-ха 9-ва-а-и пи-а-ту, “and to Karłuhas and to Kupapas nine may he (or ‘they’) give!” In this case нувал 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 х ту-ва-и ки-и у-са-ла-се, “and then the тувас which thou shalt buy for me.”

8. wa-mu-e ʔа-ма-и ти-та-и лог се-ла-ха-и пи-а-те-е, “and to me my paternal selaḥas he (or ‘they’) gave” (A 14 a 2 f.) 3 is analogous to wa-mu-e ку-ма-н(а) 4Тарху-s(а) ʔа-ма-и ти-та-и(и) лог-с(е)-ла-ха-и пи-а-те, “and when Tarhuns gave to me my paternal selaḥas” (A 2:1 f.). Dat.-loc. log=ла-ха is found perhaps in IHH Pl. CII 4, end. 4

9. The word уса́лис occurs in the nom. in x.xхъас(а)-ба+р(а)-ме-с(е)-па-ва-ма-и ʔе го́д-не-и литуус.ханд-ни васе-са-ли-и-с(а) брэд-с(е) ту+р(а)-пи-с(а), “and ʔашарме for them,” 5 for these gods, also libation (and) bread” (A 11 b 6). The corresponding acc. occurs in ʔе-та болов 4Тарку-та-а го́д-не-и литуус.ханд-не васе=у-са-ли-и иа [. . . .], “for this Tarhuns of the (sacred) bowl (and) also for the (other) gods if libation [. . . .]” (A 13 d 8 f.). In ʔе-[ла]-па-ва 4Т-тра(ra)-лу-ха го́д-ни-и литуус.ханд-ни васе-са-ли-и брэд ту+ра-пи?н(а), “and

1 On the verb see p. 12.
2 Instead of 9 the text has 8. If the emendation is correct, then instead of 9-ва-а-и the simple phonetic reading ну́-ва-а-и is also possible.—Similarly in A 1 a 2 (twice) the reading 9и-ва-ва-ту пи-а-ха, “to him also nine I gave,” is more plausible than the reading in the order ну-ва-ва-ту of Hrozny, 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 се-ла-ха in CE IX 4.
5 This is also the clearest proof that the enclitic -ма-и 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-ма-и-э in A 14 a 4 means “and for/to them.”
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for this Atraluhas (and) also for the (other) gods libation (and) bread" (A 4 d), a na seems to follow \textit{vase}-sa-li-i in the copy,\footnote{As read originally by Meriggi in MVAG XXXIX 1, p. 47, and Gelb, HH II 11.} but I would be inclined rather to include this sign (to be read as \textit{pi}?) in the next word, since I know of no clear interchange of forms ending in -\textit{i} with those ending in -n.\footnote{See above, p. 3, n. 3.—The two forms x_{c}tu-\textit{wa}+r(a)-te-i and x_{c}tu-\textit{wa}+r(a)-\textit{sa}-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.} The form \textit{vase}_{c}x_{c}tu-sa-li-i-pa-\textit{wa-tu-u}, occurring in a broken context in M XXIII A 2 f., is probably not a variant of \textit{usali} but differs in number (cf. p. 53).

10. \textit{wa}-\textit{mu} wa+ra-la-i x sa-na-wa-s(a) a-i-a-za Tala-s(a) king-ta-a-s(a), “and for me the good king Tatas made a waralas” (HHM 58, frag. 1 A 1). \textit{Hapax legomenon.}

11. \textit{wa-tu-u} wa-a-ki-i sa-he, “and I asked him for a bite (of food)” (M I 3). On this translation see pp. 64 f.

12. In the clauses \textit{wa-tu-e bread} tu+r(a)-\textit{pi-n(a) drink} si+r(a)-la-te-i-\textit{ha foot} pa-la-a-tu, “and to him bread and wine may they bring”\footnote{The hieroglyphic Hittite verb \textit{pata-}, “bring,” may correspond to cuneiform Hittite \textit{peda-}, “carry, bring,” etc. (Sturtevant, \textit{A Hittite Glossary}, 2d ed., p. 122).} (A 1 a 5), and \textit{wa-tu-te bread} tu+r(a)-\textit{pi-n(a) drink} si+r(a)-la-te-i-\textit{ha ita-s(a) arha(\textit{ha}) 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 \textit{drink} si+r(a)-la-te-i-\textit{ha expresses original \textit{drink} si+r(a)-la-te-i-n(a)-\textit{ha}, in which acc. n is assimilated as usual to a following consonant, or is an acc. in -i. An identical form, written with a different ideogram, is found in \textit{grapes} si+r(a)-la-te-i-\textit{ha} (M VI 4 emended according to collation and photograph in Hrozny, IHH p. 307 and Pl. XV) and \textit{grapes}\textsubscript{c-x}si+r(a)-la-te-i-\textit{ha}-\textit{wa} (M VI 5).\footnote{Meriggi’s reading in MVAG XXXIX 1, p. 137, of \textit{bi-la-[ta]-i} in II M XX 4 is too doubtful.}

13. The most frequent and most important noun with the acc. sing. ending -\textit{i} is ‘a-ze-ma-i. Its use is best attested in such clauses as ne-pa-wa-te ‘a-\textit{ma}-i ‘a-ze-ma-i-c ki-a-s(i) arha(\textit{ha}) x_{c}-la, “or then who(ever) removes my ‘azemas” (A 6:9), and ‘a-\textit{ma}-i-\textit{pa-wa-te ‘a-ze-ma-i ki-a-s(a) arha(\textit{ha}) x-a, “and then who(ever) removes my ‘azemas” (A 2:4). Meriggi first translated the second example as “meinem Priester aber

\footnote{Meriggi’s reading in MVAG XXXIX 1, p. 137, of \textit{bi-la-[ta]-i} in II M XX 4 is too doubtful.}
wer (es?) entzieht,’’ then changed the translation of the first two words from “meinem Priester’’ to “meiner Verwandtschaft’’ or “meiner Familie,’’ in both cases taking ʔa-ma-ʔ a-ze-ma-ʔ to be dat.-loc. sing. Hrozny translates the same phrase as “puis qui broie(?) mon image(?)’’ interpreting those words as acc. sing.

Meriggi’s interpretation of ʔa-ma-ʔ a-ze-ma-ʔ as dat.-loc. is based solely on his translation of ʔa-ze-ma-ʔ, for which he has offered no good evidence. Hrozny’s translation “image’’ (or perhaps “inscription, stela,’’ or the like) fits much better in all instances. Furthermore, ʔa-ze-ma-ʔ cannot be dat.-loc., because the possessive pronominal adjective ʔa-ma-ʔ which modifies it is not dat.-loc. The correct dat.-loc. sing. forms of the latter are ʔa-me-a, ʔa-me, ʔa-ma, e-me-a, e-me, me-a, and me, but never ʔa-ma-ʔ. 4 Finally, the verb arha( احد) x-ʔa 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 ʔ-pa-wa-ʔ(a) arha( احد) x-a, “and this (= antecedent MONUMENT x-wa-ne-ʔ) he removes’’ (M II 6).

The form a-ze-ma-ʔ 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 Hrozny and Meriggi should be right that some acc. pl. forms end in -i (see p. 45), the almost total absence of the spelling ʔa-ze-ma-ʔ 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

1 WZKM XLI 28.
2 MVAG XXXIX 1, pp. 8 f.
3 HH 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 ʔa-ze-ma-ʔ, also one example of ʔa-ze-ma-ʔ (A 18 e 2). In addition there is one example of ʔa-ze-ma-ʔ in an old inscription from Kőylütolu Yayla (HHM 41:2), written before nasallisation was yet expressed in writing, and one example of ʔa-ze-ma-ʔ in an inscription at Kotükale (HHM 40:5). The latter may possibly be a defective writing, for the Kotükale 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-ʾī (which occurs some eleven times at Carchemish) as such a form would seem quite out of place.

If ʾa-ze-ma-ʾī 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 Boy-beyipinari inscription we read ni-pa-wa-te ʾa-ma-ʾī ti-la-ʾī ʾA-ʾi-me-s(a) ʾa-ze-ma-ʾī arḥa(ḥa) x-a ni-pa-wa-z(a)1 . . . ʾx-ḥa-me-ša?-s(a) ʾPa-na-mu-wa-ta-s(a)-ḥa Ḥaṭtusi+ili-s(a)-ḥa ʾa-ze-ma-ni x ze-s(a)-tra(ra)-la lituus.hand-ni arḥa(ḥa) za-ʾa1, “or then removes the ʾa-ze-ma-ʾī of my father ʾAīmes”3 or . . . . takes away the ʾa-ze-ma-ni of ʾAlmes and of Panamuwatas and of Ḥaṭtusilis from the zestras” (HHM 7 BC 3). In comparing ʾa-ze-ma-ʾī, 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 Taʿyınat 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. ʾi-ā ʾTaḥunla-s(a) GOD.HOUSE-za . . . . BUILDING.FIST-ru-ḥa, “these temples of Ṭarḥuns . . . . I strengthened(?)” (A 2:4); ki-s(a) ʾi-e-ā GOD.HOUSE-ḥa-za e-ti BUILDING-te-pa-ʾa, “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 VOLUME. HOUSE-za, (see pp. 33 f.) is found in the old inscription from Köylütolu Yayla (HHM 41:3) and perhaps in that from Kargya (HHM 37).

2. ʾi-ā-pa-wa-te HOUSE-na-e ki-s(a) . . . . [ar]ḥa(ḥa) [ḥa?+ra?]-ā (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-ʾni (M IX 5), HOUSE-ʾne (A 16 e 1; A 17 c 2:3), HOUSE-ʾni-a

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, x-s and translated “de mon maitre” by Hrozny, IHH p. 337.

3 Literally, “removes my paternal ʾa-ze-ma-ʾī of ʾAīmes.”

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-la-a-i house-ni-i, “the paternal house” (A 2:6), and strangely in e-pa-sa-qa house-na-i ..., arha(qa) ha-ra-tu, “and his house .... may (the gods) destroy” (OLZ XXXVII 147:8; latter example is too early for use of i). A difficult form is x.house-sa-qa (M VII 2). Evidently the same word occurs as pir, pl. parna, in cuneiform Hittite. Cf. also Pa+r(a)-na-s(a)-pa-wa-te-e (HHM 10:2) and questionable pa+r(a)-na-i-qa (HHM 60:2).

3. i-a-qa-wa gate-le-na .... legs-te, “and these gates .... he passed through” (A 11 a 4); i-a gate-le-na monument-qi+ra-qa, “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., i-ta-a-i gate-na-i, “in these gates” (A 11 a 5). An adjectival formation is found in gate-le-ni-qa-a-i house.interior ha+ra-se-li-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 ḥilani by the Assyrians.

4. i-a-wa monument-xka-la-na (Ze-e-s(a) lituus bowl-n(a) dTarḫu-ta-a a-i-a-za, “and these ... s Ze’es made (into?) a bowl for Tarḫuns” (M I 3); i-a-wa-a monument-xka-la-na Runta(la)-a-s(a) Ḥalpa(pa)-ni dTarḫu(ḥu)-la ... -te, “and these ... s Runtās ... ed for the Alepine 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 i-a we should expect i-n(a). Hence I read katana and take it as neuter pl.

5. i-a speak-xmi+ra-te ki-s(a) i+a x+me-la-la, “whoever changes(?) these words” (M XI 5). Acc. is written i-a mi+ra-te in HHM 9 C 2 and in AOF VII (1931/32) 185:1. In 1-la-n(a) i-n(a) speak-xma-e+ra-la-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 in 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.


6. ʾā-pa-wa-te ki-ʾma-ā ki-s(ā) ḫa(ha) x₂c-ā, “and then who­
ever) removes these kīmas” (CE V 3). Hapax legomenon.

7. ʾā-wa building ḥi?-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
ʾā, we may cite also two examples of an acc. in -ā without it:

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

I . . . ed” (A 11 b 4). Same word in dat.-loc. sing.: LAND-ne-ā (A 11 a
2 and 3) and LAND-nī-a (A 2:3); in abl.-instr.: LAND-nī-a-la (A 11 b
5); in gen. pl.: LAND-nī-ā-ṣa (A 3:1 and 3) and LAND-ne-ā-ṣa (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 ʾa-pi ku-ru-pi ki-ʾā
x.x₂c-wa-e+ra-ma HARE-pa-se-la-ā arḥa(ha)-e HAND₂c-sa-ḥa-na wa-e+ra
HAND-x-ḥa+ra-ʾi wa-ma-e+ra arḥa(ha)-a ROAD-va-ṇi, “and those
kurupis which for the . . . ed ruler I request(?), prepare(?) them and
send them to me!” (Assur b Vo 20–Vu 14); ʾa-pi-ḥa-wa-e HARE₂c-le-pa-
se-la-ā x.x₂c-wa-x+ra-ma-e ku-ru-pi ʾa-me-a e-te-la arḥa(ha)-e HAND₂c-sa-
ḥa-na ʾa-pa-a-ā-pa-ṭa HOUSE-ni-a e-te-la arḥa(ha)-e HAND₂c-sa-ḥa-na!
wae+ra-a HAND₂c-ḥa+ra-ʾi wa-ma-e+ra arḥa(ha)-e ROAD-va-ṇi, “also
those kurupis of mine for the . . . ed ruler I request(?), and in addi­
tion 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-ʾi-a+ra (a Vo
17) or u-ʾi+ra-a (a Ro 7); PAWS?₂c-wa+ra (b Ro 3); sa-na-ṭe (e Ro
23); x₂c-wa-pa-wa (f Vo 31; again, but without x₂c, 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-ḥa-wa-tu-u x₂c-a-tu-na-a+ra (f
Ro 14–17; cf. x ʾa-tu-nil-n(a)-wā-mu, a Vu 15 f.); FOOT₂c-pa+ra-a+ra
(f Ru 10); ḫ₁ ʾa-mu+ra-le+ra-e (g Ro 16 f.); HORN₂su+r(a)-ni (g
Ro 27).
In comparing the two groups of neuter nouns modified by the demonstrative is, one thing stands out clearly: the demonstrative occurs in the form ị with nouns ending in -i, in the form ị-a with nouns ending in -a, -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: ị-a-ze-ma-i is sing., and ị-a-ze-ma-ni-(a) is pl. In addition, the occurrences of MOUNTAIN-xa+r(a)-ni-se-ị besides MOUNTAIN-xa+r(a)-ni-se-[nothing missing?] (modified by ki-ā, p. 46), of VASE-xu-sa-li-ị besides VASE-xu-sa-li-ā- (pp. 47 f.), and of HOUSE-ni-ị besides HOUSE-na-(e) (pp. 50 f.) favor differentiating these forms as sing. and pl. respectively.

As can be seen from the examples wa-na-s(a) (p. 46) and VASE-sa-li-ị-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-wo ị-ā GATE-x-na MONUMENT-śi+ra-ha wa-z(a)-e EYE-Če x-πi-śa-ā s(a)-ti-e, which could be translated "and these gates I walled up(?), and they2 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 interpretations3 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 ị-a ROAD-wa-ni as "send these (things)!" Meriggi translates "sende diese(s)"! (AOF X 133); Hrozny: "envoie ici!" (AOr X 42). However, Meriggi also translates ị-ā as "diese (Sachen)" with question mark (MVAG XXXIX 1, p. 124).

2 This pl. use of -az see my EHH.

3 Hrozny, 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 Hrozny takes the sixth, seventh, and eighth words as one word.
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 $z$ 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 \(k\omega\nu\).\(^3\) 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 \(ki+\epsilon\a\) 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 \(ki+\epsilon\).

Hrozny began his discussion of the relative pronoun by stating that the first sign is so similar in form to the signs for \(i\) and \(i\) (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 \(ja\) and thereby obtained a relative pronoun \(jas\) phonetically like a demonstrative pronoun which he had compared with the Indo-European relative pronoun \(*ιο\sigma\).\(^6\) His case seemed strengthened by such inferred relationships. The second sign also he transliterated as \(ja\) 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. Hrozny 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 \(jā\), and differentiated only the fourth sign, calling it \(ja\).\(^9\) Now Hrozny 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.
\(^5\) Ibid. p. 50, n. 17, 50-53.
\(^6\) IHH p. 37.
\(^7\) 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 $ia$, and then his evidence was based on an unfortunate misreading; for his comparison of $\text{i}+\text{ra-ta-a-te}$ (read by him as $j[a]\text{-t}a\text{-a-}t[a]$) and $\text{i}+\text{ra-ta-ta-a}$ (read by him as $ja^{(v)}\text{-t}a\text{-t}a\text{-a}$) with an alleged $j\text{[a]}\text{-t}a\text{-t}a\text{-a}$ (read by him as $jd^{(v)}\text{-a-t}a\text{-t}a\text{-a}$) is inadmissible because in the latter case too the text (HHM 49 A 2) has clearly $\text{i}+\text{ra-ta-ta-a}$.

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. The third sign was at first read by him as $e$ (from $a+r$) and the fourth sign as $\check{e}$ (from $a+r$), partially following Cowley, who had read these two signs as ligatures, $i+a$ and $\check{i}+a$ or $\check{i}+a$ respectively. Though Meriggi himself offered no evidence for these readings, he continued to use them in two other articles.

Meriggi then changed his viewpoint. He began to believe that the relative pronoun in the language of the Hittite hieroglyphs was $ja-$, as in Old Indic; hence he was forced to change his readings of the third and fourth signs, used for the relative pronoun, from his former $e$ ($a+r$) and $\check{e}$ ($a+r$) to $\check{i}\times a$ and $i\times a$ respectively, following the order in which Cowley had read these "ligatures."

In the same article Meriggi treated the first sign as an ideogram, $qi\varsigma$, without venturing any definite reading. For the second sign he

2 *ZA* XXXIX 176 ff.
4 A. E. Cowley, *The Hittites* (London, 1920) pp. 60, 81, 90. Cowley's own readings for Meriggi's $a$ and $i$ are "$wa$ (or $ya?$)" and "$\omega\epsilon\$.
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, with perhaps another value, aXa or iXa, also. In favor of such value or values Meriggi adduced two comparisons. One was of \( \left\langle \text{\ldots} \right\rangle \quad \Phi \quad \Pi \quad \text{X} \) (A 6:4) with \( \left\langle \text{\ldots} \right\rangle \quad \Phi \quad \Pi \quad \text{X} \) (A 6:7), read by him as \text{VEN-é-é-ta} and \text{VEN-é-á-ta} respectively. It appeared to him that the two verb forms were identical and that é-é in the first example interchanged with é-á in the second. In the other comparison Meriggi considered \( \left\langle \text{\ldots} \right\rangle \quad \Pi \quad \text{X} \) (M II 2) a variant writing of \text{a-i-á-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 foot\(\text{ke-ke-te}\) and foot \(\text{ke-á-te}\) respectively (p. 66) I take the first as containing a reduplicated form, \(\text{ke-ke-}\), the second as having a simple stem, \(\text{ke-}\) or \(\text{kea-}\). Again, the word \(\text{ke-á-te}\) in M II 2, against Meriggi, is a variant writing not of his \text{a-i-á-ta} but of the word root \text{ke-á-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. Further evidence can be found in the equation of \text{arfa(\text{ha}) ke-\text{ha}} (HHM 32:3) with \text{arfa(\text{ha}) foot ke-\text{ha}} (HHM 58, frag. 4:1), in each of which the form of \text{ke} is unusual.

In another article Meriggi assigns to the third sign not only the value \(\text{iXa}\) but also the value \(\text{aXa}\), and to the fourth sign besides the value \(\text{iXa}\) the value \(\text{aXa}\) or \(\text{aXa}\). For the first sign he cites \(\left\langle \text{\ldots} \right\rangle \quad \Pi \quad \text{X} \) from the Izgm inscription (Hrozný, IHH Pl. XCIX A 2), which he reads as \text{aXa-a-\text{ha}} or \text{aXa-a-\text{ha}} or \text{qui-a-\text{ha}} and equates with \text{aji\text{ha}}, “I made.” This is impossible, because the Izgm inscription has not

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 \text{AD-id-id-ta} and \text{AD-id-á-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.
ajaba but two words, ki seat-ha.\textsuperscript{1} For the fourth sign Meriggi ad­
duces $\textcircled{1} \textcircled{2} \textcircled{3}$ from a Carchemish inscription (A 5 a 1) and reads it as $\tilde{a}-\tilde{a}-\tilde{a}$, $\tilde{a}x\tilde{a}-\tilde{a}$, or $\tilde{a}x\tilde{a}-\tilde{a}$.\textsuperscript{2} The whole inscription is, however, so sketchily engraved that readings derived therefrom must be con­
sidered too doubtful for discussion.

On the basis of Hrozný's\textsuperscript{3} as well as of his own\textsuperscript{4} claim that the third sign interchanges with the first sign in a relative pronoun, Meriggi later transliterated the first sign as $i\alpha$,\textsuperscript{5} while he called the second sign $i\alpha$. In his latest article\textsuperscript{6} the four signs continue to be rendered as $i\alpha$, $i\alpha$, $i\times \alpha$, and $i\times \alpha$.

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 con­
cerned 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 $i\alpha$- 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 $j\alpha$ (Meriggi: $i\alpha$) for the first sign.\textsuperscript{7}

In my own first study I recognized the phonetic nature of the second sign but did not offer any reading.\textsuperscript{8} I took the fourth sign to be a compound, $\tilde{w}a+\tilde{w}a$ (the signs now read by me as $\tilde{i}$ and $\tilde{i}$).\textsuperscript{9} Later Hrozný and Meriggi suggested $i\alpha$ 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.\textsuperscript{10} How well founded were my doubts will be seen from what follows.

\begin{itemize}
\item \textsuperscript{1} Cf. Hrozný, IHH p. 444.
\item \textsuperscript{2} WZKM XL 259.
\item \textsuperscript{3} IHH p. 37.
\item \textsuperscript{4} WZKM XLI 29.
\item \textsuperscript{5} MVAG XXXIX 1, pp. 2 f.
\item \textsuperscript{6} RHA IV 96.
\item \textsuperscript{7} AOF X 286.
\item \textsuperscript{8} HH I frontispiece.
\item \textsuperscript{9} Ibid. pp. 24 f.
\item \textsuperscript{10} HH II frontispiece.
\end{itemize}
NEW READINGS OF SIGNS

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(t)\(^1\) ar\(ha(ha)\) x\(x\)-la, “who(ever) removes,” or x-s(a) LITUUS.HAND-ni ar\(ha(ha)\) za-\(\dot{a}\), “who(ever) takes away,” both in A 6:9.

The same pronoun with the enclitic particle -\(ha\), “and,” as in x-s(e)-\(ha\) 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)-\(ha\) (HHM 20:2) or ni x-a-s(e)-\(ha\) (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 -\(ha\), as in x-e-ta-x-la-a-\(ha\) (A 6:8).

One can hardly fail to observe the exact parallelism in formation between hieroglyphic Hittite xs, xsha, and xsx\(s\) 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 t\(is\), p\(is\), c\(i\)s, \(c\)is, 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 \(\tilde{z}\) 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 jas of the relative pronoun in hieroglyphic Hittite. However, one need but glance at the paradigms of i-stem nouns to realise 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: *Ka-ma-ni-s(a) and *Ka-ma-ni-a-s(a), PRINCE tra(ra)-wa-ni-s(a) and PRINCE-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 hieroglyphic 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 \( x s, xs\hat{\alpha}, xsxs, \) and \( xs\hat{s}ha \) cited above, there are also such forms as \( z-e x-s(e)-\hat{\alpha} \) (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 \( z \) and \( x \). From these occurrences alone I would have drawn just the opposite conclusion, namely that \( z \) and \( x \) are not equal to each other. The compound pronoun \( z-e x-s(e)\hat{\alpha}ha \) in its various forms is found almost a dozen times in different inscriptions from different periods and localities (cf. p. 69). The \( z \) 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 \( z \) and \( x \) should be read differently. If \( z \) 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 \( z \) 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, \( z \) is found but rarely in the Hittite hieroglyphic inscriptions. Four examples known to me occur in two Carchemish inscriptions and four more at Karapinar.

We find this sign in the words city-\( +me-ni \) A-\( pa-ni-\hat{s}a-\hat{z}e\text{[illegible]} \), which I would like to translate as "in the Apanisean city" (A 11 b 2), taking

\(^{1}\) 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 \( \hat{z} \) is a nasal of \( z \), and their relationship to each other is the same as that of \( \hat{a} \) to \( a \) or \( \hat{i} \) 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 \( šadūša \), "her mountain," for instance, being written as \( šd\text{-}[\text{illegible}] \) or \( ša-du\text{-}[\text{illegible}] \), 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 improbable.
the two words to be in the dat.-loc. case. The form suggests that this
geographic name represents a gentilic formation of the same type as
exemplified by Karka,(ka)-me-ša-i-s(a)\textsuperscript{GREAT,QUEEN-ši+ra-s(a),}
"the Carchemisian queen," in the nom. sing. (M IX 2). The nouns
of this formation end in -i in the dat.-loc., as in Karka,(ka)-me-ša-i-s(a)
\textsuperscript{a} Tarhu-ta-a, "to the Carchemisian Tarkuns" (A 3:1), or A-l(a)-
pa-ša-va-e\textsuperscript{a} Tarhu(hu)-ta, "and also to the Aleppine Tarkuns"
(HHM 10:4). This fact suggests that in the form A-pa-ša-\textsuperscript{a} city
the untransliterated sign should have a phonetic value parallel to i in use.

With a changed stem vowel (cf. p. 59, n. 2) a value i\textsuperscript{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-ti-nu-\textsuperscript{a} (A
11 b 3) in the dat.-loc. sing. as compared with chariot wa-ra-\textsuperscript{a} a
n(a) (A 12:2) in the acc. sing.\textsuperscript{3} The sign i\textsuperscript{a} is found twice in another
Carchemish inscription in the word wa-i\textsuperscript{a} (A 6:4 and 6), but its context
is too difficult to allow of any sure interpretation. The occurrences of i\textsuperscript{a}
and i\textsuperscript{a} in the Karapinar inscription are discussed below
after identification of sign forms used there.

From the interchange in the Karapinar inscription (HHM 36) of
the form \begin{align*}
\otimes ^2c & \quad \text{(OLZ XXXVII 147:3 and 5, latter without the
ideogram mark)} \end{align*} with \begin{align*}
\otimes ^2c & \quad \text{(ibid. 1. 4)} \end{align*} we find that two signs,
\begin{align*}
\otimes & \quad \text{and } \hat{\otimes} \quad \text{are there used interchangeably for two similar sounds.}\textsuperscript{4}
\end{align*}

\textsuperscript{1} Translated by Hrozny, 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-ni-na-a ba-na-sa-i\textsuperscript{a} 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-\textsuperscript{a} i\textsuperscript{a}-\textsuperscript{a} and Ka-\textsuperscript{a} i\textsuperscript{a}-\textsuperscript{a} (in ll. 2 and 3) are not real geographic names but are merely general expressions for some sites at Carchemish.

\textsuperscript{2} The adjective can precede or follow the noun with which it is construed; see my EHH.

\textsuperscript{3} The word waraines\textsuperscript{3} or warainias (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.

\textsuperscript{4} The same interchange can be observed in ki-\textsuperscript{a} fol-\textsuperscript{a} (A) ... ke\textsuperscript{a} fol-\textsuperscript{a}
head-\textsuperscript{a} (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 Karapmar signs corresponds, because the same word appears in other sources as \( \text{court}_x-\text{ki}+\text{ra-la-a} \), in the abl.-instr. case.¹

Furthermore, in Karapmar I. 6 we find \( \text{court}_x \text{ke-s(a)}_+\text{pe} \), which in view of the correspondences just given must represent some such form as the acc. sing. \( i\ddot{a} \text{ ki-e-} \text{ha} \) of a later inscription (M IX 4). A unique but very important pronominal form from the Sultanhami inscription is \( i\ddot{a}-e \text{ ke-s(a)-} \text{ha} \) (HHM 49 A 2), which on comparison with \( i\ddot{a}-e \text{ ki-s(e)-} \text{ha} \) (Assur g Ro 1 f.; see p. 60) shows clearly the interchange of \( \text{ke} \) and \( \text{ki} \) in the later period.

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

<table>
<thead>
<tr>
<th>Karapmar Inscription</th>
<th>Later Inscriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \text{court}_x )</td>
<td>( \text{court}_x )</td>
</tr>
<tr>
<td>( \text{ke-s(a)}_+\text{pe} )</td>
<td>( \text{ki-s(e)-} \text{ha} )</td>
</tr>
</tbody>
</table>

The differences between the Karapmar 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 Karapmar. In favor of this supposition it may be mentioned that the Karapmar inscription employs several signs not found anywhere else (see p. 36). However, in my opinion the other alternative, namely that the Karapmar 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 Karapmar group and the equivalent four signs of the later inscriptions—resemblances which cannot be purely accidental. But in the long run this

¹ HHM 32:3; similarly ibid. 58, frag. 4:1; more fully, \( \text{court}_x-\text{le-s(e)}_+\text{ki}+\text{ra-sa-i-} \text{ha} \), "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 important, because the reading of the signs is in no way influenced by it.

At Karapinar in the words iā ke-ḥa (l. 6; cited above) and iā (l. 3) the sign for iā occurs with three strokes on each side. In two other words, iā-[. .]-mi-ā-ra (l. 6) and ʔa-ku-ā-iā (l. 2), this sign is found with only two strokes on each side. The last word, in the dat.-loc. sing., would again favor the reading iā for the sign here discussed.

In ʂ ʂ i (l. 5), read as va(?)pameja(?) by Hrozny and as warbamiya by Meriggi, both scholars take the last sign as ia. Besides their interpretation a division into two words, warpa meja, “to/for my warpas,” is possible. In either case the reading ia is plausible.

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

Very similar in form to Karapinar ʂ are ʂ in old inscriptions from Emirgazi and ʂ, slightly different in form, in old inscriptions from Carchemish. In the inscriptions from Emirgazi this sign is found in the compound ʂ ʂ ʂ ʂ (IHH pp. 408 f.) and in ʂ (ibid. pp. 416, 418, 420, 422); in the inscriptions from Carchemish, in ʂ (I M X 5; XII 2:2). These three forms from the same stem are later written with iā; 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 Hrozny 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 Hrozny, IHH p. 358, n. 6, who compares nom. sing. ʔa-ku-s(u) found in Karapinar l. 4.
2 Ibid. p. 368, n. 9. 3 RHA IV 197.
Finally, by way of commentary on the table of correspondences between the Karapmar signs and those of the later inscriptions, it should be noted that there is no definite support for equation of Karapmar \( \hat{\alpha} \) with later \( \hat{\beta} \) or of Karapmar \( \hat{\gamma} \) with later \( \hat{\delta} \). 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 \( \hat{\delta} \) developed into \( \hat{\beta} \), then \( \hat{\gamma} \), with three protrusions at sides and top, was more likely to develop into \( \hat{\delta} \) than into \( \hat{\beta} \). The fact that \( \hat{\alpha} \) is so much like the old Emirgazi form \( \hat{\epsilon} \) used for later \( \hat{\beta} \) 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 \text{COURT}_x-ki\text{-}n(a) and \text{COURT-}ki\text{-}n(a) were tentatively compared with \text{COURT-}zi/ze-\text{I}. 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 \( wa-tu-u\ wa-a-ki-i\ sa-he\ wa-mu\ 'a-la-te.\)\(^2\) This was interpreted by Meriggi as “und ihm (dem ‘S.) war ich . . . . . (So) . . . . .-te er mi(ch? -r?).” Meriggi reads the verb in the first clause as ‘s-hd and takes it to be the first person preterit of the auxiliary verb “to be.” However, his reading of the sign \( sa \) as ‘s is completely out of harmony with the system of values, and the corresponding translation “I was” does not fit the context. In my interpretation \( sahe \) stands for \( sanhe,\)\(^3\) which may be identical with the root \( sanh- \) 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 \( wa-a-ki-i\) (acc. sing. neuter) may well be com-

\(^1\) For the time being this problem is of as little importance as is the distinction of \( ne \) and \( ni, \) \( te \) and \( ti, \) or \( se \) 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 \( wa-tu-u\ wa-a-ia-i\ e\-'da-ia.\)

\(^3\) The forms \( HAmhdu-wa-fre \) and \( HAmhdu\text{-}wa-{ia\text{-}e} \) in A 6:5 provide the best example of the interchange of ‘-ha and ‘-he as 1st per. sing. verbal suffix.


\(^5\) Some examples are cited in HH II 12.
pared with the cuneiform Hittite verb wak-, “to bite, to eat breakfast(?).” Thus the first clause would mean “and I asked him for a bite (of food).” The second clause is relatively easy: “and he gave me (dat.-loc. or acc.) (food) to eat.” The natural and logical sequence of ideas just obtained by correlating hieroglyphic Hittite wakī, sahe, and ālate with the cuneiform Hittite roots wak-, sanh-, and et-/at- supports the value ki used in my reading wa-a-ki-i.

2. In the phrase i wa-ni-i ʔa-mu ki-ʔa- in the Erkilet inscription (HHM 20:2) the last two words are translated by Bossert, by Meriggi, and hesitantly by Hrozný as “I made.” All these scholars take the value of my ki sign as ia and connect the last word with the verb aja-, “make.” This translation naturally fits the context well, but there are some difficulties. First, the verb aja- is regularly written with initial ā; even though the change of aja- through ija- to ja- is a priori admissible, there are as yet no examples to prove it in this particular case. A much greater obstacle is the discrepancy between the a stem in aja-, “make,” and the ī stem in our Erkilet verb. I myself did not know how to translate my reading ki-ʔa- in the phrase until Professor Bonfante suggested connection with Indo-European *kwe-, translated as “aufschichten; aufhäufen, sammeln; der Ordnung nach auf oder zu einander legen; aufbauen; machen.” The last meaning, best exemplified in Greek ποιεῖν, “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 waqessar or wakkisar is given the meaning “a bite of bread, breakfast bread,” or the like. Cf. Supplement, p. 46.

2 In cuneiform Hittite 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 corresponding 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 ʔa(i)- in MVAG XXXIX 1, p. 127, is impossible; cf. above, pp. 57 ff.

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 īa-e ke-s(a)-ha (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-ḥa (HHM 58, frag. 4:1) and ke-ḥa (HHM 32:3), and in the reduplicated forms foot 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 ā-, "to go," 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 *gʷem-, *gʷₐ-, "gehen, kommen."\(^4\)

**ROOTS AND ACCIDENCE**

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 ı̄s, "this." The regular forms of the sing. are: dat.-loc. ki-ta, acc. masc.-fem. ki-n(a), 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) arba(ha) xoc-la, "whoever removes," have been mentioned on page 59. From this pronoun were developed other forms, such as kisfra, kiskis, kiskisfra, "whoever" or "anybody" (ibid.).

Besides clauses using kis there are others in which we find instead of kis the word ı̄s, e.g. wa-tu-te-e bread tu+t(r(a)-pi-n(a) drink ści+

\(^1\) 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.


\(^4\) 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 βέβαιος 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 kis- with cuneiform Hittite ki-, kikkir-, 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.
PRONOUN

r(a)-la-te-i-ha ia-s(a) arba(ḥa) 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) arba(ḥa) 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) x₁ za-a ki-s(a)
"and it(?) down(?)" takes ....

i-a-pa-wa MON.-lu-wa-la-a MON.-lu-n(a)-e-a ia LITUUS.HAND-ne arba(ḥa) za-a
and one⁴ from the monuments monument .... also⁵ away takes,

te-s(e)-pa-wa-e te-sa
ia LITUUS.HAND-ni arba(ḥa) za-a
and this (or) that⁶ .... also⁵ away takes,

ne-pa-wa-te za-ma-i ze-az-ia i-a-s(i) arba(ḥa) x-x-la
or then my azemas .... away moves,

ni-pa-wa CHILD-ni-na-la-a i-a-n(a)
or from the children one⁴ (child)

ni-pa-wa x-xwa-sa-na-sa-la i-n(a) ki-s(a) LITUUS.HAND-ni arba(ḥa) za-a
or from the wasanasas one⁴ (wasanasas) .... also⁵ away takes."

¹ WZKM XLI 29. The first example was translated by him as "wer (es?) entzieht," the second as "wer entgegenhandelt." See also Hrozny, 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-pə-nə/nə and translates it as "wieder" (MVAG XXXIX 1, p. 95).
⁶ Translated by Hrozny 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*, *i·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·a·s(a)*.\(^3\) 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 *ki·s* 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 *i·a* except by admitting that they do not correspond to the normal relative pronoun.

That the words based on the root *i·a·s* are not equivalent to those based on the root *ki·s* can be gathered also from an additional observation strangely overlooked by those scholars who read both roots as *i·a·s*. 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 *kisha*, *kiskis*, and *kiskisha*. On the other hand, the word *i·a* or *jas* is not completely declinable, for no corresponding dat.-loc. *i·a·ta* nor any pl. form has ever been discovered. Also, in contrast to the forms *kisha*, *kiskis*, and *kiskisha*, no such secondary formations as *i·a·sha*, *jasjas*, and *jasjasja* occur in the language of the Hittite hieroglyphs.

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

\(^1\) 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.” 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-s(a)-ḫa in the nom. sing. (Hrozný, IHH pp. 408 f.), which later became iā-e ki-s(e)-ḫa (Assur g Ro 1 f.) or iā-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 iā-n(a) ki-ḫa-n(a) (CE X 4; unique!), iā ki-ḫa-n(a) (CE X 3), iā-e ki-ḫa-n(a) (Assur e Vu 11 f.; d Vu 2 f.; f Ro 26 f.), iā-e ki-a-ḫa (Assur e Vo 19 f.), iā ki-e-ḫa (M IX 4), and iā ke-ḫa (Karapinar l. 6). A word written iā or iā-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 ḭa-pi iā-e ROAD-wa-ni-ša, “and why do you not send those to me?” (Assur d Ro 11–14; cf. Assur f Ru 15–19), and x ḭa-tu-ni-n(a)-wa-mu ki-š iā-e ma-nū-ḫa ROAD-wa-ni-te, “and why did he ever send an ḭatunis 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 kisha, kiskis, and kiskisfya were developed. Originally also jas 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.

1 This translation is favored by the existence of such correlative forms as iā-pa-wa-ti ... iā-pa-wa-ti (A 11 a 6) and iā-e-pa-wa ... iā-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 *io, “who.”

2 See the examples (with some translations) given by Meriggi in MVAG XXXIX 1, pp. 126 f.
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1 An x is used for an unread syllable, an ¿ for an unidentified ideogram. In ṭapax- and ṭawix- the x stands for an unknown vowel.
## Vocabulary

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*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-wo-ni under roadwa-ni). Adjectives derived by addition of -sa- (cf. pp. 21 f.) are regularly entered directly under the corresponding nouns.*
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