

THE ORIENTAL INSTITUTE  
*of*  
THE UNIVERSITY OF CHICAGO

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STUDIES IN ANCIENT ORIENTAL CIVILIZATION

*Edited by*

JAMES HENRY BREASTED

*with the assistance of*

THOMAS GEORGE ALLEN

**NUMBER 2 IN ORDER OF APPEARANCE  
IN THE SERIES**

**HITTITE HIEROGLYPHS**  
**I**

THE UNIVERSITY OF CHICAGO PRESS  
CHICAGO, ILLINOIS











































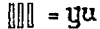














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THE BAKER & TAYLOR COMPANY  
NEW YORK

THE CAMBRIDGE UNIVERSITY PRESS  
LONDON

THE MARUZEN-KABUSHIKI-KAISHA  
TOKYO, OSAKA, KYOTO, FUKUOKA, SENDAI

THE COMMERCIAL PRESS, LIMITED  
SHANGHAI



	-a	-e	-i	-u	Vowel uncertain
Vowels	 = a  = ā				
o					
w	 = wa  = wā				
p/b					 = pā  = pā  = pā  = pā
t/d					 = tá
k/g				 = ku  = gu	
b					
m					 = m'í
n	 = na  = ná				 = né
r/y		 = ye	 = ri  = yi	 = yu	 = rx
l					 = lí
s/š	 = ša  = ša'				
Syllables of unknown value:  ,  ,  ,  ,  , 					

THE ORIENTAL INSTITUTE *of* THE UNIVERSITY OF CHICAGO  
STUDIES IN ANCIENT ORIENTAL CIVILIZATION

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# HITTITE HIEROGLYPHS

I

*By*

IGNACE J. GELB



THE UNIVERSITY OF CHICAGO PRESS  
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TO  
MY MOTHER AND FATHER



## FOREWORD

It is a source of gratification to us of the Oriental Institute that two of its members have been drawn by their own individual interests to a study of the problem of restoring to modern historians the lost documentary sources which now lie hidden in the Hittite hieroglyphic records. The problem is excessively difficult because there has been no bilingual of sufficient extent to give us a basis of fundamental facts from which to proceed in the development of the decipherment, whereas the modern ability to read Hittite cuneiform was acquired with relative ease through modern knowledge of other languages written in the same script.

The field researches of the Oriental Institute in Anatolia were undertaken in the first instance for the purpose of investigating especially the material remains of ancient Hittite life. It has furthermore always been our hope that our Anatolian Expedition might have the good fortune to unearth additional *written* records of Hittite civilization, as indeed it is now doing at Alishar Hüyük. It is therefore in fullest harmony with the purposes of the Oriental Institute that it should extend its interest likewise to the decipherment of what is now so commonly called "Hittite hieroglyphic," whether or not the term "Hittite" is even loosely correct in this connection.

Dr. Gelb's investigations have been carried on along both phonetic and grammatical lines, with the greater emphasis, however, on phonetic phenomena. On the other hand, the essay by Dr. Forrer which the Institute is about to publish has given the more important place to the interpretation rather than to the phonetic problems involved. The essays by both these scholars were read at the International Congress of Orientalists at Leiden in September, 1931, and it was already evident at that time that their results were not in complete consonance. This is probably rather more fortunate than otherwise. Each of the essays, by serving as a test of the other, will probably make it easier to eliminate errors.

JAMES HENRY BREASTED



## PREFACE

My work on the Hittite hieroglyphic inscriptions is planned to consist of three or four parts. In this first part I present a contribution to the decipherment of the writing, together with suggestions on the decipherment of the language. Later parts will contain a complete index of all words found in the Hittite hieroglyphic texts and a complete list of signs and their variants. Then may come annotated translations of the individual inscriptions and various specialized studies.

For research opportunities past and to come I am grateful especially to Professor James H. Breasted, the director of the Oriental Institute, and to Professor Edward Chiera, both of whom, by supervising my work in the Institute and advising me on difficult questions, greatly facilitated the studies which have resulted in the present treatise. To them go my sincere thanks.

My original manuscript was submitted in part or in its entirety to many members of the Institute, all of whom offered helpful suggestions. For these I would thank heartily Professors E. Chiera, A. T. Olmstead, A. Poebel, M. Sprengling, and Drs. F. W. Geers and A. Walther. To Professor Poebel especially I owe advice on the arrangement of chapter i.

The manuscript in its modified form was then turned over to the Institute's editorial office, where Dr. T. George Allen and his secretary, Miss Elizabeth Blaisdell, heartily applied themselves to the arduous task of correcting its stylistic errors and checking its scientific content. It would be impossible for me to enumerate all the suggestions which I accepted from Dr. Allen after long and careful discussion of the various questions he raised. In every section, in every paragraph, though unsigned by him, can be felt the hand of a great and modest scholar, appreciation of whose work I can scarcely express in words.

The hieroglyphs sketched in pencil in my manuscript were executed in ink by Mr. A. Schmitz, who has spared no pains to make their forms as like the originals as possible.

The decipherment of the Hittite inscriptions seems to me much


more important than it might seem to many. Hence I would beg reviewers to judge my work objectively and not to conclude prematurely that "it will belong to the future to decide whether the author was right or wrong in his theories." I hope rather that reviews will be thorough, that they will bring out all the strong and weak points throughout my work, so that future parts can be improved and thus a better understanding be gained of the historical situation in which lived and passed away the peoples of Cypro-Minoan-Hittite origin.

IGNACE J. GELB

## AUTHOR'S NOTE

To facilitate comparison of Hittite hieroglyphic passages with one another and with their transliterations, the direction of the original lines has been reversed when necessary, so that all citations herein read from left to right throughout. For convenience in tracing possible dialectal differences, the provenience of each quotation is indicated. Assur, Carchemish, and Hamath are spelled in their accepted style; other ancient place-names are scientifically transliterated.

Transliterations such as *né* and *pá* are not intended to indicate homophones of *ne* and *pa*, such as would be expected in the case of cuneiform. In fact, with only fifty-six syllabic signs, there is scarcely place for more than one sign for each syllable. Under these circumstances an accent over a vowel of any syllable means that the syllable in question contains not that particular vowel but one closely related, as shown by analogous uses of that syllable and of the known syllable transliterated by the same letters but without the accent. Voiced and voiceless consonants are not distinguished in my transliteration.<sup>1</sup> My proofs emphasize only what seems to me the most likely value of each sign.

The transliterations of individual characters are combined into words by hyphens, e.g., <sup>n</sup>*ka-ti-si*. Though vowels were not always pronounced (e.g., after the nominative ending *-s*), since we are unable to determine definitely when they were silent we are including the full value of every syllable in our transliterations, just as silent letters are written along with the others in English. Elements of compound signs occurring in the hieroglyphic are in transliteration connected by the plus sign; e.g.,  *gu+ri-gu-ma-ni*. Parentheses enclose syllables, single or in groups, which serve as phonetic complements of ideograms, e.g., *karka(ka)-me-sá*, *umena(me-na)-sá*. Absence of parentheses around syllables following ideograms implies uncertainty as to how many syllables represent phonetic complements and

<sup>1</sup> Cf. my discussion of the phonology, pp. 74-75.

how many are to be read independently. Brackets indicate lost signs; half-brackets and question marks, uncertain readings; < >, emendations.

Ideograms the pronunciation of which is unknown are transliterated with X. A small x stands for an unread syllabic sign or for an unknown element, either vowel or consonant, in such a sign. Thus rx represents a syllable consisting of r followed by an unidentified vowel.

In straight transliteration determinatives are indicated by small superior roman letters as follows:

<sup>c</sup> city	<sup>n</sup> personal name
<sup>d</sup> deity	<sup>pl</sup> plural
<sup>l</sup> land, country	<sup>r</sup> river
<sup>m</sup> masc. name (cuneiform)	

For clearness under other circumstances the words themselves have occasionally been quoted in full within parentheses.



## TABLE OF CONTENTS

	PAGE
BIBLIOGRAPHY . . . . .	xvii
INTRODUCTION . . . . .	1
I. THE WRITING . . . . .	6
General Observations . . . . .	6
The Signs . . . . .	6
The Division Mark . . . . .	8
The Ideogram Marks . . . . .	8
The Tangs . . . . .	12
The Writing of Syllables . . . . .	15
The Syllabary . . . . .	16
Readings Based on Geographic Names . . . . .	16
Readings Based on Bilingual Inscriptions . . . . .	34
Readings Based on Other Considerations . . . . .	38
Unread Signs . . . . .	50
II. THE LANGUAGE . . . . .	54
Grammatical Forms . . . . .	54
Nouns . . . . .	54
Pronouns . . . . .	56
Verbs . . . . .	59
Particles . . . . .	60
Vocabulary . . . . .	64
Texts . . . . .	66
Phonology . . . . .	74
III. HISTORICAL RESULTS . . . . .	77
INDEXES . . . . .	84
The Syllabary . . . . .	84
Ideograms Explained . . . . .	86
Proper Names Discussed . . . . .	87
Other Words Discussed . . . . .	87
Texts Translated . . . . .	88



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### IV. ABBREVIATIONS

The books of List III are cited by name of author only. Other abbreviations are:

- A British Museum. Carchemish; report on the excavations at Djerabis . . . conducted by C. LEONARD WOOLLEY and T. E. LAWRENCE (2 vols.; London, 1914-21). Plates of series A.
- AAA Annals of archaeology and anthropology (Liverpool, 1908—).
- ADMG Deutsche morgenländische Gesellschaft. Abhandlungen . . . (Leipzig, 1859—).
- AJSL American journal of Semitic languages and literatures (Chicago, etc., 1884—).
- AOF Archiv für Orientforschung (Berlin, 1923—).
- Assur ANDRAE, WALTER. Hettitische Inschriften auf Bleistreifen aus Assur. WVDOG, No. 46 (1924).
- BKS Boghazköi-Studien, hrsg. von OTTO WEBER (Leipzig, 1917-24).
- CE Cornell Expedition to Asia Minor and the Assyro-Babylonian Orient . . . Travels and studies in the Nearer East . . . (Ithaca, N.Y., 1911).
- JRAS Royal Asiatic Society of Great Britain and Ireland. Journal (London, 1834—).
- KAF Kleinasiatische Forschungen (Weimar, 1927—).
- KUB Berlin. Staatliche Museen. Vorderasiatische Abteilung. Keilschrifturkunden aus Boghazköi (Berlin, 1921—).
- M MESSERSCHMIDT, L. Corpus inscriptionum Hettiticarum. MVAG, 5. Jahrg., Nos. 4-5 (1900).
- I M *Op. cit.*, Erster Nachtrag. MVAG, 7. Jahrg., No. 3 (1902).
- II M *Op. cit.*, Zweiter Nachtrag. MVAG, 11. Jahrg., No. 5 (1906).
- MAOG Altorientalische Gesellschaft, Berlin. Mitteilungen (Leipzig, 1925—).
- MVAG Vorderasiatisch-ägyptische Gesellschaft. Mitteilungen (Berlin, 1896-1908; Leipzig, 1909—).
- OIC Chicago. University. Oriental Institute. Oriental Institute communications (Chicago, 1922—).
- OIP Chicago. University. Oriental Institute. Oriental Institute publications (Chicago, 1924—).
- PSBA Society of Biblical Archaeology. Proceedings (London, 1879-1918).
- RA Revue d'assyriologie et d'archéologie orientale (Paris, 1884—).
- RS Revue sémitique d'épigraphie et d'histoire ancienne (Paris, 1893—).
- RT Recueil de travaux relatifs à la philologie et à l'archéologie égyptiennes et assyriennes (Paris, 1870-1923).
- WVDOG Deutsche Orient-Gesellschaft. Wissenschaftliche Veröffentlichungen (Leipzig, 1900—).
- ZA Zeitschrift für Assyriologie und verwandte Gebiete (Leipzig, 1886—).
- ZDMG Deutsche morgenländische Gesellschaft. Zeitschrift (Leipzig, 1847—).





## INTRODUCTION

Not until the 19th century did the history of the ancient Near East begin to be revealed to the scientific world. Decipherment of the Egyptian hieroglyphs and then of the cuneiform script in which various languages of Western Asia were written has made those regions now comparatively well known. The last area to surrender to scholarly zeal was Asia Minor, the third great cultural center of the ancient Near East. Since the Hittite tablets found at Boghaz Kõi are written in good cuneiform, Bedřich Hrozný's decipherment of that language in 1915 has made them readable without any great difficulty.

About the middle of the last century, however, long before any Hittite cuneiform tablets had been found, there began to be noticed in southern Asia Minor and northern Syria many inscriptions in a strange picture-writing. A. H. Sayce was the first to point out the close relationship between the hieroglyphs of these two regions. Sayce was likewise the one who dubbed them "Hittite." At that time very little was known about the Hittites. So when long afterward the cuneiform tablets found at Boghaz Kõi proved to be the state archives of a real Hittite Empire, there was hopeless confusion in the use of the term "Hittite," the more so because in the interim its misuse linguistically had been matched anthropologically and archeologically. Until we have more definite knowledge of the true Hittites, their origin, their history, and their culture, any distinctions in terminology are impractical. At present we may accept this name as having a geographical connotation, i.e., as implying relation to or origin in the territory once inhabited or ruled by the Hittites. In that sense I have continued its use in this work.

I do not intend to give here the history of the decipherment of the Hittite hieroglyphic writing and language. However, since I shall have occasion to quote a few of the men who have had a hand in it and to whom I am indebted for previous discoveries, I shall mention here in what respects I agree with my predecessors. From Sayce I accept the reading of the king's name on the Tarkondemos boss,<sup>1</sup> the

<sup>1</sup> *Transactions of the Society of Biblical Archaeology*, VII (1880-82), 294-308.

reading of the city name Tyana<sup>1</sup> (corrected to Tini), and the identifications of the nominative ending -s<sup>2</sup> and the accusative ending -n.<sup>3</sup> Peiser discovered the important functions of the division and ideogram marks;<sup>4</sup> Jensen read the Carchemish group;<sup>5</sup> Thompson, the Gurgum group<sup>6</sup> and the personal-name tang;<sup>7</sup> Cowley, the enclitic "and"<sup>8</sup> and the Muški group;<sup>9</sup> Frank, the Malatya<sup>10</sup> and Barga<sup>11</sup> groups. From the scholars above mentioned I have accepted altogether the readings of about ten signs. Each one has also made a number of important observations and comparisons which, even though not acceptable, were always valuable in constraining me to consider every possibility and make some decision concerning it.

Thus far had decipherment progressed in the decades since the discovery of the Hittite hieroglyphic inscriptions when I undertook the difficult task of making speak the lion of Marsh. That scholars are not at all agreed on the most important and essential results of the work of decipherment to date is shown by the few articles which have appeared in the meantime. Meriggi for his part published the very important discovery of the ideograms for "son" and "grandson,"<sup>12</sup> read the Hamath group,<sup>13</sup> and established the differences among the various tangs.<sup>14</sup> However, he blocked his own approach to real decipherment by accepting the impossible group "Syennesis" as a basis for his phonetic values and giving thereby the syllabic value *si* to the very important vowel *i*. His ideas differ entirely from those of Jensen, who believes that the hieroglyphic inscriptions are written ideographically for the most part and can, therefore, never be deciphered without the help of a bilingual inscription.<sup>15</sup>

In working on these mysterious inscriptions it was clear to me from

<sup>1</sup> PSBA, XXV (1903), 179.

<sup>2</sup> Wright, p. 173.

<sup>3</sup> RT, XV (1893), 24-25.

<sup>4</sup> *Die hettitischen Inschriften* (Berlin, 1892), p. 11.

<sup>5</sup> ZDMG, XLVIII (1894), 324.

<sup>6</sup> *A New Decipherment of Hittite Hieroglyphs*, p. 31.

<sup>7</sup> *Ibid.*, p. 20.

<sup>11</sup> *Ibid.*, p. 20.

<sup>8</sup> *The Hittites*, p. 78.

<sup>12</sup> ZA, XXXIX (1930), 199, § 12.

<sup>9</sup> *Ibid.*, p. 58.

<sup>13</sup> *Ibid.*, p. 191, § 8.

<sup>10</sup> ADMG, XVI, No. 3 (1923), 18.

<sup>14</sup> *Ibid.*, p. 179, § 6.

<sup>15</sup> *Ibid.*, XXXV (1924), 251, and XL (1931), 29 ff.

the beginning that with a strict scientific method and plenty of patience decipherment was possible. The disadvantage of having no real bilinguals is compensated by a number of texts bearing in hieroglyphs the name of a city and found at a site the ancient name of which is known from Greek or Assyrian sources. Such a correlation is at least as valuable for the establishment of phonetic values of signs as any bilingual inscription. Like all my predecessors, then, I began with the study of the geographic names. It soon became apparent that, even though I had identified a greater number of cities, this method alone would not open the way to a complete understanding of these hieroglyphic inscriptions. It was necessary to undertake the slow and difficult task of making a complete concordance of all the words and groups of words contained in them. But here another difficulty arose. Never before had anyone tried to make a list of the signs and their variants, and all who have worked on this subject know how difficult it is to determine whether a given sign is independent or is only a variant of a better-known sign. Interrupting work on the concordance, I made a complete list of all the signs and their variants. This gave a definite basis for identification of the monumental with the corresponding cursive forms.

The concordance, when completed, proved fundamental not only for understanding the grammatical structure of the language but especially for identifying the most important phonetic variants—the real goal of my undertaking. This, together with the variant forms obtained from the sign list, made possible a real understanding of the character of the hieroglyphic inscriptions. I was able to determine (1) that the number of signs used phonetically does not exceed fifty-six or so, (2) that there are no sign values beginning with a vowel (e.g., *ap*), (3) that there are no closed syllables (e.g., *pam*), (4) that there are only syllables ending in a vowel (e.g., *pa*), (5) that closed syllables can be written only by using two syllables each ending in a vowel (e.g., *pam* = *pa+me*). In short, the general system of the Hittite syllabary corresponds exactly to that of the Cypriote syllabary, except that in the Hittite writing ideograms or word-signs are used along with the syllabary.

As soon as it became clear that all the syllables must end in a vowel, a new and very helpful way of fixing the values of the phonetic

signs presented itself. Thus, if  $x+a$  was sometimes written as  $x$  only, it could be assumed that the sign  $x$  must contain in itself the vowel  $a$ . By this means I was able to establish in a few cases the value of the vowel in a syllabic sign the consonant of which remained questionable.

The so-called "internal" method of approach which I used lets the inscriptions speak for themselves without being influenced by other scripts or languages. The numerous appropriate names obtained thereby and the consistency of my results in general speak strongly in favor of the validity of my method. I divided my task into two entirely different parts: one, the decipherment of the writing; the other, that of the language. Working at first exclusively on the writing and ignoring grammatical considerations, I was able to establish values for some fifty of the syllabic signs, of which about thirty are fairly certain. Even during my work on the signs, however, my concordance yielded important grammatical results. I have not been backward in pointing out features of Hittite grammar about which I have no doubts. At the end of this work I give a short grammatical sketch which is to be considered rather as a summary of the various grammatical forms than as a real explanatory treatment.

The general impression I have derived from my studies is that the Hittite hieroglyphic inscriptions represent a dialect related to the cuneiform Hittite language, but that since these inscriptions are a few centuries later they are much more under the influence of Asianic languages than was the official language of the Hittite Empire.

The main results of my work are those above mentioned. With them in mind, how easy and clear the Hittite hieroglyphic writing now appears! If only one more site the ancient name of which is known from other sources would yield a hieroglyphic inscription containing that city's name, we should have a complete syllabary with all values ascertained and proved. I say only one; and this really would be enough, because if a new geographic name contained, let us say, four or five signs, two of which evidently had the values already assigned them in this work, the values for the rest of the signs could be satisfactorily identified. Since all my work on the syllabary depends on a few series in which the value of one sign is based on or proved by another in a similar group of signs, one sure new value may give the clue to a long chain of signs.

And the ideographic signs? Sometimes one would think that the good old Hittites almost knew how difficult it would be for modern scholars to decipher their mysterious language. To facilitate our efforts they very often added phonetic complements, sometimes repeating a whole word phonetically after its ideogram, thus enabling us to read approximately the name of the ideogram. Can one imagine anything easier? The ideogram gives the idea, and the phonetic complements give the name of that idea—a combination not available in even the cuneiform in which most of the Asianic languages are written.

For such reasons I am very optimistic over our prospects for better knowledge of the Hittite hieroglyphic inscriptions. I am hopeful that in a few years we shall be able to read and understand these hieroglyphic inscriptions better than any other ancient autochthonous records of Asia Minor.

From another point of view also the importance of the Hittite hieroglyphs should be stressed. Their origin lies entirely in the West; as indicated elsewhere in this work,<sup>1</sup> they must be connected with the Cretan pictographs. Since some of the signs in the two systems are exactly the same both in nature of the object represented and in form, these two systems of writing—both of them entirely different from Egyptian and cuneiform—must have a common origin. I hope that the decipherment of the Hittite hieroglyphs will open the way for the reading of the Cretan inscriptions also and thus unveil the greatest mystery of all antiquity, that surrounding the ancient Pelasgians.

<sup>1</sup> See pp. 79-81.

## I

## THE WRITING

## GENERAL OBSERVATIONS

## THE SIGNS

Hittite hieroglyphic writing, like the Egyptian, Cretan, and Sumerian, is pictorial in origin. The objects represented by its signs can almost always be clearly recognized, though the forms of the signs are more variable than in Egyptian. A single sign may have many different and even dissimilar forms. The great area over which Hittite inscriptions have been found evidently prevented such uniformity of design as was possible in the relatively small and shut-in country of Egypt. As out of Egyptian hieroglyphic developed cursive writings also, the hieratic and the demotic, so too the Hittite hieroglyphs are matched by cursive forms. Both styles are used in writing on both stone and lead. Hittite hieroglyphic inscriptions can thus be divided into two well defined groups: (1) monumental and (2) cursive. The monumental style is represented mostly by inscriptions found in Syria, i.e., those from Hamath, Carchemish, and Marash. The only cursive inscriptions found thus far are derived from Asia Minor.<sup>1</sup> It would, however, be dangerous to conclude from this that the cursive style was not used at all in Syria for ordinary purposes.

A highly developed kind of monumental writing is found in inscriptions from Emirghazi which are quite different from the rest of the Asia Minor inscriptions. Many signs are combined into one for aesthetic reasons. The separation of individual words and groups of signs is thus made much more difficult. Similar development of a monumental writing into an ornamental style can be observed in the scripts formerly used by the Turks, all derived from the simple Arabic alphabet.

Since a special kind of writing was used on seals, in many cases it is very difficult to identify on them signs corresponding to those of other inscriptions. The forms of the signs are much abbreviated and

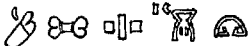
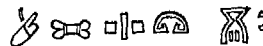


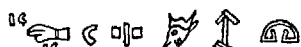

<sup>1</sup> The lead strips found at Assur constitute a possible exception. Cf. pp. 72-74 and 77.

simplified, and their order is uncertain in most instances, in spite of the fact that usually a legend is repeated on both sides of a seal.

The monumental and cursive forms may, for no apparent reason, be found mingled in one and the same inscription. Thus the head of a donkey appears in both its monumental and its cursive form in a single line (A 6:6). The same is true of a ram's head (A 6:1). Sometimes in such clear cursive writing as that found on the lead strips from Assur monumental forms representing, e.g., a donkey's head (Assur f Ro 31) and a goat's head (Assur f Ru 3), are used; but in these cases such forms probably indicate that the signs in question were to be read not phonetically but as ideograms.

The lines always read boustrophedon. This arrangement is found elsewhere in the Near East in, e.g., Cretan and South Arabic writing. The direction in which the Hittite is to be read can be easily recognized, because its signs always face toward the beginning of the line. The first line may start at either the right or the left. Though there is no established rule in this matter, the scribes preferred on the whole to start at the right. Among the long Carchemish inscriptions, only A 14 starts at the left; every one of the inscriptions on the lead strips from Assur, if we assume that Assur g is a continuation of Assur f, starts at the right. But in Marash the scribes preferred in general to begin at the left. There are few exceptions to the general rule concerning the order of the signs. In one text the signs are arranged in big groups from top to bottom (A 17a, frags. 1, 2, 3). In a few other cases the direction of a large part of a whole line is mistaken, e.g., in CE XII:2 and M VI:5 f.

The words are always grouped in short columns of one to five signs according to the size of the individual pictures or the height of the horizontal lines. The order of signs in the word groups is certain in the Assur inscriptions only; in other texts, especially in the long monumental inscriptions, the order of the signs is not so clear. As in Egyptian, signs are often transposed for aesthetic reasons. The following examples all come from Carchemish:

	A 11a:1	for		A 11b:1
	"	for		A 2:6
	"	for		A 2:1

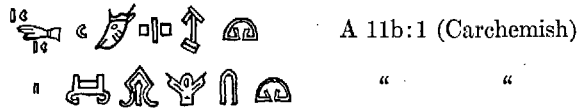
## THE DIVISION MARK

Words are separated by a division mark  $\text{𐎠}$ , used very regularly in the Assur lead strips only. At Carchemish and Marash it occurs less consistently. It is not found at all at Hamath nor in most of the inscriptions of Asia Minor. Word division, even when indicated, is not always consistent. Sometimes a long group of signs was considered by one scribe as a single word, whereas by another it would be divided. Cf. Assur f Vo 20 with Assur f Vu 4. The sign is usually put at the beginning of a word so as to separate it from the preceding word. Very rarely is it placed in the middle of a group, as in Assur f Vo 20. In CE XII:4 it is put at the end of a word. In both these exceptional cases the division mark was misplaced in order to utilize a free space. Scribal mistakes are surely responsible for the few cases in which the division mark points in the wrong direction, e.g., M VIII A:4 and B:4; A 1b:1 and 3; A 2:6; A 11a:2; CE IX:3; CE XII:2.

The division mark functions in less usual fashion in the following cases:

1. In  $\text{𐎠} \text{𐎠} \text{𐎠} \text{𐎠}$  (Assur f Ro 34) and in two examples illustrating *yi* on page 46 this sign is phonetic.

2. It is always present in the groups of signs denoting "son," "grandson," or other family relationships (cf. p. 64). Examples are:



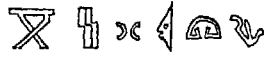

3. In a few cases a sign like a double division mark occurs at the beginning of a line. This combination can be explained in CE XII:1 ( $\text{𐎠} \text{𐎠} \text{𐎠}$ ) and CE XIII:2 as an abbreviation for the usual "grandson" group. We do not know what ideogram it may stand for in A 6:3, A 16e:2, M I, M X:6, and M XLVIII:3. It is used only in connection with the three signs  $\text{𐎠}$ ,  $\text{𐎠}$ ,  $\text{𐎠}$ , the first two of which are related in sound (cf. pp. 34-35).

## THE IDEOGRAM MARKS

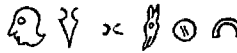

A special mark  $\text{𐎠}$  indicates that a given sign or group of signs is to be read ideographically. This mark is not used very regularly. It



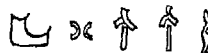

is sometimes omitted when the ideographic reading of the sign or signs in question has already been indicated in the preceding group, as in

 A 6:7 (Carchemish)  
 " " (-) " "  A 6:8 "

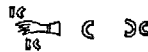
or when signs are involved which have only ideographic and never syllabic values, as in

 A 18e:2 (Carchemish)  
 " " (-) " "  A 7b:2 "

Sometimes the ideogram mark is omitted for other reasons. The fact that a few signs point in one direction when used ideographically, and in the other when used phonetically, suffices to distinguish their readings. The sign representing the foot is an example:

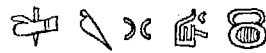

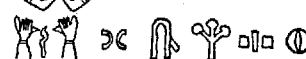
 A 6:4 (Carchemish)  
 " (-) "  " A 6:7 "

This ideogram mark is used in one special case:







 A 15b\*\* :3 (Carchemish)

Probably the scribe started to write the word for "son," then, deciding to abbreviate it, put down the ideogram mark at the end of the unfinished group.

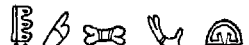

As in cuneiform writing, ideograms can be expressed by two or three different signs put together, for example:

 M V:2 (Hamath)  
 I M X:1 (Carchemish)  
 A 12:5 "

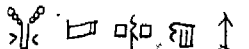

As in cuneiform and in Egyptian writing, ideograms may have phonetic complements of different lengths:

	"prince"	A 13d:1 (Carchemish)
	"prince"- <i>si</i>	M IXB:2 "
	"prince" ( <i>na</i> )- <i>si</i>	A 6:1 "
	"prince" ( <i>na-a</i> )- <i>si</i>	A 11b:1 "
	"prince" ( <i>i-na-na</i> )- <i>pa</i>	A 11a:2 "
	"prince" ( <i>yu+ri-i-na</i> )- <i>si</i>	A 11a:1 "

In some cases the phonetic signs following an ideogram are so numerous as to indicate that the word represented is completely spelled out. Examples are:

	<i>X-ka-ti-ni-si</i>	A 6:5 (Carchemish)
	<i>X-yu+ri-x-ni-su</i>	" "






#### The groups


	<i>tirsā(ti-i+ri-sā)-wā</i>	II M XXXIII:3 (Bor)
	<i>tirsā(ti-i+ri-sa)-ni</i>	" "



seem to me to give real proof of complete phonetic spelling after an ideogram. The vine branch is followed by signs which spell *tirsā*. Now if we take into consideration a common phonetic interchange between *i* and *u*, this word would correspond perfectly to the Greek word *θύσος*, which stands for the emblem of the god Bacchus. The Hittite hieroglyphic picture will certainly help to clarify the origin of this strange Greek term. The word corresponds also to Hebrew *tirōš* and Assyrian *sirāšu*, "must." This agrees well with the usual derivation of viticulture from Asia Minor. The English word "wine," like Latin *vinum* and Greek *οἶνος*, comes probably from the Hittite cuneiform *wi*, which gave rise also to Assyrian *īnu*, Hebrew *yayin*, and Arabic and Ethiopic *wain*.

Many proper names of Asia Minor are based on the root *tirsa*. They include personal names: *Θυρσος* and *Tirsas*;<sup>1</sup> city names: *Ταρσος* in Cilicia,<sup>2</sup> *Turša* in Nuzi documents,<sup>3</sup> *Tyrsa* in Asia Minor,<sup>4</sup> *Tirissa* in Unqi,<sup>5</sup> and ethnic names: Pisidian *Τυρσηνος* and *Συρσηνος*,<sup>6</sup> the Teresh who participated in the Sea Peoples' invasion of Egypt,<sup>7</sup> and the Tyrsenians or Etruscans of Italy.<sup>8</sup>

When an ideogram could be read in various ways, it was necessary, as in other pictorial writings, to add phonetic signs to show which reading was intended in any given case. Compare, for example, the diverse readings of the following ideograms:

	<i>XX-ta-hi-su</i>	A 7b:2 (Carchemish)
	<i>XX-li-a-si</i>	II M XXXIII:1 (Bor)
	<i>X-gu-ta</i>	A 13:5 (Carchemish)
	<i>X-mi-ni</i>	II M LIII (Nigdeh)
	<i>X-ka-pa-ni</i>	M I (Babylon)

A special ideogram mark of considerable minor importance has the form of a semicircle , as in

	Assur e Vu 9 (Assur)
	Assur e Vu 33 “

<sup>1</sup> Cf. A 7j:1.

<sup>2</sup> Sundwall, p. 217.

<sup>3</sup> Chiera, *Joint Expedition with the Iraq Museum at Nuzi* (American Schools of Oriental Research, "Publications of the Baghdad School," *Texts*), Vol. I (Paris, 1927), 24:6 and 98:38.

<sup>4</sup> Ramsay, *The Historical Geography of Asia Minor* (London, 1890), p. 414.

<sup>5</sup> Boudou, p. 180.

<sup>6</sup> Sundwall, p. 221. For  $\Sigma$  he gives  $\Theta$ , misquoting from his source, J. R. S. Sterrett, *The Wolfe Expedition to Asia Minor* (American School of Classical Studies at Athens, "Papers . . .," Vol. III [Boston, 1888]), p. 273.

<sup>7</sup> Breasted, *A History of Egypt*, p. 467.






<sup>8</sup> Perhaps *Tīrās* of Gen. 10:2 also belongs to this group of geographic names; cf., however, R. Dussaud in *Babyloniaca*, XI (1930), 77.

## THE TANGS

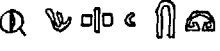
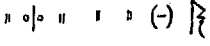
It is necessary to distinguish three different short strokes or tangs:

1. An oblique tang, placed always at the top of the word column and pointing in the direction of the writing, denotes very clearly a personal name. This stroke occurs regularly only in the Carchemish and Marash inscriptions and with a few personal names from Malatya and Babylon. Elsewhere it is practically unused. Proof that this oblique stroke determines personal names is given by many introductory lines, such as those of A 2, A 6, and A 11, in which it appears above the first sign of what is presumably a personal name immediately following the well known introductory word *i-me-a*, "I."

2. Much more difficult and complicated is the question of the tang attached to the middle or lower part of a sign. It also tends to point in the direction of the writing. The value of this type of tang can be deduced by comparison of the following examples:

	<i>karka(ka)-me-sá</i>	A 15b** :1 (Carchemish)
	<sup>d</sup> <i>karku(ku)-u-si</i>	A 11a :3 "
	<sup>d</sup> <i>ka+ri-ku-u-ā</i>	A 13d :6 "
	<i>ka+ri-ka-me-sá</i>	A 4b :1 "
	<i>gu+ri-gu-ma-i-na-a-sá</i>	I M XXI :1 (Marash)

This tang is evidently phonetic and pronounced after the syllable to which it is attached. The variant writings of *karku* are explained on pages 27–28. The first sign in the fourth example is evidently a compound formed with a quite distinctive tang or pair of tangs. The third and fifth examples contain the simplest form of phonetic tang. Comparison with the other examples indicates that both the simple and the unusual tang contain the sound *r*.<sup>1</sup> The vowel which follows the *r* in the simple tang at least is given by comparison of

	<i>u+ri-ni-i-na-a-si</i>	Syria, X, Pl. XXXII :2 (Tell Ahmar)
	<i>u+ri-ni-ni-i-na-su</i>	CE V :3 (Kara Burun)

<sup>1</sup> An alternative explanation would be that the four projections found in the unusual tang represent the syllable *me*. The latter occurs compounded with *pa* and other

In the second of these two groups the phonetic complement *i* proves not only the nature of the vowel which accompanies *r*, but also shows that the vowel here is to be pronounced. In the first example, however, without the phonetic complement, the situation is ambiguous. In fact, it is usually difficult, and sometimes impossible, to decide whether the tang is to be pronounced with its full value *ri* or is merely used to add an *r* (cf. Author's Note).

It would appear that, as in Egyptian, the Hittite *r* often weakens to a *y*. Compare

𐎗𐎗𐎗𐎗	<i>i+ri-mi-ta</i>	Assur a Ro 3 (Assur)
𐎗𐎗 " "	<i>i -mi-ta</i>	Assur a Ro 6 "
𐎗𐎗𐎗𐎗𐎗	<i>na-pi-i+ri</i>	A 13a (Carchemish)
" " 𐎗𐎗	<i>na-pi-i</i>	" "
{ 𐎗 𐎗 𐎗 𐎗 }	<i>XX-li-a+ri-si</i>	CE IX:1 (Bagheche)
" " " 𐎗 "	<i>XX-li-a -si</i>	II M XXXIII:1 (Bor) <sup>1</sup>

That the tang *r* sometimes does duty as *l* appears from








𐎗 𐎗𐎗 𐎗𐎗	<i>ni-i+r/li-li-si</i>	M XLI:1
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This close relationship between *r* and *l* is well known from Egyptian and Chinese also.











As seen in the foregoing examples, the phonetic tang can express any one of the related sounds *r*, *l*, or *y*, with or without the addition of an *i* vowel. The use as *y* often amounts merely to an indication that a preceding *i* is long.

signs (cf. pp. 24, 34, and 41). The geographic name 𐎗𐎗-*ga-mis* quoted by Thureau-Dangin, *Le syllabaire accadien* (1926), p. 31, should in that case be read *gamgamis* instead of *gurgamis*. This is an example of how our hieroglyphic inscriptions might help to correct the reading of a proper name written in cuneiform.

<sup>1</sup> If the name Gaga (Knudtzon, p. 1015) really corresponds to Gargamiš, we would have here another example of the weakness of *r*, a weakness which can be observed also in such geographic names as Meturna and Metuna, Darnešeq and Dimašqi. Cf. also Thompson, *A New Decipherment*, p. 31, for other examples.




















This tang occurs most commonly with , , whereas other signs, such as ,  (but  can have it), and <sup>1</sup> (but  can have it), never take it. It is probably derived from the single vertical stroke which occurs as an independent sign for *ri* in our syllabary (frontispiece). The same sign is even used in A 12:3 and 4 as an ideogram.


3. A third straight tang, attached usually to the lower part of an ideogram, stands usually between the two halves of the commoner ideogram mark (p. 8). Compare











          *X-ta-ni-tá-wi*      A 11b:4 (Carchemish)  
          (“river”) *sá-gu+ri-i-na*      A 11c:3      “

Since the second group contains the river name Sagur (p. 26), and since the first sign of that group is (when without the tang) the ideogram for “water,” I would suggest that the tang there specializes that sign into an unpronounced determinative for “river.” Whether it has a specializing function in the first group too remains uncertain.


From the preceding paragraphs we have observed three different uses of straight tangs:

Determinative of personal names:     ;         A 11a:1  
 (Carchemish)  
 Phonetic:           ;         A 13d:6 and A 12:4  
 (Carchemish)  
 Ideogrammatic:     ;            A 11b:4  
 (Carchemish)





Besides the straight tangs there is also a curved tang, . Signs with which it has been found include

, , , , , , , , , . Upon comparing these with the signs which take the straight tang, it appears that signs taking one form do not take the other.<sup>2</sup> This

<sup>1</sup> Except once in A 15b\*\*:3.









<sup>2</sup> Except that  has a straight tang in M V:2 and in Assur e Ro 24.

shows how consistent were the users of this hieroglyphic writing and how definite were its rules. From comparison of

			<i>wā+ri-wa-me-si</i>	A 7j (Carchemish)
	" "	" "	<i>ar+x-wā-me-si</i>	A 12:1 "






it would appear that this symbol, like the straight phonetic tang, may contain the sound *r*.










Ⓟ is very rare as an independent sign. It appears in the midst of a group of signs in the following cases only:

			<i>i-me-ri-sa</i>	Assur g Vo 7 (Assur)
" "	" "		<i>i-me-ri-wi</i>	A 15b* (Carchemish)
" "	" "		<i>i-me-ri-tá</i>	CE V:1 (Kara Burun)
			<i>X-pa-ri-tá</i>	AAA, II, Pl. XXXVIII:7 (Tell Ahmar)

#### THE WRITING OF SYLLABLES

A student of cuneiform would look in Hittite hieroglyphs for closed syllables written by combining two simple syllables in the form *ba+am=bam*, *gu+ur=gur*, etc. That these, however, do not occur is shown by the following examples:

The country name Gurgum is written *gu+ri-gu-ma* (p. 18), not *gu-ur-gu-mu*.     , "sun" *pa-me-ma-si*, evidently corresponds to the personal name Bamma (p. 41).

     and     in A 4 a:3 and 3:4 (Carchemish) are variant writings of a divine name which cannot be transliterated otherwise than as *gu-pá-pi-pi-si* and *gu-pá-pi-si*, Gupappis.

We may, then, draw the conclusion that Hittite hieroglyphs contain no syllables ending in a consonant. Upon arriving at this point, I looked over my list of phonetic signs and saw, with astonishment, that all but one (since changed) of the values which I had previously assigned ended in a vowel.






I then counted the signs which I had been considering as phonetic and found that they totaled fifty-six, a quantity so small that it ac-

cords well with the conclusion previously reached.<sup>1</sup> The vowels found number only four: *a*, *e*, *i*, and *u*. There are twelve consonants (p. 74). In such series of syllables as those with *m* and *n* (see frontispiece), in each of which more than four characters appear, it is evident that there must be consonantal differentiations not expressed in the cuneiform characters which served me as a key in the attribution of values. In these instances, for example, some of the *m*'s and *n*'s may represent such sounds as English *ng* in "sing" and French *n* in "un." Again, in the group with *t* the sound *th* may occur.<sup>2</sup>

The Hittite usage above noted is in striking agreement with the Cypriote. I should explain that I had reached my own conclusions as to Hittite before seeking possible parallels elsewhere. Upon comparing the Cypriote syllabary, however, its manner of writing closed syllables was seen to be clearly analogous. The Cypriote, for example, would write such words as ἀργύρω in the form *a-ra-ku-ro*, with a silent *a* in the second syllable on account of the sounded *a* in the first. Our Hittite inscriptions, however, prefer for such a purpose syllables ending in *i*.

### THE SYLLABARY

#### READINGS BASED ON GEOGRAPHIC NAMES

Determinatives of geographic names were identified long ago. They represent either one or two mountain peaks or a combination of these two signs. The single peak  apparently indicates a city. Though its outline is the same as that of the tiara , the ideogram for "king," the two characters are clearly distinguished by their interior markings. The twin-peak sign  seems to stand for "land," "country." When repeated in the form , the plural is indicated. When the "city" sign is followed by the "land" sign, the resulting combination 

<sup>1</sup> In making up my list of phonetic signs, I used every sign which occurred more than twice beyond the second place in its word group in all the hieroglyphic inscriptions taken together. Signs beginning a word group, and even those standing in second place in a group, could not be taken into account because, if rare, they are usually ideograms.

<sup>2</sup> For further phonological details see pp. 74-76.

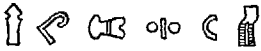



evidently represents the Assyrian *mât âli*, "land of the city (of . . . )."<sup>1</sup> In spite of their difference in form, these two signs often interchange (cf. p. 24).

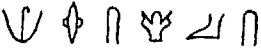


Since the determinatives just mentioned regularly follow groups of characters representing geographic names, it becomes relatively easy to distinguish the latter in the Hittite hieroglyphic inscriptions. Especially valuable are the geographic names in such inscriptions as are definitely known to have been found at a site the ancient name of which is familiar to us from other sources. Our simplest approach to the identification of Hittite syllable-signs is along this line.

Place-names meeting the conditions just outlined are five in number: Hamath, Gurgum, Tunni, Haleb, and Carchemish.

## 1. HAMATH

	<i>a-ma-ti-i-na</i> ("land") <sup>2</sup>	
		M IV A:1 and B:1 (Hamath)
" 	<i>a-ma-ti-i-na</i> ("land")	
		M VI:1 "

The first sign in the foregoing writings is doubtless a vowel,<sup>3</sup> since in otherwise parallel groups of signs it is often omitted. Compare its occurrence in a more usual form in

	<i>X-la-a-sa-pa-a</i>	Assur g Vu 19 (Assur)
" " (-) " 	<i>X-la -sa-tá</i>	Assur g Vo 21 "
	<i>X-pa-a-su</i>	A 6:1 (Carchemish)
" " (-) "	<i>X-pa -su</i>	A 15b**:1 "

The vowel *a* is evidently the one intended.<sup>4</sup>













<sup>1</sup> Sayce in PSBA, XXV (1903), 142.

<sup>2</sup> Though our demonstration of values follows instead of preceding this and other transliterations, it seems to us most convenient for later reference to insert the latter regularly directly after the hieroglyphs themselves.

<sup>3</sup> The city name Hamath appears without initial *h* as Amat in Luckenbill, I, § 715.

<sup>4</sup> The identity of the two forms of *a* appears from their interchange as phonetic complements of *la* in *mi-i-ta-la-a-sa-sá* and *X-la-a-sa-pa-a* on p. 38 and of *ná* in "prince"-*ná-a-si* and "son"-*ná-a-mi*-[. . .]-*wá-si* on p. 22.






















The second sign appears in two forms, the monumental and the cursive. Their equivalence is shown in the following parallelisms:

			<i>i-ma-ni</i>	A 11b:3 (Carchemish)
			<i>i-ma-ni</i>	Assur f Ru 13 (Assur)
			<i>i-ma-wā</i>	A 11b:6 (Carchemish)
			<i>i-ma-wā</i>	Assur e Vo 23 (Assur)

The position of this symbol in the name indicates for it the value *ma*,







The third sign, then, presumably begins with *t*. That the accompanying vowel is *i* is suggested by the seal of Indilimma (p. 36).

## 2. GURGUM

							<i>gu+ri-gu-ma-i-ná-[a]-si</i> ("city")	II M LII:1
							<i>gu+ri-gu-ma-i-na-a-sá</i> ("city")	I M XXI:1
							<i>gu+ri-gu-ma-ni</i> ("city" "land")	von der Osten, "Four Sculptures from Marash," Fig. 7:3

The foregoing groups of signs are taken from inscriptions found at Marash, ancient Marqaši, which would seem according to the Assyrian annals to have been the capital of the kingdom of Gurgum.<sup>1</sup> The only difference between the first sign and the second is that to the former is added the tang already discussed on pages 12-13. So it is easy to read them together as *gu+ri-gu*. The third sign, then, should contain *m*. That it is actually the same sign which we have already found in the name of Hamath enables us at once to read it as *ma*.

## 3. TUNNI (ATUNA)

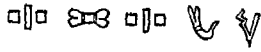

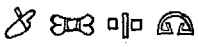

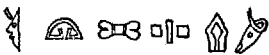
						<i>ti-i-ni-i-na-si</i> ("city") <sup>2</sup>	II M XXXIII:1 (Bor)
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The first sign, *ti*, has been found already in the name of Hamath. The second sign is evidently a repetition of the vowel, since it occurs

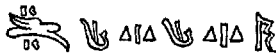
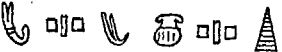
<sup>1</sup> Cf. Luckenbill, II, §§ 79 and 99.

<sup>2</sup> The first three signs of this group occur again in II M XLVIII:3; but there we have probably not the name of a country but simply an adverb, as in Assur e Ru 31 and g Vu 27 with different endings.

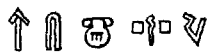
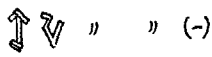
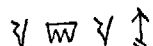
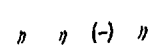
after *ti* not only here but in the writing of Hamath (pp. 17-18), as well as in such examples as the following:

	<i>i-ti-i-ni-e</i>	A 12:5 (Carchemish)
" " (-) 	<i>i-ti -ne-e</i>	M II:4 (Babylon)
	<i>nka-ti-i-si</i>	A 2:1 (Carchemish)
	<i>n<sup>ti</sup>-i+ri-sa-a-su</i>	A 7j:1 "
	<i>n<sup>a</sup>-si-ti-i-tu-ma</i>	A 11a:1 "

It has long been recognized that the third sign found in the writing of Tunni contains an *n*.<sup>1</sup> If our reading of *ti* is correct, the vowel of this *n* sign also is *i*, for it occurs commonly with the same phonetic complements in such combinations as

	<i>X-ni-i-ni-i-su</i>	I M XXI:3 (Marash)
	<i>ni-i-ni-pi-i</i> ("city") <sup>2</sup>	A 12:3 (Carchemish)

In one of the examples above (A 12:5) *ni* is followed not by *i* but by a different sign. The latter occurs again in the parallel example (M II:4) after a variant of *ni* itself. The new vowel sign is seen again in

	<i>wa-a-pi-i-e</i>	A 6:3 (Carchemish)
	<i>wa-c-pi-i</i>	" "
	<i>e-x-e-wa</i>	Assur f Vo 12 (Assur)
	<i>e-x -wa</i>	Assur a Vo 11 "

In A 6:3 it follows once *i* and once *wā*. Hence its value probably lies between *i* and *a*, and we may call it *e*. The variant of *ni* in M II:4 will then be *ne*. Further discussion of *ne* will be found on pages 43-44. A sign looking like a combination of *e* with the tang seems to have the value *pā*; compare pages 49-50.

<sup>1</sup> Sayce in RT, XV (1893), 23-25.

<sup>2</sup> I.e., Nineveh?

A royal name found in this same inscription is

𐎠 𐎡 𐎢𐎣 𐎤𐎥𐎦𐎧𐎨𐎩𐎪𐎫𐎬𐎭𐎮𐎯𐎰𐎱𐎲𐎳𐎴𐎵𐎶𐎷𐎸𐎹𐎺𐎻𐎼𐎽𐎾𐎿 *ma-ti-sá* "king"-i II M XXXIII c:4 (Babylon)

It begins clearly with *ma-ti*. Now in the Assyrian inscriptions<sup>1</sup> we find mentioned Matti (Mati) of Atuna (Tunni). Both the geographic and the royal name evidently correspond to those we have just found in hieroglyphic.<sup>2</sup> Together they corroborate our readings of *ti* (p. 18) and *i* and *ni* (p. 19).

This city of Tini (Assyrian Atuna or Tunni) is not the noted city of Tyana but a neighboring city called Tynna by Ptolemy.<sup>3</sup> In any event this place-name is one of several examples of variation between cuneiform and Hittite hieroglyphic methods of indicating shades of sound between *u* and *i* (cf. pp. 75-76).

#### 4. 𐎧𐎠𐎵

𐎧𐎠𐎵	𐎧𐎠𐎵	𐎧𐎠𐎵	𐎧𐎠𐎵	𐎧𐎠𐎵	<i>halpi(pi)</i> -[. . .] ("city") CE XXIV:1 (Aleppo)
𐎧𐎠𐎵	𐎧𐎠𐎵	𐎧𐎠𐎵	𐎧𐎠𐎵	𐎧𐎠𐎵	<i>halpi(pi)</i> - <i>i</i> - <i>na</i> - <i>wa</i> ("land") M III B:3 (Hamath)
𐎧𐎠𐎵	𐎧𐎠𐎵	𐎧𐎠𐎵	𐎧𐎠𐎵	𐎧𐎠𐎵	<i>halpi(pi)</i> - <i>i</i> - <i>ná</i> - <i>si</i> M II:1 and 6 (Babylon)
𐎧𐎠𐎵	𐎧𐎠𐎵	𐎧𐎠𐎵	𐎧𐎠𐎵	𐎧𐎠𐎵	<i>halpi(pi)</i> - <i>na</i> Assur 8 (Assur)

This same name is used as a personal instead of a geographic name in A 1a:4, A 7i, M XVI:1, and CE XXI:1, and again at Marash as the beginning of a personal name in I M XXI:1 and 2 and II M LII:1 and 3. Hence it was necessary to find a proper name used in both these ways. Now Frank<sup>4</sup> had noted Šanḫar as a geographic and Sangara as a personal name. So I tried the ideographic value *sanḫar* for the first two signs of this place-name taken together, and assumed for the third sign the value *ri*; but this reading could not be maintained, for


<sup>1</sup> Luckenbill, II, §§ 7, 55, and 214, and Mayer and Garstang, p. 12.










<sup>2</sup> It is, of course, possible that not the same king but another of the same name is intended in the Assyrian. However, full identity is likely, for the statue from Bor which bears the hieroglyphic inscription shows indubitable Assyrian influence and could well belong to the same period, that of Sargon II, as do the Assyrian texts in question.

<sup>3</sup> Forrer, *Provinzeinteilung*, p. 72. Tyana is called Tuwanuwa in the Boghaz Köi inscriptions; see Mayer and Garstang, p. 47.

<sup>4</sup> "Die sogenannten hottitischen Hieroglypheninschriften," p. 21.

the third sign often begins words, whereas in most of the languages of Asia Minor the consonant *r* is not used initially.<sup>1</sup>

Since the first of the foregoing groups of writings was found at Aleppo, I then assumed that it represented the name of that city. Inasmuch as the first two signs appear in this grouping in these instances only, they seem to represent jointly the rare ideogram *halpi*. The third sign  appears to be a phonetic complement. We may read it as *pi*, since it is followed in two of our examples by the *i* which has been identified above. That the *i* may be omitted at will is apparent from the other two examples as well as from the groups

				<i>pi-i-pa-ā</i>	CE XII:4 (Bulghar Maden)
"	(-)	"		<i>pi -pa-a</i>	CE XII:3 "
				<i>pi-i-tá</i>	A 11c:2 (Carchemish)
"	(-)	"		<i>pi. -tá</i>	A 11b:3 "

The root *halpi* appears in cuneiform<sup>2</sup> in such personal names as *Ḫallabaa*, *Ḫalpaa*, *Ḫalpaššulubiš*, *Kalparunda*,<sup>3</sup> *Ḫalbišu*,<sup>4</sup> *Ḫalpamuwaš*,<sup>5</sup> and *Ḫalpaḫiš*,<sup>6</sup> and in such city names as *Ḫalbumaš*, *Ḫalipašuwaš*,<sup>7</sup> *Ḫalbuda*, *Ḫalbuknu*, *Ḫallab*, and *Ḫalpi* (= *Ḫalman*).<sup>8</sup> These numerous names, especially the personal ones, which come in general from the same territory, show how common was the use of this root.

The ending *-ina* found above with the name of *Ḫalpi* corresponds

<sup>1</sup> Cf. Hittite, *Ḫurrian*, *Mitannian*, *Lycian*, and *Lydian*.

<sup>2</sup> It appears in Egyptian also in a personal name equivalent to cuneiform *Ḫalpašili* or *Ḫalpašarri*; see Luckenbill, *AJSL*, XXVI (1909/10), 99.

<sup>3</sup> See Tallqvist, pp. 83 ff.

<sup>4</sup> Harper, *Assyrian and Babylonian Letters*, No. 633:5.

<sup>5</sup> Friedrich, *KAF*, I (1930), 362.

<sup>6</sup> Hrozný, *BKS*, III (1919), 131.

<sup>7</sup> Mayer and Garstang, p. 16.

<sup>8</sup> Names, but not equation, from Boudou, pp. 68 ff.

to a recently discovered spelling of that city's name as Ḫalbini.<sup>1</sup> This ending  $\square\text{a} \text{ } \text{C}$  *-ina* has, in fact, been present in each of the four place-names thus far discussed. For it *-ini* or *-ni* is sometimes substituted, as in

	<i>e-mi+ri</i> -("land")- <i>i-ni-pa</i> ("city") A 15b**:4 (Carchemish)
	[...] - <i>gu-i-a-ti</i> -("city")- <i>i-ni</i> CE XXVI A:8 (Samsat)
	<i>X-a</i> -("land")- <i>ni-ta</i> <i>Syria</i> , X, Pl. XXXIII:6 (Tell Ahmar)
	<i>X</i> -("land")- <i>ni-pi-i-si</i> AAA, II, Pl. XXXVIII:4 (Tell Ahmar)

Interchanges of the syllables which we call *ni* and *na*, but without the initial *i*, are seen in

	<i>X-ka-ti-ni-si</i> A 6:5 (Carchemish)
	<i>X-ka-ti-na-wa-a-sa</i> " "
	<i>XX-u+ri-sa-ta-ni-wa</i> A 11c:2 "
	<i>XX-u+ri-sa-ta-na-wa</i> A 11b:5 "

As we have already seen, is to be read *ni*. Hence also contains an *n*. It and , found already as variants in the names of both Gurgum and Ḫalpi (pp. 18 and 20), interchange in the following examples also:

	"prince"- <i>na-a-si</i> A 11b:1 (Carchemish)
	"prince"- <i>na-a-si</i> A 12:1 "
	"son"- <i>na-a-mi</i> -[...]- <i>wa-si</i> II M LII:1 (Marash)
	"son"- <i>na -mi-i-wa-si</i> A 2:1 (Carchemish)

<sup>1</sup> Cf. Virolleaud, "Les inscriptions cunéiformes de Rās Shamra," *Syria*, X (1929), 305.

Since both are followed above by the same phonetic complement *a*, they may be transliterated as *na* and *ná* respectively.

Now the ending *-ina* appears as *-na*, meaning "town" or "city," in the Haldian language.<sup>1</sup> Under the form *-ene* it was common later in such country names as Osroëne, Melitene, and Commagene. Both in Haldian and in the Hittite cuneiform such an ending is sometimes used, sometimes omitted.<sup>2</sup> In Hittite it apparently adds the "country" idea. In fact, this ending seems to form a part of the Hittite hieroglyphic noun for "land" or "country." Cognate forms of this word appear in so many languages of Western Asia that it was quite natural to seek it, and not at all surprising to find it, here also. We have, for instance, Hurrian *uminas*, Elamite *humanis*, and Haldian *ebani*.<sup>3</sup> In Hittite cuneiform the word for "country" is written *UD-ne-e*, which is commonly read *utnê*.<sup>4</sup> But I would read *UD* as *úmi* or *úme* to give the reading *umene*. This is often used in such gentilic forms as \*Hattušumnieš (= \*Hattuš+umni+eš), \*Arinnumniš, \*Šalambumenieš, and \*Kartapaḫumenieš (also in the form \*Kartapaḫumnieš).<sup>5</sup> According to Forrer<sup>6</sup> this gentilic ending later became *-oves* in Greek geographic names.<sup>7</sup>

In hieroglyphic the ideogram for "country" is often used as a determinative. In other instances, however, addition of phonetic complements proves that the ideogram was actually pronounced. Examples with the final syllable or syllables repeated are shown on page 24.

<sup>1</sup> Cf. *Corpus inscriptionum Chaldicarum*, p. 42: *Qu-me-nu-na-ú-e*.

<sup>2</sup> The geographic names Hubišna and Hubuškia, Kizwadna and Katpatuka, Kinaḫna and Kinaḫhi, together with the old Cappadocian name Wulušna as compared with the cuneiform Hittite Wiluša (Uluša), seem to show the contrast between forms with and without the geographic ending *-na*. In the hieroglyphic texts Halpi appears perhaps without this ending in CE XXIV:1 (cf. p. 20), and both Gurguma and Gurgumaina occur (cf. p. 18).




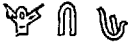






<sup>3</sup> Cf. Bork in MVAG, XIV (1909), Part 1/2, 79.

<sup>4</sup> Hrozný, BKS, III (1919), 96 f., and Friedrich, "Staatsverträge des Hatti-Reiches in hethitischer Sprache," MVAG, XXXI (1926), 85.

<sup>5</sup> Hrozný, "Die Sprache der Hethiter," BKS, I (1917), 50 f., and *Code hittite* (1922), p. 16.

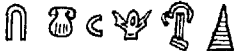
<sup>6</sup> *Mitteilungen der Deutschen Orient-Gesellschaft*, No. 63 (1924), p. 4.

<sup>7</sup> Against Kretschmer, "Der Name der Lykier und andere kleinasiatische Völkernamen," KAF, I (1930), 2 f.

	<i>umena(na)</i>	CE XII:2 (Bulghar Maden)
" " 	<i>umena(na-a)</i>	A 2:3 (Carchemish)
" " 	<i>umena(na-ā)</i>	A 11b:4 "
" " 	<i>umena(na)-sa-a-ni</i>	A 15b**:4 "
" 	<i>umena(nā-ā)</i>	A 11a:2 and 3 "
" 	<i>umena(na-ā)-pa</i>	A 11b:5 "
" 	<i>umena(nā-ā)-sa</i>	A 3:3 "
	<i>umena(me-na)</i>	A 11b:2 "
" " 	<i>umena(me-na-ā)-si</i>	A 11b:1 "
" " 	<i>umena(me-na-a)-ni</i>	A 11c:5 "

The *s* which sometimes occurs in a final syllable is evidently the nominative ending.<sup>1</sup> In the nominative, then, we may read the word "country" as *umenas*. This corresponds to *umene*, the same word with the same meaning, found in Hittite cuneiform if our transliteration of the latter is correct.

Further proof that our readings *na* and *pi* are correct appears from a consideration of

 *a-pi-na-sa-wā+wa* ("city") A 11b:2 (Carchemish)

This city, probably pronounced Abina, may be compared to two cities already known. One, *a-bi-na* or *a-be-na*, was situated in Syria according to the Boghaz Kōi inscriptions;<sup>2</sup> the other, *a-be-na*, *a-be-na-aš*, or *a-bi-na-aš*, is mentioned in the Nuzi tablets.<sup>3</sup> The sign at

<sup>1</sup> Cf. Sayce in Wright, *The Empire of the Hittites*, p. 173.

<sup>2</sup> Mayer and Garstang, p. 3.

<sup>3</sup> Chiera, *Joint Expedition with the Iraq Museum at Nuzi* (American Schools of Oriental Research, "Publications of the Baghdad School," *Texts*), Vol. I (Paris, 1927), 96:35, 41, 42; 94:41, 42; Vol. II, 187:8.



the end of our word is a compound, the value of which, *wā+wa*,<sup>1</sup> is obtained from a comparison of the groups

	<i>wā+wa-pi-i-tá</i>	A 11a:6 (Carchemish)
	<i>wā-wa-pi-i-tá</i>	“ “

Some of the writings of Gurgum, Tunni, and Haleb given above add the nominative ending *-s*. The syllabic signs ordinarily used for that ending are those found in


	“prince”- <i>yr+i-i-ná-si</i>	M II:1 (Babylon)
	“prince”- <i>yu+ri-i-na-sá</i>	I M XXI:1 (Marash)
	<i>ka-ma-ná-si</i>	M XI:3 (Carchemish)
	<i>ki-ma-ná-sá</i>	M XI:4 “








The last sign found in the first example in each pair above is often followed by the sign *i*, which determines for us its value *si*. Compare from the tables of particles (pp. 60-61) two instances in the groups


	<i>i-si-e</i>	A 2:5 (Carchemish)
	<i>pi-si-e</i>	A 2:6 “
	<i>si-i-si</i>	A 17c*2:2 “
	<i>i-ma-wā</i>	A 6:5 “
	<i>pi-i-ma-wā-ta</i>	A 15b**:3 “
	<i>si-i-ma-ta-e</i>	A 6:7 “



The sign , found at the end of the second example in each pair of those used to illustrate the nominative ending, interchanges not














<sup>1</sup> The separate signs *wā* and *wa* are explained on pp. 30-31.

only with *si*,<sup>1</sup> as there noted, but with a third *s* sign, , which has the value *sa* (cf. p. 28), in







						<i>karka(ka)-me-sá-wā-si</i>	A 14b:2 (Carchemish)
						<i>karka(ka)-me-sa-wā-si</i>	A 2:1 “

Moreover, it is once followed by a phonetic complement *a* (p. 19). Hence  must contain some sort of *a* sound. We transliterate it, then, as *sá*.

That  is the cursive form of  is shown by their interchanging in

				<i>ᵃX-me-mu-sá</i>	AAA, II, Pl. XXXVIII:4 (Tell Ahmar)		
		(-)		<i>ᵃX -mu-sá</i>	A 6:1 (Carchemish)		
						<i>X-a-sá-ye-i-wi</i>	II M LII:2 (Marash)
						<i>X-a-sá-yi-i-wi</i>	I M XXI:4 “

Further proof of the value *sá* is given by the geographic name

						<i>(“river”) sá-gu+ri-i-na<sup>2</sup></i>	A 11c:3 (Carchemish)
--	--	--	--	--	--	--	----------------------

This name gives us a confirmation of the *gu* sign and another example of the geographic ending *-ina*. The whole group reads “country (*-ina*) of the river Sagur,” a region well known from Assyrian inscriptions.<sup>3</sup>

## 5. CARCHEMISH

The most important and most common place-name is that found in almost every inscription of any length from Carchemish. I give on page 27 all of its occurrences.

The sign which comes first in all cases except No. 14 is followed regularly by a sign which must be a phonetic complement, since

<sup>1</sup> But apparently only where the vowels are silent.

<sup>2</sup> Cf p. 14.

<sup>3</sup> Boudou, p. 152.

							1. <i>karka(ka)-me-sa-wā-si</i> ("lands") A 2:1 (Carchemish)
"		"	"	"	"		2. <i>karka(ka)-me-sa-wā-si</i> ("city") A 2:2, 4, and 6; A 11a:1; A 11b:1; A 13:1; A 15e:1; M IX:1 and 2 (Carchemish)
"	"	"	"	"		"	3. <i>karka(ka)-me-sa-wā</i> ("city") A 3:1; A 11a:4; A 13:3 (Carchemish)
"	"	"	"	"		"	4. <i>karka(ka)-me-sa-wā-ni</i> ("city") M IX:4 and 5
"		"	"	"	"	"	5. <i>karka -me-sa-wā</i> ("city") A 2:3
"		"	"		"	"	6. <i>karka(ka)-me-sa-wa</i> ("city") M XI:3
"	"	"		"	"	"	7. <i>karka(ka)-me-sá</i> ("city") A 15b**:1
"	"	"	"			"	8. <i>karka(ka)-me-sá-pi-i</i> ("city") M XI:2
"	"	"	"		"	"	9. <i>karka(ka)-me-sá-mi</i> ("city") I M X:1
"	"	"	"			"	10. <i>karka(ka)-me-sá-wā-si</i> ("city") A 14b:2
"	"	"	"		"	"	11. <i>karka(ka)-me-sá-ni</i> ("city") A 15b**:1
"		"					12. <i>karka -me-x-sa-[. . .]</i> A 14a:1
						"	13. <i>karka(ka)-me-a-sa-mí</i> ("city") CE XVI:2 (Gürün)
						"	14. <i>ka+ri-ka-me-sá</i> ("land") <sup>2</sup> A 4b:1 (Carchemish)




Nos. 5 and 12 omit it. This means that the first sign is an ideogram. It occurs only in this place-name and in the name of a god






















					<sup>a</sup> <i>karku(ku-u)-su</i>	A 11b:4 (Carchemish)
"		"	"		<sup>a</sup> <i>ka+ri-ku-u-ā</i>	A 13:6


who appears in inscriptions from Carchemish only. The evident relationship of these two names suggests that the city's name includes that of its god. So we may assume that the ideogram is to be read *kark* plus some vowel. The usual Assyrian reading of the city's name as Karkameš indicates that the vowel is *a* and that the complementary syllable is *ka*.

<sup>1</sup> Cf. forms of *mí* on p. 36.





<sup>2</sup> Cf. p. 12.



Judging again by the Assyrian, the third sign in the city's name has the value *me*, and the signs usually found in fourth place,  and , contain *s*. From the following examples it appears that the vowel of  is *a*:















									<sup>na</sup> <i>a-si-ti-i-tu-ma-wā-sa-a</i>
"	"	"	"		"	"	"	(-)	A 11a:1 (Carchemish)
"	"	"	"		"	"	"	"	<sup>na</sup> <i>a-si-ti-i-le-ma-wā-sa</i>
"	"	"	"	"	"	"	"	"	A 11b:1 "
									<sup>ni</sup> <i>ki+wā-ma-sa-a-si</i>
"	"	"	"	(-)		"	"	"	I M XXI:1 (Marash)
"	"	"	"	"	"	"	"	"	<sup>ni</sup> <i>ki+wā-ma-sa -su</i>
"	"	"	"	"	"	"	"	"	I M XXI:2 <sup>1</sup> and 3 "

 has already been identified as *sá* (pp. 25-26).

The last example of the city's name and the second example of the god's name both begin not with the ideogram but with the sign we have just found to be *ka*. In the god's name a normal *ri* tang is added. The unusual form of tang in the city's name would seem to mean the same.<sup>2</sup> The next sign in the god's name, differing from that in the city's name, is found again as a phonetic complement after the ideogram for the name of the most important god in our Hittite inscriptions,

				<sup>d</sup> <i>tarku(ku)-si</i>	<i>passim</i>
"	"	(-)	"	<sup>d</sup> <i>tarku</i>	<i>-si</i> "

That  begins with *k* is clear. Its vowel would seem to be given by the sign  which follows it in the name of the god of Carchemish. But the latter sign seems to interchange with *pa* (p. 41) in

			<i>X-pa-ni</i>	Assur b Vo 14 (Assur)				
"		"	<i>X-wi-ni</i>	Assur a Ro 5 "				
						<sup>d</sup> <i>hi-pa-ā-a-su</i>	I M XXI:5 (Marash)	
(-)	"					<i>hi-wi</i>	<i>-si</i>	CE XII:5 (Bulghar Maden)

<sup>1</sup> First sign broken in l. 2.

<sup>2</sup> Cf. p. 12, n. 1.

Hence it can have a consonantal value. It is, however, sometimes omitted; compare

	<i>&gt;a-nu-wi-i-wā</i>	Assur f Ro 29-30 (Assur)
" " (-)	<i>&gt;a-nu -i-wā-e</i>	Assur f Ro 24-25 "
	<i>pi+ri-wi-e</i>	A 1a:2 (Carchemish)
" (-)	<i>pi+ri -e</i>	" "
	<i>wā-ā-wi-i</i>	A 11a:4 "
" " (-) "	<i>wā-ā -i</i>	M XVI A:1 (Malatya)

It seems, then, to contain the weak labial *w* rather than the strong labial *p*. That the vowel accompanying it is *i* is shown in

	<i>wi-i-ti-ta</i>	Assur f Ro 15 (Assur)
" (-)	<i>wi -ti+ri-ni</i>	Assur e Vu 8 "
	<i>wi-i-ma-wā</i>	Assur e Ro 11 "
" (-)	<i>wi -ma-sa</i>	CE V:2 and 3 (Kara Burun)

But, though is normally *wi*, it sometimes interchanges with vowel sounds also, thus confirming our first thought that it might be a vowel. Compare

	<i>X-wi-e</i>	Assur b Vu 8 (Assur)
" "	<i>X-wi-a</i>	Assur b Vu 13 "
" "	<i>X-wi-wi</i>	Assur a Ro 2 "

It seems, then, that when its *i* is silent, our *wi* may be equivalent to an *u*. On this basis we transliterate it as *u* when it follows , which it thereby identifies as *ku*. The sounds *wi* and *u* are related in cuneiform Hittite also; compare <sup>o</sup>*wiluša* and <sup>o</sup>*uluša*, *wida* and *uda*.<sup>1</sup>

A genitive ending *wa* is common in many of the Asianic languages, such as Hurrian and Proto-Hittian. That the value of the consonant

<sup>1</sup> Friedrich in MVAG, XXXI (1926), 42, and other examples in MVAG, XXXIV (1930), 42, 167.

in the Hittite genitive ending  $\uparrow$  is *w* is shown by the interchange of this sign with *wi* in

$\nabla$	$\textcircled{\text{B}}$	$\uparrow$	<i>e-pi-wa</i>	Assur b Vu 17 (Assur)
"	"	$\textcircled{\text{D}}$	<i>e-pi-wi</i>	Assur a Vu 12 "

A similar sign, barred across its lower end, interchanges with *wi+ri* in

$\uparrow$	$\uparrow$	$\textcircled{\text{D}}$	<i>wā-tā-wi</i>	Assur g Vo 10 (Assur)
$\textcircled{\text{Q}}$	"	"	<i>wi+ri-tā-wi</i>	Assur f Vu 3 "

If we may assume for Hittite the equivalence of *w* and *m* which is well known in Semitic cuneiform,<sup>1</sup> then the *a* is corroborated by the use of *ma* as a variant for the foregoing signs in such cases as

$\text{U}_2$	$\text{N}$	$\text{B}$	$\text{K}$	$\text{J}$	$\text{N}$	<i>X-a-pi-ma-pa-a</i>	A 6:1 (Carchemish)
"	$\text{K}$	"	$\uparrow$	$\text{N}$	"	$\text{M}$	<i>X-a-pi-wa-a-pa-[...]</i> M XXIV A:2 (Marash)
$\text{W}$	$\text{A}$	$\uparrow$	$\text{K}$	$\text{R}$		<i>tarku(ku)-wa+ri-ma-su</i>	II M XXXI:1 (Agrak)
"	"	$\text{V}$	$\text{K}$	$\uparrow$	"	<i>tarku(ku)-ni-a+rx-wā-su</i>	CE XII:1 (Bulghar Maden)





Again, we find in Lycian the similar sign  $\uparrow$ , of which Bork says: "Es ist ein Trübungslaut unklarer Färbung, der jedoch oft mit *a* wechselt."<sup>2</sup>












From the following groups we see that there is very little difference between  $\uparrow$  and  $\uparrow$ :


$\text{U}_2$	$\text{K}$	$\uparrow$	$\text{N}$	<i>X-ki-wa-a</i>	A 4a:1 (Carchemish)
"	"	$\uparrow$		<i>X-ki-wā</i>	M VII:2 (Kirch Oghlu)
$\text{K}$	$\text{K}$	$\uparrow$		"son"- <i>nā-mi-wā</i>	A 4b:2 (Carchemish)
"	"	$\uparrow$		"son"- <i>nā-mi-wa</i>	A 4b:8 "












<sup>1</sup> Cf. Babylonian *awīlu*, Assyrian *amēlu*.



<sup>2</sup> *Skizze des Lükischen* (1926), p. 15.









The sign  stands in the same relation to  as does  to . In such examples as




				<i>umena(me-na-ā)-si</i>	A 11b:1 (Carchemish)
"	"			<i>umena(me-na-a)-ni</i>	A 11c:5 "
				<i>me-ā-wā</i>	A 2:3 "
"				<i>me-a-wa</i>	A 11b:3 "

we already know the *a* vowel. It is a fair presumption, then, that  is a long *ā*. Like *a* it is often omitted. Compare

				<i>umena(na-ā)-sa</i>	A 3:1 (Carchemish)	
"	"	(-)	"	<i>umena(na )-sa</i>	A 15b**:4 "	
					<i>i-pa-ā-ta</i>	II M LII:3 (Marash)
"	"	(-)			<i>i-pa -tá</i>	II M XXXI (Agrak)

If the two bars across the bottom of  serve as diacritical marks to indicate its length, they may be supposed to serve the same purpose in ; so we may call the latter *wā*. It occurs with the phonetic complement *ā* in

				<i>wā-ā-i</i>	M XVI A:1 (Malatya)
"	(-)	"		<i>wā -i</i>	I M XLVI:1 (Kara Burun)
				<i>wā-ā-wi-i</i>	A 11a:4 (Carchemish)

At the end of No. 9 in the writings of Carchemish we have an animal head corresponding to either  or . That these two pictures represent the same sign is proved by the fact that each has the same cursive form  in the following personal names:

THE WRITING

	<i>mi-i-ta-li-sa-sá</i>	I M XXI:2	(Marash)
	<i>mi-i-ta-li-sa</i>	II M LII:4	"
	<i>mi-i-wa-sa</i>	I M XXI:3	"
	<i>mi-i-wa-sa</i>	II M LII:3	"

That the vowel in this sign is *i* is shown in the foregoing personal names, where it is followed by the *i* vowel itself, and also in

	<i>"son"-na-mi-i-wā-si</i>	A 11a:1	(Carchemish)
	<i>"son"-ná-mi -wā</i>	A 4b:2	"
	<i>pá-mi-i-a</i>	A 11c:4	"

Now interchanges with in the name

	<i>a-e-wi-mi-i-na-si</i> ("city")	A 4a:2	(Carchemish)
	<i>a-e-pa-mu-i</i> -. . .] <sup>1</sup>	I M XIV 7:3	"

, in turn, in its cursive form interchanges with *me*, which we already know (p. 28), in

	<i>X-X-me-si</i>	M XXXIX:6	(Nineveh)
	<i>X-X-mu</i>	M XXXIX:4	"


All these signs, then, have a consonantal element *m*, and in its various forms has the value *mi*. Since we have previously found the values *ma* and *me* for other signs, we are probably justified in transliterating as *mu*.











The sign *mi* appears in two geographic names which, aside from their confirmation of the value of this sign, have important historical bearing. The first name is

	<i>mi-su-wā</i> ("city")	A 6:3	(Carchemish)
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<sup>1</sup> That these writings both refer to the same city appears from a broken text, I M XII 2:1 (Carchemish), where we find [. . .]-*wa-e-mu* ("city").








Since the third sign in this name is a case ending (cf. pp. 29 and 54), the first two signs give the name itself. The second sign contains *s*, for it interchanges with  in

  	<i>X-pa-si</i>	A 4b:2 (Carchemish)
" " 	<i>X-pa-su</i>	A 5a:1 "
    	<i>ki+wā-ma-sa-a-si</i>	I M XXI:1 (Marash)
" " " (-) 	<i>ki+wā-ma-sa -su</i>	I M XXI:2 <sup>1</sup> and 3 "
































This syllable seems never to have a phonetic complement. Since, however, signs for *si*, *sá*, and *sa* have already been identified, *se* and *su* are its most likely values. For the sake of uniformity I shall transliterate it regularly as *su*. The name in question, then, is *Misu*, which may be compared with the ethnic name *Miši* known from the Tell el-Amarna letters.<sup>2</sup>

The second geographic name beginning with *mi* is

    	<i>mi-sá-ka-wā</i> ("city")	A 6:3 (Carchemish)
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Since *wā* is again a case ending, this group of signs gives us the name *Miska*, evidently equivalent to Assyrian *Muški*<sup>3</sup> and found again in Greek *Μοσχοι*, the name of a people of Asia Minor often mentioned in Assyrian records from the time of Tiglathpileser I to Sargon II.

Our study of geographic names has established the following values:

 ,  (  ) ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  (  )	<i>a, ma, ti, gu, i, ni, e, ne, pi, na, ná, si, sá</i>
 ,  ,  ,  ,  ,  ,  ,  ,  (  ) ,  (  ) ,  , 	<i>ka, me, sa, wi/u, ku, wa, ā, wā, mi, mu, su</i>

<sup>1</sup> First sign broken in l. 2.

<sup>2</sup> Knudtzon, pp. 1197 and 1470, written *Mi-lim*. This people is mentioned in connection with ships at sea. Is it possible that its name corresponds to *Μυριοι*, as *Muški* (see below) does to *Μοσχοι*?

<sup>3</sup> See section on phonology (pp. 75-76) for relationship of *mi* and *mu*.


## READINGS BASED ON BILINGUAL INSCRIPTIONS

Less valuable than the geographic names are some bilingual inscriptions which give us values for a few more signs.


## 1. TARKONDEMOS BOSS






Our oldest bilingual inscription in hieroglyphic and cuneiform writing is the so-called Tarkondemos boss, which from the time of its discovery has been one of the greatest *crucis* in the decipherment of the Hittite inscriptions. In spite of the fact that it has been rejected by recent decipherers as without value for the understanding of the hieroglyphs, I believe that its hieroglyphic and cuneiform parts agree with each other and with other comparable Hittite inscriptions.

I accept the cuneiform reading <sup>n</sup>*tar-qu-u-tim-me šar mât* <sup>âli</sup>*me-ra*.<sup>1</sup> This accords well with the hieroglyphs

 *tarku-tu+me me+ri-e* "land" "king."<sup>2</sup>

The first sign is the goat's head elsewhere used for *šá*, but here read as an ideogram, *tarku*. This reading may be supported by Greek *τράγος* and Assyrian *turáhu*, which I cannot believe are merely coincidences.<sup>3</sup> Moreover, the goat's head is followed by *gu* in

 <sup>n</sup>*tarku(gu)?* CE XXVI A:9<sup>4</sup> (Samsat)

The second sign is probably a compound made up of  + . From the following comparisons it is clear that both  and  have values similar to  *ti*:



<sup>1</sup> Cf. Hilprecht, *Assyriaca* (1894), pp. 107-36, where some thirteen previous interpretations are listed. Hilprecht himself reads *dim(?)* for our *tim* and decides on *tan* (with *kal* as a possibility) for the final sign. This last, however, usually read *e*, it seems necessary to emend with Albright (AOF, IV [1927], 137-38) to *ra* to complete the equivalence of the two scripts (see below).

<sup>2</sup> For a reproduction of this boss see Sayce in *Transactions of the Society of Biblical Archaeology*, VII (1880-82), pl. opp. p. 298 and also last plate in the volume.

<sup>3</sup> The Greek word has no satisfactory etymology in any of the Indo-European languages, nor has the Assyrian in any language of the Semitic group. On the latter cf. P. Jensen, *Hittiter und Armenier* (1898), p. 153.

<sup>4</sup> Cf. the writing of the god Tarku's name with another ideogram on p. 28.

	<i>X-pi-ti</i>	Assur e Ru 1 (Assur)
	<i>X-pi-te-e</i>	A 15b** :2 (Carchemish)
	<i>XX-yu+ri-pi-te</i>	A 6:4 "
	<i>X-te-e-si</i>	M I (Babylon)
	<i>X-te-i-wā-wi</i>	A 2:5 (Carchemish)
	<i>X-te -wā-e</i>	M II:6 (Babylon)
	<i>X-tu -pa-a</i>	A 6:4 (Carchemish)
	<i>a-si-ti-i-te-ma-wā-sa</i>	A 11b:1 "
	<i>a-si-ti-i-tu-ma-wā-sa-a</i>	A 11a:1 "

The , as seen above, is occasionally followed by *i*; but in two of our examples it has a phonetic complement *e* which indicates that its real value is *te*. For the sign , which is never followed by *i*, we may assume the value *tu*.

The third sign on the Tarkondemos boss is *me* plus the *ri* tang. That the fourth sign is *e* is shown by occurrence of several similar *e*'s in II M XLIX (Emir Ghazi).

The fifth sign, representing twin peaks, is the ideogram for "country" or "land." In cuneiform also land and mountains are associated, for one sign means both *šadû*, "mountain," and *mātu*, "country."

The sixth sign, the royal tiara, is the ideogram for "king."

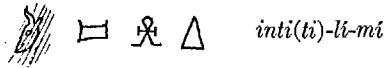
In their respective grammatical orders, then, the two versions of our inscription yield exactly the same statement: "Tarkondemos, king of the country of Mera."<sup>1</sup>

<sup>1</sup> In the cuneiform the "city" determinative precedes Mera. As to this land cf. Albright, *loc. cit.* He prefers to identify it with Mi-ra-a of the Boghaz Kõi tablets, the location of which is uncertain. Friedrich, "Zu den kleinasiatischen Personennamen mit dem Element *muwa*," KAF, I (1930), 359-78, mentions on his p. 367 variant cuneiform writings of that regional name as Me-ra-a and Mi-ra-a.

Albright and Friedrich would read the king's name as Tar-qu-mu-wa, which the Hittite hieroglyphic signs show to be impossible.

## 2. INDILIMMA SEAL

The second bilingual<sup>1</sup> is not as useful as was the first. Its cuneiform legend reads *in*<sup>2</sup>-*di-lim-ma mâr EŠ-ir-da-mu warad* <sup>3</sup>*iš-ḫa-ra*; the hieroglyphic is



The first sign is not clear.<sup>3</sup> Since we do not have closed syllables in our writing, it cannot be *in*. On the basis of the cuneiform, I suggest the ideographic value *inti*, with the second sign, *ti*, as its phonetic complement.

The third sign should stand for *li*. Since we shall soon meet another *li* sign, however, we may call this one *lī*. In the Carchemish inscriptions this sign is clearly distinguished from  $\text{𐎎}$  *la*. But in the Assur inscriptions *lī* does not occur; it may there have been confused with *la* (p. 38)<sup>4</sup> or may even be merely a secondary development from *la*.

The fourth sign should contain *m*. That its vowel is *i* is indicated by

					<i>X-mi-i-pa-a</i>	A 6:8 (Carchemish)
»	»	(-)			<i>X-mī -ni</i>	“ ”
					<i>i-mī-i</i>	CE XV:3 (Arslan Tash near Derende)
					<i>i-mī</i>	II M XXXIII A:4 (Bor)

<sup>1</sup> The copy in M XLV:8 should be corrected on the basis of the impression reproduced by Hogarth, *Hittite Seals* (1920), No. 181.

<sup>2</sup> The cuneiform sign *in* may possibly be divided to read *še-ir* instead. If so, correspondence with the hieroglyphic legend might be obtained by reading the first sign of the latter not as the oxhead but as the goat-head *sá* plus the tang *ri*.

<sup>3</sup> There may be a forward-slanting downward projection (tongue or beard?) not shown in our drawing. If we should read the sign as *sá*, then the projection could be the *ri* tang.

<sup>4</sup> A late name Indlamma in the Xanthos inscription mentioned by Messerschmidt, MVAG, III (1898), 220, suggests that the name on our seal too might possibly be read with *la* instead of *lī*.

Compare too the geographic name




*mí+ri-wā-wi* ("city")

A 6:3 (Carchemish)

Since this occurs last in a group, we may safely assume that the third sign is the enclitic "and" (cf. p. 62). The second sign is the genitive ending. The whole of the geographic name, therefore, is contained in the first sign with its tang. The name *Miri* thus obtained may well be identical with the *Meri* (cuneiform *Mera* and *Mira*) we have just found on the Tarkondemos boss.

The third and fourth signs of the Indilimma seal occur frequently alone,<sup>1</sup> possibly as the name of a deity. The first part of the name Indilimma occurs in common personal names of Asia Minor such as *Ivδas*, *Ivδης*, *Ivδος*, and *Ivδους*.<sup>2</sup>

### 3. ŠUPPILULIUMA SEAL

In the photographic copy of this seal published recently by Weidner<sup>3</sup> only one sign is clear. His hand copy renders traces of three signs, but shows room for a fourth also. The signs Weidner gives are . Their order of reading is uncertain. The one we have put first may be the ideogram for *Suppu*, probably a god's name,<sup>4</sup> changed later to *Sapa*.<sup>5</sup> Our third sign may have the value *li*, since it is once followed by an *i* (p. 46).

### 4. ARNUWANTAŠ SEAL

This seal also was published by Weidner.<sup>6</sup> It has even less value than the Šuppiluliuma seal, since the hieroglyphic part of the inscription is almost entirely lost. From the aedicula we can see only that it must have contained a royal name.

<sup>1</sup> Cf., e.g., M XLI:2; M XLIII:1(?), 2, 4, and 6.

<sup>2</sup> Sundwall, p. 82.

<sup>3</sup> "Das Siegel des Hethiter-Königs Šuppiluliuma," AOF, IV (1927), 135-37.

<sup>4</sup> Šubbu in Deimel, *Pantheon Babylonicum*, No. 3181.

<sup>5</sup> Cf. the king Sapalulme of Ḫattina in Luckenbill, I, §§ 599 and 600, and the Philistine name Saph in II Sam. 21:18.

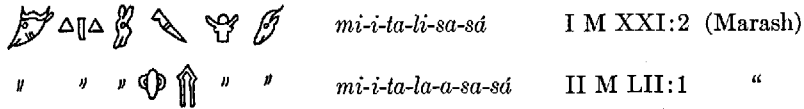
<sup>6</sup> *Loc. cit.*


From the bilingual inscriptions we have obtained the following syllabic values:

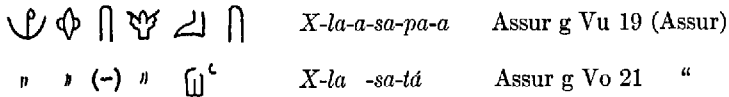


#### READINGS BASED ON OTHER CONSIDERATIONS

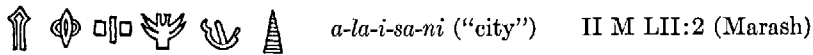
In one very important name from the Gurgum inscriptions the sign *li* found on the Šuppiluliuma seal interchanges in



with , which there has the phonetic complement *a*. The value *la* thus obtained is corroborated by



Further proof for *la* may come from the name









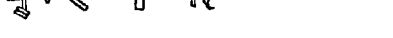
Dropping the accusative ending, we may read Alaisa and compare Alaia situated in the Shubari country.<sup>1</sup>

In the personal name from Gurgum given above, *mi* and *li* may stand for cuneiform *mu* and *lu* (cf. pp. 20 and 75-76). The name then suggests that known as Mutallu in the Assyrian annals, and it becomes reasonable to assign the value *ta* to the third sign. The Mutallu of the Assyrian records was, like ours, a king of Gurgum.<sup>2</sup> The various Mutallu's are, however, not identical, since the one known from Assyrian sources was the son of Tarḫulara,<sup>3</sup> whereas the hieroglyphic inscriptions from Marash give the following genealogies:


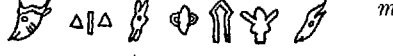

<sup>1</sup> Luckenbill, I, § 143.

<sup>2</sup> Other men of the same name are mentioned in a Carchemish inscription, A 1a:4, and in Assur b Ro 4.




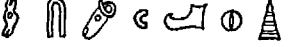
<sup>3</sup> Luckenbill, II, §§ 29 and 61.

		<i>halpi(pi)-hi-pa-a-ā-si</i> I M XXI:1
son of		<i>ki+wā-ma-sa-a-si</i> I M XXI:1
grandson of		<i>halpi(pi)-hi-pa-ā-sa-sá</i> I M XXI:1
great-grandson of		<i>mi-i-ta-li-sa-sá</i> I M XXI:2
. . . . of		<i>halpi(pi)-he-pa-ā-sa-sá</i> I M XXI:2
. . . . of		<i>mi-i-wa-sa</i> I M XXI:3
. . . . of		<i>ki+wā-ma-sa-su</i> I M XXI:3

and

		<i>halpi(pi)-he-pa-a-ā-si</i> II M LII:1 (cf. 3)
son of		<i>mi-i-ta-la-a-sa-sá</i> II M LII:1 (cf. 4)
grandson of		<i>mi-i-wa-sa</i> II M LII:4 (cf. 1)

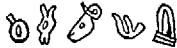
That the value of the sign represented by the donkey's head is *ta* is confirmed by the fact that it occurs regularly with the vowel *a*. Compare

	<i>a-wa-a-si-ta-a</i> A 1a:5 (Carchemish)
	<i>"son"-na-mi-i-ta-a-si</i> AAA, II, Pl. XXXVIII:1 (Tell Ahmar)
	<i>ta-a-ma-si</i> A 1a:1 (Carchemish)
	<i>ta-a-ma-na-pa-wi</i> ("city") A 15b**:4 "


Since the last example is the last of a group of names, its ending *wi* is the enclitic "and." Now *-pa* is the genitive ending (p. 54), and *-na* is the abbreviation of the geographic ending *-ina*. The name of the city, therefore, is *ta-a-ma*, which may be compared to Thema, pronounced also Thama,<sup>1</sup> in Syria. As found here with the geographic ending *-na* in the form Tamana, this name is in splendid agreement with the

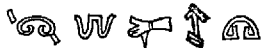

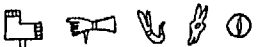


<sup>1</sup> Dussaud, p. 286.



Assyrian name Teman.<sup>1</sup> Still another name which corroborates our reading of *ta* is



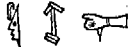

 <sup>u</sup>*ta-ma-ni-ā* A 1a:6 (Carchemish)


Here the *u* or *wi* obviously stands for an initial *r* which could not be written in the hieroglyphic. The name occurs in the Tell el-Amarna letters as <sup>mar</sup>*ta-ma-an-ya*.<sup>2</sup> Both writings represent Indo-European *rta-manyā*.<sup>3</sup>

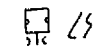
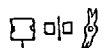
Having established the value of the sign *ta*, we can now find the value of the sign  with which it interchanges in

	"("sun") <i>tarku-tā-wā-si</i>	A 11b:2 (Carchemish)
" " 	"("sun") <i>tarku-tā-wā-si</i>	A 11c:5 "
	<i>X-tā-ni-tā-wi</i>	A 12:3 "
	<i>X-[...]tā-ni-tā-e</i>	I M XXI:4 (Marash)
	<i>X-tā-ni-tā-wi</i>	A 11b:4 (Carchemish)

That  is the cursive form of  is shown in

	<sup>p</sup> <i>tā-nā-ā</i>	A 11a:3 (Carchemish)
" " 	<sup>p</sup> <i>tā-na-sā</i>	A 6:1 "
	<sup>a</sup> <i>+rx-wā-tā</i>	A 11a:3 "
" " 	<sup>a</sup> <i>+rx-wā-tā</i>	I M XXI:4 (Marash)

Similarly we see that  is the cursive form of *ta* by comparing

	<i>X-ta</i>	A 4a:3 (Carchemish)
	<i>X-i-ta</i>	A 4b:6 "

<sup>1</sup> Luckenbill, I, §§ 363 etc.

<sup>2</sup> Knudtzon, No. 201:3 f.

<sup>3</sup> Cf. J. Friedrich, "Arier in Syrien und Mesopotamien," in *Reallexikon der Assyriologie*, I, 144-48. He translates the phrase as "nach dem heiligen Gesetz strebend."



To return to the ending found with *ta-a-ma* (p. 39), by observing the divine names (especially Tarku) we see that the signs *wā* and *wa* used for the genitive ending interchange with it initially and medially also in

				<i>pa-pi-i-mi</i>	A 15b* (Carchemish)
	"	"		<i>wa-pi-i-ni</i>	Assur e Ro 17 (Assur)
				<i>wā+ri-wā-me-si</i>	A 7j (Carchemish)
				<i>wā+ri-pa-pa-a</i>	CE V:2 (Kara Burun)
				<i>a+rx-wā-me-si</i>	A 12:1 (Carchemish)
				<i>pa+rx-pa-pa-a</i>	A 12:4 "

That contains the vowel *a* is shown by

				<i>X-pa-a-su</i>	A 6:1 (Carchemish)
"	"	(-)	"	<i>X-pa -su</i>	A 15b* "

That its consonant is *p* is proved by the personal names Gurpas and Pammas and the divine name Hipas which follow.

The personal name

					<i>gu+ri-pa-a-su</i>	CE IX:1 (Bagheche)
	"	(-)	"		<i>gu+ri-pa -su</i>	II M XLVIII: 3(Asarjik <sup>1</sup> )
	(-)				<i>gu+ri -a-sá</i>	M I:3 (Babylon)

corresponds to Gura<sup>2</sup>, Guraa, and Gurraba known from Assyrian inscriptions.<sup>2</sup> The omission of *pa* in the third example suggests that the sound of this hieroglyph may have varied as did that of the cuneiform *pi*, which represents the sound of *w* also.

The name Pammas is written

				(“sun”) <i>pa+me-ma-si</i>	A 4a:2 (Carchemish)
--	--	--	--	----------------------------	---------------------

The first sign contains the division mark, which shows that after it begins a new word—in this case the personal name. Since the sign

<sup>1</sup> Cf. CE, pp. 15 f.

<sup>2</sup> Tallqvist, p. 82.

representing a foot never takes the tang, the extra stroke on the heel here must be a mistake made by the scribe. This name Pammas or Bammas corresponds exactly to the cuneiform *Ba-am-ma-a*, *Ba-ma-a*, or *Ba-ma-a-a*.<sup>1</sup>

If we are correct in identifying the new symbols involved, the name

<sup>d</sup>*hi-pa-ā-a-su* I M XXI:5 (Marash)
   
 , » » (-) » <sup>d</sup>*he-pa-ā -su* I M XXI:6 “

is that of an important goddess, *Ḫipa* or *Ḫepa*, worshiped in the Mitannian as well as in the Hittite world. Since in

<sup>na</sup>*si-pa-ḫi-i-su* A 15b\*\*:3 (Carchemish)
   
  
*si-ḫi-i-na-su* II M LIII (Nigdeh)

is followed by *i*, I transliterate it as *ḫi*. The sign with which it interchanges in the name of the goddess and also in

*ḫalpi(pi)-ḫe-pa-a-ā-si* II M LII:1 (Marash)
   
 , » » » » » , *ḫalpi(pi)-ḫi-pa-a-ā-si*
  
 I M XXI:1 “

may then be read as *ḫe*.

Now comes the problem of distinguishing signs with similar forms but different values. The sign which I call *ḫe* probably represents a tree or shrub and must not be confused with any of the five signs representing various positions of the hand. After long and careful study of the hand pictures I would group them as follows:


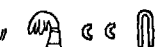

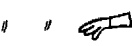


	Carchemish	Assur
1.		
2.		
3.		
4.		
5.		



<sup>1</sup> Tallqvist, p. 51.





The signs in the first column are taken from the Carchemish inscriptions; those in the second column are cursive forms from the Assur lead strips.




The correspondence of the signs in line 1 is self-evident.<sup>1</sup>

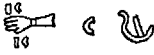
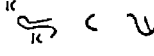
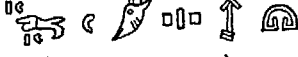
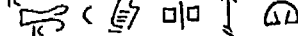
The signs in line 2, with the fingers directed downward, interchange with the *ni* sign of line 1, in which the fingers are directed upward, in

	<i>X-ni-na</i>	A 11a:2 (Carchemish)
	<i>X-ne-na-na-a</i>	A 11c:5 “
	<i>i-ma-ni</i>	A 11b:3 “
	<i>i-ma-ne</i>	A 11b:4 “
	<i>tá-ni-wā</i>	CE IX:2 (Baghche)
	<i>tá-ne-wi-i</i>	M V:3 (Hamath)

 is evidently a cursive form of , for not only does each of them interchange with *ni* above, but they interchange with each other in

	<i>a-wa-a-ne</i>	M VII 2:2 (Kirch Oghlu)
	<i>a-wa-a-ne</i>	M III B:3 (Hamath)
	<i>ne-na-la-ni</i> <sup>2</sup>	CE X:2 (Baghche)
	<i>ne-na-la-ni</i>	CE X:3 “





 and  also are cursive forms of  but are used mostly in the Assur inscriptions. Compare, for example:

	<i>X-na-ni</i>	A 15b**:4 (Carchemish)
	<i>X-na-ni</i>	Assur e Ru 22 (Assur)
	<i>X³-na-mi-i-wā-si</i>	A 2:1 (Carchemish)
	<i>X-na-mi-i-wā-si</i>	II M XXXI (Agrak)









<sup>1</sup> The nature of this sign is particularly clear in A 6:5.

<sup>2</sup> Actually written in the order *la-ne-na-ni*.

<sup>3</sup> In this exceptional variant the thumb is above instead of below the fingers.







 and its cursive forms , , and  are called *ne* for the reason given on page 19.

That the hand forms in line 3 are identical in origin appears from







				<i>X-ā+ri-wi-a</i>	A 15b**:3 (Carchemish)
				<i>X-ā -pa-ni-ā</i>	Assur e Ru 10 (Assur)

As this sign is known initially only, its value is probably ideographic rather than phonetic.







The identity of the two forms in line 4 is shown by

			<i>né-ta-wi</i>	II M XXXIII:3 (Bor)
			<i>né-ta</i>	Assur e Ro 30 (Assur)







This sign is equal to the usual *ne* in

			<i>X-né+me-wi</i>	A 6:4 (Carchemish)
			<i>X-ne-me-wi</i>	A 11a:5 "

The two forms in line 5 interchange in









			<i>nu-ā-tá</i>	A 3:1 (Carchemish)
			<i>nu-a-tá</i>	CE XII:2 (Bulghar Maden)

Since this sign interchanges with *ni* in



			<i>gu-ma-nu</i>	CE V:2 and 3 (Kara Burun)
			<i>gu-ma-ni</i>	A 2:1 (Carchemish)

it also contains an *n*. The fact that it is followed by an omissible *wi* or *u* sign in *ᵐa-nu-wi-i-a* (p. 29) indicates that its value is *nu*.





After establishing the values of the hand signs, we still have a few unidentified signs. To judge from

				<i>ka-ma-ná-si</i>	M XI:3 (Carchemish)
				<i>ki-ma-ná-sá</i>	M XI:4 "



△ must have a value similar to the *ka*-sign with which it interchanges. It is often associated with *i*, for example in

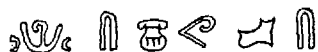


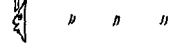
	<i>e-ki-i</i>	Assur g Ro 24 (Assur)
	<i>i+ri-pi-ki-i-si</i>	II M XXXIII:1 (Bor)

The value *ki* which I would assign to it is confirmed by the following personal names:

	<i>ki-wā-a-ma-si</i>	M XXV:1	(Marash)
	<i>ki+wā-ma-sa-a-si</i>	I M XXI:1	"
	<i>ki+wā-ma-sa-su</i>	I M XXI:2 and 3	"
	<i>"ki-&gt;i-ki-si</i>	M II:1	(Babylon)



The name *Kiwamas* or *Giwamas* corresponds to that of *Gi-am-mu*, prefect of the cities on the river *Balikh*.<sup>1</sup> The second name, containing two *ki* signs, is probably to be read *Kikia* or *Kiakki*.<sup>2</sup> To each *ki* is attached something akin to a *tang*, but not in the position to which we are accustomed. These additions may represent weak consonants of some sort; but our Assyrian parallel, if correct, would indicate that they were not pronounced.



The new sign in the second name is evidently the cursive form of , which may be related to another picture of a human head, . The latter represents a sound found initially only, if we may judge by such groups as



















	<i>X-a-pi-ma-pa-a</i>	A 6:1 (Carchemish)
	<i>X-a-pi-wa-a-pa-[...]</i>	M XXIV A (Marash)
	<i>wā+ri-wā-me-si</i>	A 7j (Carchemish)
	<i>²a+rx-wā-me-si</i>	A 12:1 "


<sup>1</sup> Tallqvist, p. 79.








<sup>2</sup> Tallqvist, p. 114.

Its interchanges with *a* and *wa* show that its vowel is *a*. Together with its position in the foregoing examples they suggest that its consonant is the smooth breathing. If our value  $\text{ᵐ}a$  is correct for this sign and if  (representing the human head with tongue protruding)<sup>1</sup> really is related to it, then  may possibly be  $\text{ᵐ}i$ . It is a very rare sign, however, and I am very doubtful about it.









We come now to a group of signs which have to be considered together on account of their common origin and interdependence. That  and  have similar values is proved by

							<i>X-li-i-ā-ye-i-wi</i>	II M LII:4 (Marash)
»	»	(-)	»		»	»	<i>X-li -ā-yi-i-wi</i>	II M LII:5 “
							<i>X-a-sā-ye-i-wi</i>	II M LII:2 “
»	»	»		»	»	»	<i>X-a-sā-yi-i-wi</i>	A 6:4 (Carchemish)
»	»			»	»	»	<i>X-a-sā-yi-i-wi</i>	I M XXI:4 (Marash)

The following particles show that  contains *i*:


			<i>yi-i-wi</i>	II M LII:5 (Marash)
»	(-)	»	<i>yi -wi</i>	A 15b**:3 (Carchemish)
			<i>yi-i-tá</i>	I M XXI:4 (Marash)
»	(-)		<i>yi -ta</i>	A 15b**:4 (Carchemish)





That it is to be read *yi* is suggested by

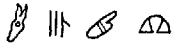
						<i>X<sup>2</sup>-ri-i-i-a+ri-tá-pa</i>	Assur e Vu 23 (Assur)
»	»		(-)		(-)	<i>X<sup>2</sup>-ri-yi-a</i>	Assur e Ro 2 “

<sup>1</sup> Even the sign we call  $\text{ᵐ}a$  often shows a protruding tongue, e.g., A 3:3 and 4.

<sup>2</sup> The initial sign, though in the form of the division mark, is clearly an ideogram, for in both cases it is itself preceded by a division mark of normal, smaller size. Cf. the same usage in Assur f Ro 34 (p. 8).

Since *yi* interchanges with , as seen above, I transliterate the latter as *ye*.


Now in form  seems to have developed from , and the latter in turn from . If  is related to the other two phonetically as well as formally, then it too contains a *y*. By transliterating it as *yu* in

 *ta-yu+ri-ka-si* Assur f Ru 3 (Assur) and  
CE XII:4 (Bulghar Maden)



we find a word *tayurkas* which is evidently the same as the Hittite cuneiform *tayugaš*.<sup>1</sup> Though the *yu* sign, unless used ideographically, regularly carries the tang, the latter was probably unpronounced in many cases and served only to show some special characteristic of the sound.

It is strange that the same group of signs, of one, three, and nine strokes, exists in the Rās Shamra inscriptions, which are written in cuneiform in two different languages, Phoenician and some autochthonous language of Syria. Is it possible that the latter corresponds to the language of our Hittite hieroglyphic inscriptions?

The value of another sign can be obtained from the personal name

 *mi+ri-ha-li-ni-si* M III B:1 (Hamath)

The first sign is equivalent to the bull's head *mi* plus the tang.<sup>2</sup> The second sign contains the vowel *a*, as shown by its use in

 *mi-ha-a-si* A 14a:1 (Carchemish)  
" " (-)  *mi-ha-sa* A 14b:2 "

If the name from Hamath and vicinity corresponds to that of its king called Irhuleni in the Assyrian annals, then the second sign is presumably *ha*. The original name Mirhālinis could have been

<sup>1</sup> Written *ta-a-i-ú-ga-áš*, *ta-a-ú-ga-áš*, *da-a-i-ú-ga-áš*, and *da-a-i-ga-áš*, with the meaning "two-year-old (animal)." See Hrozný, "Die Sprache der Hethiter," BKS, I (1917), 93.

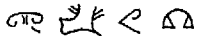
<sup>2</sup> This same sign, in the same royal name, appears again in the Restan inscription published by Ronzevalle in 1908. Its identity is proved by use there of the same form, but without the tang, in the writing of the word for "son." Restan is only seventeen miles or so from Hamath.


changed through \*Wirḫalini and \*Irḫalini to its Assyrian form Irḫuleni.<sup>1</sup> This same sign appears in another personal name


 *ha-ni-sa-a-si* AAA, II, Pl. XXXVIII:1 (Tell Ahmar)


with which I would compare the names Ḫa-a-ni, Ḫa-an-i, Ḫa-ni-i, Ḫa-an-ni-i, and Ḫa-nu.<sup>2</sup>

By comparison of



 ("sun") *pa+me-ma-si* A 4a:2 (Carchemish)


(-)  *pa+me-ma-pa* A 6:1 "


we see that  may be equivalent to *pa*. The new sign, *pa*, occurs again in a geographic name from Carchemish,

 *pa+ri-ka-i-na-ni* ("city") A 1a:1

This latter name, Parka or Barga, if our reading is correct, may be identified with a city near Ḫaleb<sup>3</sup> and closely connected with Carchemish.<sup>4</sup>

From the following divine name we see that  is the cursive form of :

 *gu-pa-pi-pi-si-wi* A 11b:4 (Carchemish)

" "  *gu-pa-pi-pi-si-wi* A 4a:3 "

This name, Gupappis or Kupappis, evidently represents the goddess Kupapaš or Gubaba of Asia Minor. Her name is frequent in the hieroglyphic inscriptions; in those from Carchemish she belongs to the great triad of the gods. She is the same as *Κυβέλη* or *Κυβήβη*, who was later worshiped by the Lydians and the Phrygians as the great mother-goddess.<sup>5</sup>

<sup>1</sup> Luckenbill, I, §§ 563 etc.





<sup>2</sup> Tallqvist, pp. 85 f.





<sup>3</sup> Luckenbill, I, §§ 614 etc.


<sup>4</sup> Hrozný, "Muršiliš II als Schiedsrichter zwischen den Ländern Barga und Kargamiš," BKS, III (1919), 130 ff.







<sup>5</sup> On the whole subject see Albright, "The Anatolian Goddess Kubaba," AOF, V (1929), 229 ff.




Since  has as its cursive form , the bird with extended wing  evidently corresponds to the cursive form . The value of this last sign is shown by








			<sup>2</sup> <i>a-pi-pä</i>	II M LII:5 (Marash)
"	"		<sup>2</sup> <i>a-pi-pa</i>	Assur f Ro 5 (Assur)

A bird-headed figure, , occurs in a name, found at Carchemish only,








				<sup>2</sup> <i>a-pä-a+ri-a-si</i>	A 6:1
"	"	" (-)	"	<sup>2</sup> <i>a-pä-a+ri -si</i>	A 7b:1
" 	" (-)			<sup>2</sup> <i>a-pä-a+ri -su</i>	A 15b**:1

where it interchanges with . Can the latter be an abbreviated style of the former, rather than the *e+ri* which it resembles? We may call these signs *pä* and *pä* respectively. The personal name Aparias or Aparis in which they occur suggests that of the city of Apparazu captured by Shalmaneser III on a return march from Syria.<sup>1</sup>

Our *pä* interchanges with *pä* in

					<i>XX-i-pä-ma-a</i>	Assur c Ro 10 (Assur)
"	"	"			<i>XX-i-pä-ma-e</i>	Assur g Ru 9 " <sup>2</sup>


and with the common *pa* sign in

				<i>X-mu+ri-pä-wä</i>	Assur e Ru 4 (Assur)	
"	"				<i>X-mu+ri-pa-wa-i</i>	Assur c Ru 24 "


<sup>1</sup> Luckenbill, I, § 655. Or, since *p* interchanges with *w* and *w* with *m*, we may perhaps compare the name <sup>m</sup>*A-ma-ya-še* found in Knudtzon, p. 1557. In that case our *ri* tang should be read with its *y* value.

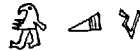
<sup>2</sup> Again, but without *-e*, in Assur a Ru 7.

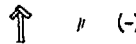
It occurs also in a personal name

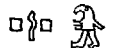
 *sa-ka-pà-si* A 7h (Carchemish)

which may be compared to the Semitic name Sagab.<sup>1</sup>

The intimate relations between the sounds *p* and *w* are brought out once more (cf. pp. 28-29) by the interchange of  *pà* with *wa* and *wā* in

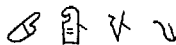
 *pà-ki-e* A 6:6 (Carchemish)

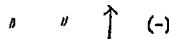
 *wa-ki* A 6:5 "

 *i-pà* A 6:8 "


 *i-wā* Assur g Ro 5 (Assur)

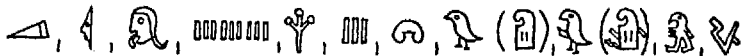
and of *pà* with *wa* in

 *ka-pá<sup>2</sup>-pà-ni* Assur g Ro 7 (Assur)

 *ka-pá-wa* Assur f Ru 28 "

In addition to readings based on geographic names and bilingual inscriptions, the following signs have now been evaluated:

  
*la, ta, tá, pa, hi, he, ne,<sup>3</sup> né, nu*

  
*ki, a, i, ye, yi, yu, ha, pá, pã, pã<sup>4</sup>*

#### UNREAD SIGNS

There are a few other rare phonetic signs which remain unreadable for the present.

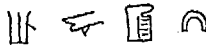
<sup>1</sup> Tallqvist, p. 189; cf. British Museum, *Carchemish*, II, 135.


<sup>2</sup> The *pá* here carries what might be a tang (so read by us in "Parka," p. 48), but is possibly intended for the bird's tail. The rare sign *pã* has the "tail" in all the examples known.

<sup>3</sup> The *hieroglyphic* form of *ne* was proved on p. 19; only its *cursive* form properly belongs in the present list.


<sup>4</sup> Though these last four signs are evidently related in value, the very abundance of *pa*'s (five altogether) suggests more uncertainties here than appear on the surface.


In the royal name or names





 *yu+ri-tá-x-si* CE I, same as Meyer, Fig. 19

" "  " *yu+ri-tá-x-si* Meyer, Fig. 22


found four times in the first form and once in the second,<sup>1</sup> all five occurring in the vicinity of Kara Dagh or Mahalich near Konya, the third sign in each occurrence is apparently phonetic. These two new signs may or may not be mere variants. One suggestion that they are really different comes from

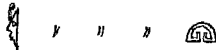
 "god"-ná-wi<sup>2</sup> CE I (Kara Dagh)


 "god"-ná-x " "


where our  interchanges with *wi*. Here the latter is apparently the enclitic "and," since it occurs at the end of the second term in a group of two. As  appears at the end of a similar group of three terms, it may be a variant of *wi* in value, perhaps *we*. This would make at least the second royal name above read approximately Yurtawes, which suggests the Carian masculine names *Opθωσιος* and *Aprυασσιος*, perhaps compounded from the elements *urta(erta)* and *waza*.<sup>3</sup> The first element of the first name is evidently the same; but the second remains wholly uncertain, since its writing with  is taken from the same inscription in which we have just found "god"-ná followed by  instead.

Another rare sign might be read if the comparison

 *ᶜa-x-wā-me-a-su* A 7j:2 (Carchemish)

 *ᶜa+rx-wā-me-a-si* A 11b:1 "

is justified.  appears to be equivalent to the curved tang (cf. p. 14) and hence to have the value *rx*. With the ideogrammatic tang it stands for "prince" (cf. p. 10). In the divine name

 *ᶜx+ri-gu* A 11b:6 (Carchemish)

<sup>1</sup> Meyer, Figs. 19–23.


<sup>2</sup> On this word for "gods" see p. 54, n. 2.


<sup>3</sup> Sundwall, pp. 235 and 76.




it may be either phonetic, as suggested by my transliteration, or ideogrammatic with a value ending in *gu*.


Another sign might be identified if we could find a divine name corresponding to

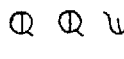
 *d<sup>h</sup>x+ri-ma* A 15b\*\*:2 (Carchemish)

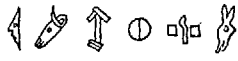
The  occurs again in


 *X-x+ri-li-wi* A 12:4 (Carchemish)



When deprived of its tang, it somewhat resembles  and ; but these are perhaps variants of  instead in

 *wi-x-ni* M XI:5 (Carchemish)


 *wi+ri-wi+ri-ni* II M XLVIII:1 (Asarjik)


 *ᶜa-ma-wā-wi-i-ta* A 6:2 (Carchemish)

" " "  *ᶜa-ma-wā-x-i-me* A 1a:4 "


That  and , which may be merely variant forms of a single sign, have phonetic rather than ideographic value appears from the groupings


 *pi-x* A 4b:2 (Carchemish)

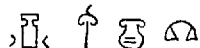
 *ti-x* A 17b:2 "

 *i-mi-x* CE XII:2 (Bulghar Maden)

where the signs *pi* and *ti*, which are never used ideographically, precede them.

The position of  in such cases as

 *X-x-x-ta* A 6:4 (Carchemish)

 *X-x-pi-si* Assur f Vu 25 (Assur)

implies a phonetic value.

Altogether we have read twenty-four signs from geographic names known in cuneiform also, five more from bilingual inscriptions, and nineteen from other sources. Two signs (𐎠, 𐎡) were explained in our discussion of tangs (pp. 12-15). With the six signs the readings of which are still to be determined, this makes a total of fifty-six phonetic signs used in the Hittite hieroglyphic inscriptions. There is a difference of two between this and the Cypriote syllabary, which contains fifty-four.

Out of the fifty-six signs used in the Carchemish inscriptions there are six which do not appear at Assur:



The first four are replaced by 𐎠, 𐎡, 𐎢, 𐎣; the last two merely happen to be lacking because of their rarity. One sign which appears at Assur, 𐎤, is not known at Carchemish. Its form suggests that it may correspond to 𐎠 𐎡 𐎢.

## II

## THE LANGUAGE

## GRAMMATICAL FORMS

## NOUNS

From variant endings of nouns and proper names which are otherwise identical, it would seem that our language has the following case endings:

𐎗	𐎗	𐎗	𐎗	𐎗	𐎗	some number <i>X-e-ḫi-pa-su</i>
						Assur g Vo 3 (Assur)
"	"	"	"	↑		<i>X-e-ḫi-pa-wa</i>
						Assur a Ru 2 "
-	"	"	"	"	𐎗	some number <i>X-e-ḫi-pa-ni</i>
						Assur g Vo 12 "

The nominative ending *-s* is proved by names on seals and by those appearing immediately after "I" at the beginnings of inscriptions. The vowel following it varies, but is probably unpronounced, since we never find it accompanied by a phonetic complement.<sup>1</sup> Compare

𐎗	𐎗	𐎗	𐎗	𐎗	<i>ka-ti-i-si</i>	A 2:1 (Carchemish)
𐎗	𐎗	𐎗	𐎗	𐎗	<i>ka-ma-na-a-su</i>	A 7a:1 "
𐎗	𐎗	𐎗	𐎗	𐎗	<i>ki-ma-ná-sá</i>	M XI:4 "

The genitive ending is probably *-wa* or *-wā*, interchanging with *-pa*.<sup>2</sup> It appears often near the beginnings of inscriptions in a phrase which may mean "favorite of the gods,"<sup>3</sup>

𐎗	𐎗	𐎗	𐎗	𐎗	𐎗	𐎗	"god"- <i>ná-pa</i> <i>a+rx-wā-me-si</i>
							A 12:1 (Carchemish)

<sup>1</sup> Except possibly in forms such as *na-si-ti-i-tu-ma-wā-sa-a* (p. 35), where *-sa-a* may be the nominative ending after the genitive *-wā*.

<sup>2</sup> On a variant, *-sa*, see p. 72.

<sup>3</sup> The groups of signs containing the word for "god" cited here and in the passages on p. 51 might also be read "god"(*na*) or "god"(*nā*), in which case the *na* or *nā* would be a phonetic complement giving us the end of the unknown word for "god."

Other forms of this ending occur in

	"god"- <i>na-pa</i>	M IX:1 (Carchemish)
" " "	"god"- <i>na-pa-a</i>	A 11b:1 "
" "	"god"- <i>na-wā</i>	A 4d "
" "	"god"- <i>na-wa</i>	A 6:2 "
" " "	"god"- <i>na-wa-a</i>	I M XXI:4 (Marash)

The accusative ending is *-n*, as in

	<sup>a</sup> <i>gu-pá-pi-ni</i>	M IX:4 (Carchemish)
--	---------------------------------	---------------------

As in the nominative case, the vowel is probably silent.

In another occurrence of this same divine name we find a fourth case ending, which may possibly be the dative (cf. p. 72):

	<sup>a</sup> <i>gu-pá-pi-ā</i>	A 18j (Carchemish)
--	--------------------------------	--------------------

Another possible case ending is *-tá*, seen with two examples of the infix *-ki-* on page 63 and perhaps in

	<i>X-tá</i>	A 12:3 (Carchemish)
"	<i>X-tá</i>	CE V:3 (Kara Burun) <sup>1</sup>

The *-ta* with the word for "ax" on page 65 may be the same. May we compare it with the old cuneiform Hittite instrumental ending *-ta?*<sup>2</sup>

We have examples of the formation of the plural in

	<sup>pl</sup> <i>ta-yu+ri-ka-si-na-si</i>	Assur f Ru 3 (Assur)
	<i>ta-yu+ri-ka-si-na-ā</i>	CE XII:4 (Bulghar Maden)
	<sup>pl</sup> <i>tayurkas-ni-wa</i>	Assur f Ro 31 (Assur)

<sup>1</sup> The same word occurs with the nominative ending *-si* in A 3:4 and with the accusative *-ni* in A 11a:2.

<sup>2</sup> Cf. Hans Ehelolf in *Indogermanische Forschungen*, XLIII (1926), 316-17.

The singular of this word is *tayurkas* or *tayukas*.<sup>1</sup> Hence if the three dots in triangular arrangement twice preceding the first sign constitute a plural determinative, the plural ending would be contained in *-na*<sup>2</sup> or *-ni*; the suffixes are case endings.

Three dots in a row following the sign to which they apply in



may likewise indicate the plural. The various animals whose heads are pictured, evidently to be taken ideographically, will have constituted offerings to the gods who are named along with them.

It is characteristic of ancient Caucasian or Asianic languages that, besides its own ending, a governed noun may add the ending of its governing noun. This seems true in Hittite also; compare

	<i>karka(ka)-me-sá</i>	
" " "	M XI:2	(Carchemish)
" " "	<i>karka(ka)-me-sa-wā-si</i> ("land")	"
" " " "	A 2:1	"
" " " "	<i>karka(ka)-me-sa-wā-ni</i> ("city")	"
" " " "	M IX:4	"
	<i><sup>d</sup>tarku(ku)-si</i>	
" " "	AAA, II, Pl. XXXVIII:2 (Tell Ahmar)	
" " "	<i><sup>d</sup>tarku(ku)-wā-si</i>	
" " " "	A 6:2	(Carchemish)
" " " "	<i><sup>d</sup>tarku(ku)-wā-ni</i>	
	II M XXXIII A:3	(Bor)

PRONOUNS

PERSONAL

The form *i-me-a* with its variants, standing usually at the beginning of an inscription, is evidently the 1st person singular, "I." No other personal pronouns have been identified.

<sup>1</sup> Hrozný, "Die Sprache der Hethiter," BKS, I (1917), 93.

<sup>2</sup> Can this be the same as the Lycian plural ending *-na*, found also in Hurrian? Cf. Bork, *Skizze des Lükischen* (1926), p. 29, and E. Forrer in ZDMG, N.F. I (1922), 226.



## GRAMMATICAL FORMS

## POSSESSIVE

The forms of these pronouns, inflected like nouns, are:

Singular		Plural	
1ST PER.	- <i>meas</i>	1ST PER.	- <i>nas</i> and - <i>nis</i>
2D PER.	- <i>tas</i>	2D PER.	?
3D PER.	- <i>sas</i> <sup>1</sup>	3D PER.	?

Examples are:

		1st Per. Sing.	
	<i>me-a-si</i>	A 6:1	(Carchemish)
	<i>me-ā-wā</i>	A 2:3	"
	<i>me-ā-pa</i>	A 11b:4	"
	<i>me-ā</i>	II M LII:5	(Marash)
	<i>me-ā-ni</i>	A 11b:2	(Carchemish)
	<i>X-me-si</i>	II M XXXI	(Agrak)
	<i>X-si-me-a</i>	A 11c:6	(Carchemish)

		2d Per. Sing.	
	<i>ta-sá</i>	A 6:8	(Carchemish)
	<i>ta-wā</i>	A 11a:7	"
	<i>ta-pa-a</i>	M II:4	(Babylon)
	<i>ta</i>	A 7a:3	(Carchemish)
	<i>ta-ni</i>	A 14a:3	"

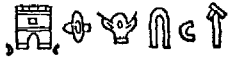
"son"-*na-mi-i-ta-a-si*  
AAA, II, Pl. XXXVIII:1 (Tell Ahmar)

*X-li-ā-ta-wā-wi* A 2:2 (Carchemish)

<sup>1</sup> This possessive suffix, in the form -*sis*, -*ses*, is used regularly in Luvian. Cf. Forrer, "Die Inschriften und Sprachen des Hatti-Reiches," ZMDG, N.F. I (1922), 218 ff. The possessive suffix cannot always be distinguished from the genitive -*sas* mentioned on p. 72.

THE LANGUAGE

3d Per. Sing.



"tower"(*la*)<sup>1</sup>*-sa-a-na-wa* A 11c:6 (Carchemish)



"god"-*na-sa-a-ni* A 1a:4 "

1st Per. Pl.



*na-su* CE XII:4 (Bulghar Maden)



*na-wa* A 11b:4 (Carchemish)



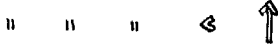
*na-pa-a* M II:6 (Babylon)



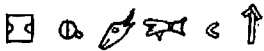
*na-ni* A 12:2 (Carchemish)



*X-ka-ti-ni-si* A 6:5 (Carchemish)



*X-ka-ti-na-wa* " "





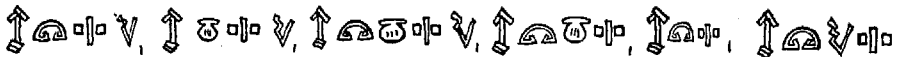
*X -u+ri-sa-ta-na-wa*  
A 11a:5 "



*X(rx)-u+ri-sa-ta-ni-wa*  
A 11c:6 "

DEMONSTRATIVE

A common demonstrative is  *wā-si*, "this."<sup>2</sup> It is sometimes strengthened by the particle  *pi-i*, "here." In a list of kings of Carchemish in A 7 the following forms of this pronoun appear:





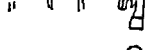
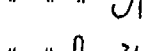



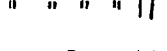
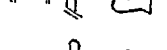
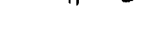

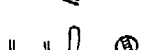
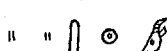
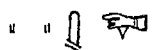
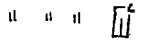
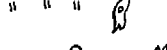
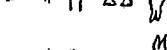
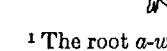


*wā-si-i-e, wā-pi-i-e, wā-si-pi-i-e, wā-si-pi-i, wā-si-i, wā-si-e-i*

<sup>1</sup>That *la* is a phonetic complement is shown by "tower"(*la*)-*ni* in A 11a:4.

<sup>2</sup> Cf. Lydian *ess*, "this." See Kahle and Sommer, "Die lydisch-aramäische Bilingue," KAF, I (1930), 24, n. 2.

## VERBS

Various forms from a single root<sup>1</sup> are:

	<i>a-wa-a-ne</i> M VII 2:2 (Kirch Oghlu); I M XV A:3
" " " 	<i>a-wa-a-ne</i> M I:4 (Babylon); M III B:3 (Aleppo); M IV A:3 and B:2 (Hamath)
" " " 	<i>a-wa-a-ne</i> AAA, II, Pl. XXXVIII:5 (Tell Ahmar)
" " " 	<i>a-wa-a-ne</i> II M LIII (Nigdeh)
" " " 	<i>a-wa-ā-e</i> Assur b Vo 18 (Assur)
" " " 	<i>a-wa-ā-i</i> Assur e Vu 3 "
" " " 	<i>a-wa-a-i-a</i> AAA, II, Pl. XXXVIII:7 (Tell Ahmar)
" " " 	<i>a-wa-a-pa</i> M XI:5 and A 16a I:2 (Carchemish)
" " " 	<i>a-wa-a-pa-a</i> CE VII:3 (Tekir Devrent)
" " " 	<i>a-wa-ā-pa-a</i> CE XII:4 (Bulghar Maden)
" " " 	<i>a-wa-a-wi</i> M I:3 (Babylon); II M LII:5 (Marash); M XI:3, A 1a:4, A 6:4, A 11a:5, and A 15b**:2 (Car- chemish)
" " " 	<i>a-wa-a-'na'-wi</i> M VI:2 (Hamath)
" " " 	<i>a-wa-ā-wi</i> M XXIII A:2 (Marash)
" " " 	<i>a-wa-ā-ḥi</i> A 3:4 (Carchemish)
" " " 	<i>a-wa-a-x-sá</i> A 15b* "
" " " 	<i>a-wa-ā-tá</i> A 11a:3 "
" " " 	<i>a-wa-ā-tá</i> CE V:1 (Kara Burun)
" " " 	<i>a-wa-ā-ta</i> A 15b**:1 (Carchemish)
" " " 	<i>a-wa-a-si-ta-a</i> A 1b:3 and 4 (Carchemish)
" " " 	<i>a-wa-a-si-ta+ri</i> A 6:5 and A 17b:2 (Carchemish)

<sup>1</sup> The root *a-wa-a* alone appears perhaps in Assur d Vu 9.

That  $\uparrow\uparrow\uparrow$  is a verb root appears from its endings, which are quite different from those of the noun, and also from its occurrence in a short and easily translated text (cf. p. 67). It evidently means "to make" or "to construct," and may be comparable to the Hittite cuneiform *iya*, which has the same meaning. The third person of the past tense ends in  $\uparrow\uparrow\uparrow$  *ne*. Nothing definite can be said about the other endings. There are, however, in cuneiform Hittite parallel forms for *-hi*, *-ta*, *-sta*, and *-stari*.

PARTICLES

The frequent use of particles and adverbs is an outstanding feature. The list that follows is very important for studying the language of the Hittite hieroglyphs. However, it contains a few words which I am not yet sure are particles.

- |    |  |  |   |   |  |   |
|----|--|--|---|---|--|---|
|    | $\circ\circ$ <i>i-</i>                             | $\uparrow\uparrow$ <i>pi-</i>  | $\circ$ <i>wi-</i>                                      | $\Delta$ <i>si-</i> ; $\uparrow$ <i>su-</i>                       | $\uparrow\uparrow$ <i>wā-</i>  | $\uparrow\uparrow$ <i>'a-</i>                             |
| 1. | $\circ\circ\uparrow$<br><i>i - e</i>               | $\uparrow\uparrow\circ\uparrow$<br><i>pi - i - e</i>                               | $\circ\circ\uparrow$<br><i>wi - i - e</i>               | $\uparrow\uparrow$<br><i>su - e</i>                               | $\uparrow\uparrow\uparrow$<br><i>wā - e</i>  |   |
| 2. | $\circ\circ\uparrow(\uparrow)$<br><i>i - wā(a)</i> | $\uparrow\uparrow\uparrow\uparrow$<br><i>pi - wā - a</i>                           | $\circ\circ\uparrow\uparrow$<br><i>wi - i - wā</i>      | $\Delta\uparrow\uparrow$<br><i>si - wā - e</i>                    | $\uparrow\uparrow\uparrow$<br><i>wā - wā</i>   | $\uparrow\uparrow\uparrow\Delta$<br><i>'a - wā - ki</i>   |
| 3. | $\circ\circ\uparrow\uparrow$<br><i>i - pa - a</i>  | $\uparrow\uparrow\uparrow\uparrow$<br><i>pi - pa - a</i>                           | $\circ\circ\uparrow\uparrow$<br><i>wi - pa - ā</i>      | $\Delta\uparrow\uparrow$<br><i>si - pa</i>                        | $\uparrow\uparrow\uparrow\uparrow$<br><i>wā - pa - a</i>                               |   |
| 4. | $\circ\circ\circ$<br><i>i - wi</i>                 | $\uparrow\uparrow\circ$<br><i>pi - wi</i>  |   | $\Delta\circ\uparrow$<br><i>si - wi - e</i>                       | $\uparrow\uparrow\circ$<br><i>wā - wi</i>  |   |
| 5. | $\circ\circ\uparrow$<br><i>i - a</i>               | $\uparrow\uparrow\uparrow\uparrow$<br><i>pi - ā - e</i>                            | $\circ\circ\uparrow\uparrow$<br><i>wi - a - wa</i>      |   | $\uparrow\uparrow\uparrow\uparrow$<br><i>wā + ri - a</i>                               |   |
| 6. | $\circ\circ\uparrow\uparrow$<br><i>i - ma - wā</i> | $\uparrow\uparrow\uparrow\uparrow\uparrow\uparrow$<br><i>pi - i - ma - wā - ta</i> | $\circ\circ\uparrow\uparrow$<br><i>wi - i - ma - wā</i> | $\Delta\circ\circ\uparrow\uparrow$<br><i>si - i - ma - ta - e</i> | $\uparrow\uparrow\uparrow\uparrow\uparrow\uparrow$<br><i>wā + wa - i - ma - wā - e</i> | $\uparrow\uparrow\uparrow\uparrow$<br><i>'a - ma - wā</i> |
| 7. | $\circ\circ\uparrow$<br><i>i - mi</i>              | $\uparrow\uparrow\circ\uparrow$<br><i>pi - i - mi</i>                              | $\circ\circ\uparrow$<br><i>wi - i - mi</i>              |   |  | $\uparrow\uparrow\uparrow$<br><i>'a - mi</i>              |

- i - pi - wi - si - wa*
8. 
  
*i - mi - ta - e      pi - i - mi - ta - e      a - mi - ta - e*
9. 
  
*i - mi - ta      wi - i - mi - ta*
10. 
  
*i - ki - me - ni - e    pi + ri - ki - a + ri    wi - ki - wi      wa - ki      a - ki - si*
11. 
  
*i - ni      pi - i - ni      wi - ni      su - ni      wa - ni*
12. 
  
*i - ne - e      pi - i - ne      wi - ne - sa*
13. 
  
*i - nu      pi + ri - nu      a - nu*
14. 
  
*i - la      pi - la      wi - la      si - la      wa - la      a - la*
15. 
  
*i - ta      pi - i - ta      wi - ta      si - ta - e      wa - ta - wi      a - ta - ni*
16. 
  
*i - ti - e      pi - i - ti      wi - i - ti*
17. 
  
*i - ti - ta - e      pi - i - ti - ta - e      wi - i - ti - ta      si - ti - ta - e      a - te - mu - x*
18. 
  
*i - ti - i - ni - e      wi - ti + ri - ni*
19. 
  
*i - si - e      pi - si - e      wi - sa      si - i - si      wa - si - pa*
20. 
  
*i + ri - pi - si      pi - pi - i      wi - pi - ni - pa      wa - pi - i      a - pi - (si)*

The foregoing particles are formed in accordance with definite rules. Thus  $\square\square$   $\int$  *i-ta* may be enlarged by means of the prefixes  $\text{𐎗}, \text{𐎗}, \text{𐎗}, \text{𐎗}, \text{𐎗}$  (*pi-, wi-, si-, wā-, ʔa-*);  $\square\square$   $\int$  *i-mi* becomes in its enlarged form *pi-i-mi, wi-i-mi, or ʔa-mi*. A particle may be enlarged also by adding another full particle. Thus, for instance,  $\square\square$   $\int$   $\int$   $\int$  *i-mi-ta-e* =  $\square\square$   $\int$  +  $\square\square$   $\int$   $\int$  (*i-mi + i-ta-e*);  $\square\square$   $\text{𐎗}$   $\int$   $\int$  =  $\square\square$   $\text{𐎗}$  +  $\square\square$   $\int$   $\int$ ; etc. A compound particle, in turn, may take the prefixes *pi-, wi-,* and others, like any simple particle. A similar but not identical formation of particles is known in the Mitannian language.<sup>1</sup>

Enclitic particles include the following:

① *-wi*, "and," used like Latin *-que*:


$\text{𐎗} \int \text{𐎗}$	<i>mi+ri-wā-wi</i> ("city")	A 6:3 (Carchemish)
$\text{𐎗} \text{𐎗} \text{𐎗}$	"calf"- <i>si-wi</i>	A 11b:6 "
$\int \int \int \text{𐎗} \text{𐎗} \text{𐎗}$	<i>ta-a-ma-na-pa-wi</i> ("city")	A 15b**: <sup>2</sup> 4 " 2
$\text{𐎗} \square$ <i>-pi-i</i> :		
$\int \int \text{𐎗} \text{𐎗} \square$	<i>ka-ma-na-si-pi-i</i>	A 6:6 (Carchemish)
" " " $\int$ " "	<i>ka-ma-na-ni-pi-i</i>	A 15b**: <sup>2</sup> 3 "
$\int \int \text{𐎗} \int \text{𐎗} \square$	<i>karka(ka)-me-sá-pi-i</i> ("city")	M XI:2 (Carchemish)


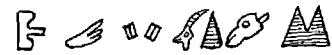
$\text{𐎗}$  *-ti* and  $\int$  *-te*:


$\text{𐎗} \int \text{𐎗} \text{𐎗}$	<i>X-tá-yu+ri-ā-ti</i>	A 3:1 (Carchemish)
$\int \text{𐎗} \text{𐎗} \text{𐎗}$	<i>X-la-si-ti</i>	A 4a:3 "
" $\int$ $\int$ $\text{𐎗}$	<i>X-la-wā-ti</i>	A 11a:6 "
$\int \text{𐎗} \text{𐎗}$	<i>X-pi-ti</i>	Assur e Ru 1 (Assur)
$\int \text{𐎗} \int \int$	<i>X-pi-te-e</i>	A 15b**: <sup>2</sup> 2 (Carchemish)


<sup>1</sup> Bork, "Die Mitannsprache," MVAG, XIV (1909), 33.


<sup>2</sup> Another good example occurs after the fourth and last of a group of divine names in A 15b\*\*:<sup>2</sup>1.


 -mi:


 *X-pi+ri-ti-ná-ti-mi*<sup>1</sup> A 11c:4 (Carchemish)  
 *karka(ka)-me-sá-(city)*<sup>2</sup>-mi ("land")  
 I M X:1 (Carchemish)


 -gu, very rare, but demonstrated by its interchanging with other endings in

 *X-u-gu* II M LII:3 (Marash)

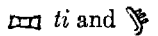
" "  *X-u-su* " "


" "  *X-u-pa-ni* II M LII:4 "

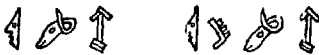
 <sup>a</sup>*X-gu* AAA, II, Pl. XXXVIII:2 (Tell Ahmar)


" "  <sup>a</sup>*X-ni* A 2:3 (Carchemish)

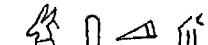
Infixed particles are rare. They include


 *ti* and *te*:

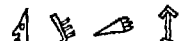
 *X-pi+ri-ti-ná-ti-mi*<sup>1</sup>  
 A 11c:4 (Carchemish)


 <sup>a</sup>*a-ma-wā* <sup>a</sup>*a-te-ma-wā*  
 A 6:9 " *et passim*

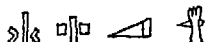
 *ki*; compare


 *X-ā-ki-tá* CE V:1 (Kara Burun)

 *X-ā-li-si* I M XXI:3 and 1<sup>3</sup> (Marash)

 <sup>a</sup>*a-te-ki-wā* A 15b<sup>\*\*</sup>:3 (Carchemish)

"  <sup>a</sup>*a-te-ma-wā* A 6:9 "

 *X-i-ki-tá* AAA, II, Pl. XXXVIII:5 (Tell Ahmar)

" "  *X-i-ā-pa* A 11a:5 (Carchemish)







<sup>1</sup> For another example of *-ti-mi* see A 2:6.

<sup>2</sup> The "city" sign, actually written before *mi*, belongs after it.


<sup>3</sup> Head only of the rabbit in l. 1.

## VOCABULARY

The meanings of words are suggested sometimes pictorially by their ideograms, sometimes by their context, and sometimes by phonetic spellings which resemble those of words known already in some other Asianic language or languages. The context in inscriptions A 11a (Carchemish) and I M XXI and II M LII (Marash) is especially helpful in explaining such terms of relationship as

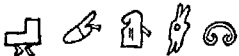
<sup>16</sup> 	"son"- <i>na-mi-i-wā-si</i>	
" "		"son"
" "		"grandson"- <i>si</i> "grandson"
" "		"grandson"- <i>ma-mi-ka-ki-su</i> "great-grandson"
" "		<i>X-ni-i-ni-i-su</i> ?
" "		<i>X-u+ri-ti-su</i> ?

The word for "great-grandson" is written with a different ideogram in

 *X-mi-ka-ki-si* CE XIII:3 (Egri Kōi)


The fourth term in our list may be compared to Lycian *nēnni*, "sister."<sup>1</sup> The meaning of the fifth escapes me. For variants of the first and second terms compare Meriggi, pages 199 ff.

To judge by its ideogram, the word

 *X(ka+ri-pá+ri-ta)-si* A 15b\*\*:3 (Carchemish)

means "footstool." Perhaps it is the same word found in Sumerian-Akkadian as *qartappu* etc.








The group meaning "prince" or similar is written

 "prince" (*yu+ri-i-na)-si* A 11a:1 (Carchemish)

<sup>1</sup> Meriggi, "Beiträge zur lykischen Syntax," KAF, I (1930), 422.







A word for "vessel" or "vase" is written







      "vessel" (*pi+ri-ti-na*)-*ti-mi* A 11c:4 (Carchemish)  
 " " " <  " (-) "vessel" (*pi+ri-ti-na-a*)-*ti* " "

The syllables *-ti-mi* and *-ti* are enclitic endings.

The ideogram for "ax" is followed by its phonetic spelling and the ending *-ta* in








    "ax" (*ka+ri-ma-li*)-*ta* A 1a:1 (Carchemish)

If in














    "warrior" (*ta-hi*)-*si* A 18e:2 (Carchemish)  
 "  " "  "warrior" (*ta-hi*)-*su* A 7b:2 "

the double ideogram really means "warrior" or "hero" and is followed by its complete phonetic spelling, perhaps it may be compared with the Hittite cuneiform *zahhiša*, "to fight."

The word

       *X(gu-ti-ni-li)-si-wi* A 11b:6 (Carchemish)

appears among pictures of animals used as offerings to the gods (cf. p. 56). It is probably equivalent to the Hittite cuneiform word *kuttanalli*.<sup>1</sup> Its ideogram may represent an altar with smoke rising from it. The final *-wi* is our enclitic "and." The ending *-lis* preceding it is common in our hieroglyphic inscriptions. Other examples of it with various case endings are

     "ax" (*ka+ri-ma-li*)-*ta* A 1a:1 (Carchemish)  
    *X-ā-li-si* I M XXI:3 and 1<sup>2</sup> (Marash)  
    *su-pi-tu-li-ā* A 11b:2 (Carchemish)

<sup>1</sup> Friedrich, "Zu AO 24, 3," ZA, XXXVI (1925), 275.

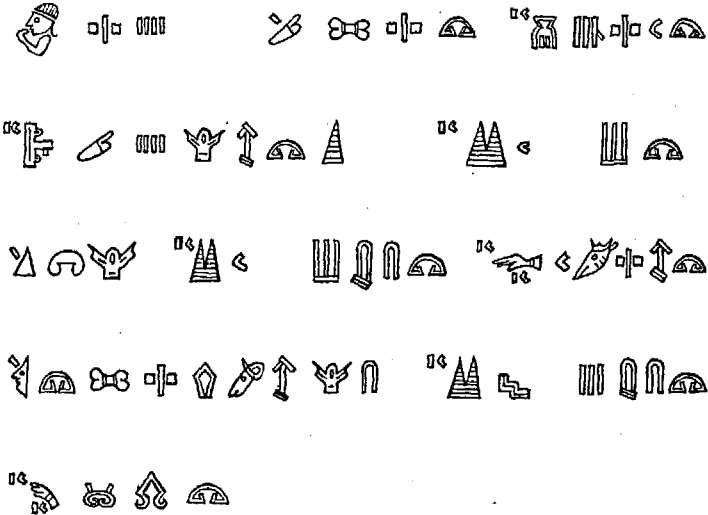
<sup>2</sup> Head only of the rabbit in l. 1.

THE LANGUAGE

TEXTS

To suggest the syntax of the Hittite hieroglyphic inscriptions I give here transliterations and translations of a few passages.

A 11a (Carchemish)



<i>ime(i-me)</i> "I,	<i>ka-ti-i-si</i> Katis	"ruler" ( <i>yu+ri-i-na</i> )- <i>si</i> the ruler,
<i>karka(ka)-me-sa-wā-si</i> ("city") of Karkames	<i>umena(na)</i> the land	"prince"- <i>si</i> the prince,
<i>mi-ḥa-sa</i> of Miḥas	<i>umena(na)</i> of the land	"prince"- <i>ā-a-si</i> the prince
<i>na-si-ti-i-tu-ma-wā-sa-a</i> of ᵀAstituma	<i>umena(na)</i> of the land	"son"- <i>na-mi-i-wā-si</i> the son,
		"prince"- <i>ā-a-si</i> "grandson"- <i>si</i> . . . . the prince the grandson, . . . ."

In English order we would say: "I, Katis the ruler, the prince of the land of (the city of) Karkames, the son of Miḥas the prince of the land, the grandson of ᵀAstituma the prince of the land, . . . ." This is the sort of introduction used in all of the longer inscriptions from Carchemish. The personal names are clearly indicated by use of the tang. Among the other words the only question is whether some slightly different term such as "governor" should be used instead of "ruler."

## II M LIII (Nigdeh)

↑ □□    ↑ Δ ∨    Δ ⊗ □□ <    𐎠    𐎠 ↑ 𐎠 𐎠

𐎠    𐎠    𐎠    𐎠 𐎠

*wā-i*    *X-mi-ni*    *si-ḫi-i-na-su*    *a-wa-a-ne*    *a-pi-si*    "prince"-su<sup>1</sup>  
 "This    column(?)    Sihinas    made,    the . . . .    prince."

This inscription is cut on what seems to be the base of a column. The second word, then, means either "column" or some more generalized term such as "monument." This same group of signs, except that the first is accompanied by the ideogram mark, appears in Carchemish A 15b\*. The last two words contain a title. Since the second of them is the ideogram for "prince" plus the nominative ending, the other may be an adjective such as "great."

## Assur 8

↑ 𐎠 □□ 𐎠    𐎠 𐎠 𐎠 ∨    𐎠 𐎠 𐎠 𐎠

*wa-ā-i-a*  
 "This

*X-ka-pa-ni*  
 bowl(?)

*X(pa)-ā-si*  
 . . . . pas

𐎠 𐎠 𐎠 <    ⊗ 𐎠 𐎠 𐎠 𐎠    [𐎠 ↑ 𐎠] 𐎠

*ḫalpi(pi)-na*  
 of Ḫalpi

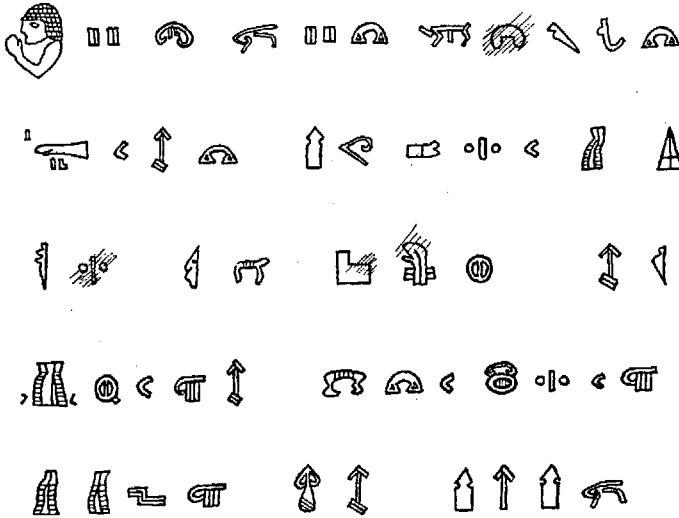
*tarku(ku)-pa-ni*  
 belonging to (the god) Tarku

*[a-wa-a]-tā*  
 made."

The same ideogram used above for "column(?)" is followed here by a different phonetic series. The same spelling occurs in M I (from Babylon). In each of these latter instances the inscribed object appears to be a large bowl. The word *ḫalpi(pi)-na* seems to lack a declensional ending. We assume that it applies to the god. The sense then would be: ". . . . pas made this bowl belonging (i.e., dedicated) to (the god) Tarku of Ḫalpi."

<sup>1</sup>This and the preceding word are written as a unit, for the "prince" sign stands in the middle of a column. Are the words perhaps in apposition, or have we a compound analogous to "Grosskönig"?

## M IV B (Hamath)



*ime(me)* "sun" *ne-me-si* "mi+ri-ha-li-ni-si" "son"-na-(mi)-wā-si  
 "I the Sun,<sup>1</sup> Nemes, of Mirhalinis the son,  
*a-ma-ti-i-na* ("land") "king" *e-i* *ʔa-mi* *X-né+me-wi* *wā-li*  
 of Hamath the king, here now(?) of victory(?) this  
*X(wi+ri-na-sá)-wā* *mi-si-na-pi-i-na-sá* *umena-ná-sá* "ruler"-wā  
 monument of Misnap of the lands over the ruler  
*a-wa-a-ne*  
 made."







The idea above seems to be: "I the Sun, Nemes, the son of Mirhalinis, the king of Hamath, built this monument of victory over the ruler of the lands of Misnap." We include this text, however, more because of the problems it raises than because of the help it gives. The case endings which we attempted to identify on pages 54-55 play strange pranks here.

The word for "son," here as in A 11b:1, lacks the *mi* with which it is usually written. I have no basis for my translation of the three words after the "king" sign except comparison with similar inscriptions in

<sup>1</sup> The epithet "sun" was commonly given to kings in the cuneiform inscriptions from Boghaz Kōi. Cf. Weidner, "Politische Dokumente aus Kleinasien," BKS, VIII (1923), 2 and 4.

neighboring languages. *Wā-li* is the demonstrative pronoun *was* with the *-li* ending. This pronoun in the form *wā-i* appears at the beginning of a large inscription from Kara Burun (CE V:1), preceding the same word *wi+ri-na-sd-wā* (there written without its initial ideogram). Hence we translate these two words as "this monument," "this inscription," or something similar. The spear, frequent in many inscriptions, probably pictures a title such as "ruler" or "warrior."

Two other inscriptions from Hamath (M III B and M IV A)<sup>1</sup> treat of the same subject, the conquest of a neighboring territory. Both are slightly longer than M IV B, though M III B has lost its left half, including the end of the text. As far as M IV B goes, these three inscriptions read exactly alike except for the name of the conquered territory and the syllables following the ideograms for "land." The additions are


		
"conquered"- <i>wi-i</i> "and conquered"	<i>halpi(pi)-i-na-wa</i> of Halpi	"land" [. . .] M III B the land . . ."
		
"conquered"- <i>wi-i</i> "and conquered"	<i>nā-mu-ma-si</i> of Namumas	"land" M IV A the land."

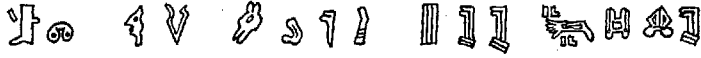
The first word in each addition is evidently a verb expressed by an ideogram and followed by the enclitic *-wi*, "and," while the second is a geographic name. The sign for "land" is evidently to be pronounced, in spite of its lack of a phonetic complement or ending, since in M III B it is preceded by what we may fairly call an appositional genitive. The fact that no genitive ending is visible in the parallel text M IV A is quite in keeping with similar omissions in texts previously discussed.


<sup>1</sup> A good synopsis of the Hamath inscriptions is given by Rylands, "Hittite Inscriptions," PSBA, XX (1898), 263 ff. Another inscription from the neighborhood of Hamath has been published by Ronzevalle, "Stèle hittite des environs de Restan," and again by Sayce, "A New Inscription from Hamath," PSBA, XXXI (1909), 259 ff.

Two building inscriptions from Malatya<sup>1</sup> are

## M XVI A


  
*wā-ā-i* "palace"-*si* *si-lī-ā* *halpi(pi)-pā-si*


  
*"X-si* *taḥis* *milit-te-a* ("city") "prince"-*ā-ā* "grandson"-*ā*

  
*li-ri-ḥe* "son"-*mi-i-a-ā-ā*

and


## II M XLVII

  
*wā-ā-i* "palace"-*si* *si-lī-ā* *ma-a-ri-te-si*

  
*"mu+wi-i-a-ri-me-si* "son"-*mi-i-a-ā-ā* "king"-*si*

Freely translated, the first reads: "This palace was built for Halpipa the grandson of . . . s, the warrior, the prince of Malatya, the son of Lirḥe." The second, beginning in the same way, states: "This palace was built for Martes the son of Muwiarmes(?), the king."


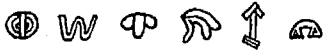

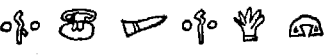


The ideogram for "palace" is analogous to the Egyptian hieroglyphs for "house," "temple," etc. The word *siliā*, the only one not otherwise accounted for, is evidently the verb. Our passive translation is based on the assumption that the *-ā* with some of the nouns is the dative ending; but, if so, the correlation of case endings is as perplexing as we found it on page 68. King Halpipa of the first text is named again in

  
*halpi(pi)-pā* "king" "great(?)" CE XXI (Malatya)


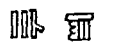
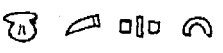


<sup>1</sup> See good reproductions of both from photographs, Meyer, Pls. VI-VII.

where the final sign may be an ideogram for "great." The word between *tahis* and "prince" is evidently the name of the city itself. Its *te* sign is a specialized form found again in the name of Martes in the second text. The initial sign of the city's name, then, is ideographic. Its known phonetic value, *mi*, comes about naturally by acrophony. The mention of grandfather before father is unique, due perhaps to the greater renown of the former. The name Martes in the second text may be compared to cuneiform Mar-di-i or Mar-di-ia.<sup>1</sup>

The great rock sculpture at Ivriz<sup>2</sup> includes two inscriptions, one before the face of the god, the other behind the smaller figure of the king who worships him. The text beside the god<sup>3</sup> reads:

 <i>wā-i</i> "This"	 <sup>4</sup> <i>tarku(ku)-ne-wā-si</i> of Tarku	 <i>X-wā-si</i> monument
 <sup>5</sup> <i>i+ri-pi-ki-i-sa-si</i> (of) Irpikis	 <sup>6</sup> <i>i-ti-lā-ne-ā-si</i> the <i>ittāneās</i>	
 <i>u-ni-nē-ti-ne</i> carved(?)		

In English order we would say: "The *ittāneās* of Irpikis carved(?) this monument of Tarku." Behind the king we find the statement:<sup>4</sup>

 <i>wā-i</i> "This (is)	 "prince"- <i>sá</i> the prince	 <sup>5</sup> <i>i+ri-pi-ki-i-si</i> Irpikis,	 <i>tahis</i> the warrior	 <sup>6</sup> <i>a+ri-ā-wā</i> of . . . ."
--	--	--	--	--

The ideogram for "monument" is apparently a variant form of that discussed on page 67, where with other phonetic complements it stood for "column" and for "bowl." That "Irpikis" is a royal name appears certain from its occurrence in CE XII:1 (Bulghar Maden).

<sup>1</sup> Tallqvist, p. 128.

<sup>2</sup> Meyer, Pl. XV.

<sup>3</sup> II M XXXIV A; Sayce in PSBA, XXVIII (1906), 133-34 and pl.

<sup>4</sup> II M XXXIV B; Sayce, *loc. cit.*

The form there is the same as in the first text here. That its ending *-sas* is another means of expressing a genitive is clear from the context of this name in CE XII:1 and from the context of a similar form *\*mi-ḫa-sa-si* in A2:1.<sup>1</sup> Does the choice between *-wa* or *-pa* on the one hand and *-sa* on the other depend on the termination, consonantal or vocalic, of the stem to which the genitive ending is attached? That principle is evident in cuneiform Hittite, where it seems due to the Indo-European element in that language.

The general nature of the lead strip inscriptions from Assur may be judged by contrasting them with other texts. On these strips the words and phrases most common in the historical and religious inscriptions from Asia Minor and Syria do not occur. The fact that no divine names appear in these inscriptions speaks against Andrac's supposition that they are older examples of incantations on lead strips such as are known from the Greek period.<sup>2</sup> The frequent appearance of numbers (cf. p. 54) gives us the key for understanding the character of these inscriptions; they must be business documents in which quantities are mentioned.

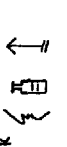
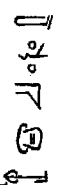
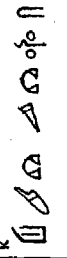
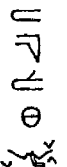
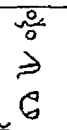
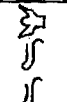
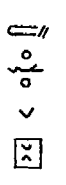
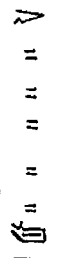
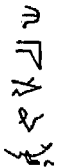
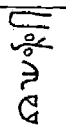
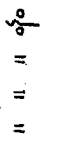
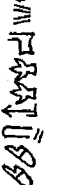
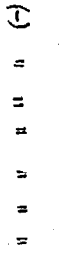
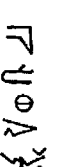
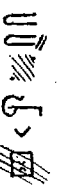
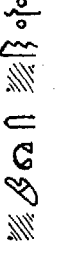
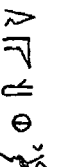
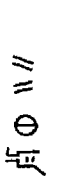
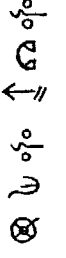
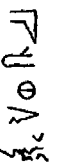
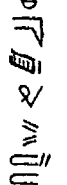
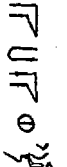
We can still more closely define their contents by comparing their introductory words. As we see from page 63, the first word in each of the six inscriptions (for *g* is only a continuation of *f*) is identical. In all of them appears also an ideogram showing in profile a face with extended tongue, to which I attribute the meaning "speak." These two characteristics indicate that the Assur lead strips are letters, written probably in the oriental style best represented by the Assyrian introductory phrase *ana X bēliya qibima umma Y*: "To X, my lord, speak: Thus (says) Y." On the analogy of this Assyrian phrase, of a type common in oriental epistolography, we can try to explain the introductory words of our Assur inscriptions.

The first word in all these letters will correspond to *ana*, "to." The second, different throughout except for the equivalence of *b* and *d*, will designate the addressee. The names *wāpīpairiā*, *Xnairiā* and its variant, and *kakaā* have a final *-ā*, which is perhaps the dative ending

<sup>1</sup>The same phrase occurs again, but without the final *-si* of *Miḫas*, in A 11a (see p. 67).

<sup>2</sup>Andrac, "Hettitische Inschriften auf Bleistreifen aus Assur," *WVDOG*, No. 46 (1924), 5.



Assur a	 a - x - wā	 wā - pi - pa - i - ri - ā	 tā - ka - si	 X - wa - ri - pa - a	 si - ni - i - ri	 ne - ne - sa	
Assur b	(=a)	 X - na - i - ri - ā	 tā - ka - si	 X - ma - pu - pa - ni	 si - ni - i - ri - a	(=a)	
Assur c	 a - x - wā - i	 ka - ha - ā wa - sa - pa - me - wi	 tā - ka - si	 X - e - wi - a - ri - pa	(-)	(-)	(-)
Assur d	(=c)	 X - na - x - i - ri - ā - a	 tā - ka - si	 X - wi - a - ri - pa - e	(=a)	(=a)	
Assur e	(=a)	 na - wi - me	 x - ri - ni - i	 X - e - wa - a - ri - pa	(-)	(-)	
Assur f	(=a)	 a - ā - me - ma - mi - pa - ri	(=a)	 X - wi - pa - a - pa	(-)	(-)	

(cf. p. 55). At any rate, the case formed with  $-ā$  is evidently that used after the preposition  $ʔaxwa$ , "to." In c, e, and f the name is combined with or replaced by a title. The titles used—*wāsapamewi*, *nuwime*, *aāme*—probably include the 1st person singular pronoun (see p. 56), just as does *bēliya* in the corresponding Assyrian phrase. The fact that the personal name *tang* is not used in these texts suggests that they are older than the inscriptions of Marash and Carchemish. Yet they use the division mark more regularly than do any other Hittite inscriptions.

The third element, *takas kisā/e*, probably identifies the writer. That he was the same man in each case, a fact already recognized by Andrae,<sup>1</sup> is well proved by the uniformity of all these inscriptions. That his name or title consists of at least two elements appears from the form [*ta*]kasia [*ki*]sui in d. The final, or in that instance medial, vowel or vowels, may perhaps be weak particles (cf. pp. 60–63). This phrase is probably a title or epithet, for in e it is replaced by another, *xrinī wāsī*.

The next word, as previously stated, expresses very clearly by its initial ideogram the idea of "speaking" and corresponds to the Assyrian *qibima*, "speak." The phonetic complements following this ideogram vary somewhat. The two words after the verb presumably amount to our phrase "as follows."

Since all these letters, though written by one person to different correspondents, were found together, we may consider them forerunners of the "carbon copies" of today.

#### PHONOLOGY

We are not yet in position to write about the phonology of the Hittite hieroglyphic. A few words, however, must be devoted to explaining the transliterations followed in this paper.

According to my decipherment there are sixteen sounds in our hieroglyphic inscriptions, comprising twelve consonants and four vowels. The consonants found thus far are  $ʔ$ , *w*, *p*, *t*, *k*, *h*, *m*, *n*, *r*, *y*, *l*, *s*; the vowels, *a*, *e*, *i*, and *u*.

Voiced and voiceless consonants are not distinguished. For ex-

<sup>1</sup>*Op. cit.*, p. 6: "Die fast genaue Gleichheit der Breiten stimmt überein mit der vollkommenen Gleichmässigkeit der Schrift und weist alle Inschriften einer Entstehungszeit, ja sogar e i n e m Schreiber zu."

ample, the same syllable *ti* is written in "Amati" (p. 17, cuneiform Amat, etc.) as in "Intilimi" (p. 36, cuneiform Indilimma). This situation is in agreement not only with the number of signs (56) in our Hittite syllabary, but also with the general character of all the comparable languages of Asia Minor. According to general custom, then, I have used the voiceless consonants regularly in transliterations. The syllable *gu* is the only exception, since it could be differentiated from *ku* by its occurrence in the geographic names Gurgum (p. 18) and Sagur (p. 26).

The *w* interchanges sometimes with  $\text{?}$ , sometimes with *m* (cf. p. 30), or may even be lost completely (cf. p. 29).

Interchanges of *pa* and *wa* syllables in the genitive ending (p. 55) and of *pa* and *wi* elsewhere (p. 28) join with an instance in which the personal name Gurpas is written Guras (p. 41) to indicate that our *p* is relatively weak.<sup>1</sup>

The consonant *h* is rare, at least in contrast with the cuneiform Hittite. Perhaps the original *h* sound became modified in the course of time into the smooth breathing; or it may have disappeared in the writing just as did some of the laryngeals in Assyrian cuneiform.

Possible varieties of nasal sounds were suggested on page 16.

The consonant *r* does not appear at the beginning of a word.<sup>2</sup> For its relationships to *y* and *l* see page 13.

The *y*, like the *w*, may be omitted (cf. p. 46).

The consonant *l* does not appear here as often as it does in many other languages of Asia Minor.

The nature of the sibilant which I have regularly transliterated as *s* remains uncertain.<sup>3</sup>

Of the four vowels, the most certainly identified are *a* and *i*. The signs which we have taken to represent *e* and *u* are used far less frequently than the others as phonetic complements. Why are the writings *te-e*, *ku-u*, and *ne-e*, for example, so rare in comparison with *pa-a*, *sa-a*, *pi-i*, and *ti-i*? And why is *ka* never followed by *a*?

The hieroglyphic vowel *i* evidently stands not only for its own proper sound but also for other sounds intermediate between *i* and *u*,

<sup>1</sup> Cf. Assyrian *pi*, which can be read *wi* also.

<sup>2</sup> Unless perhaps in one pair of examples on p. 46.

<sup>3</sup> Cf. Ungnad in ZA, XXXVI (1924), 134.

whereas in cuneiform *u* often serves the latter purpose. Contrast the following spellings:

HIEROGLYPHIC	CUNEIFORM
Miska (p. 33)	Muški
Mitalis (p. 38)	Mutallu
Tini (p. 18)	Tunni

On the other hand, the cuneiform sometimes agrees with our hieroglyphs, as in

HIEROGLYPHIC	CUNEIFORM
Misu (p. 32)	Miši
Intilimi (p. 36)	Indilimma
<i>tirsa</i> (p. 10)	<i>sirāšu</i> (but cf. <i>θύραος</i> )

From occurrences of the divine name Gupappis in the dative(?) as *gu-pá-pi-ā* (p. 55) and *gu-pá-pi-pi-ā* (A 6:6)<sup>1</sup> it appears that doubled (properly, intensified) consonants may be represented by either a single or a double writing.<sup>2</sup>

Double consonances may and doubtless do occur frequently, even though the writing perforce indicates a succession of single consonants each followed by a vowel.

<sup>1</sup> Cf. similar variations in nom. and acc. forms, pp. 48 and 55.

<sup>2</sup> In spite of a strong tendency to single writing in the Semitic group of alphabetically written languages, even there double writings sometimes occur; cf. Guidi, "Summarium grammaticae Arabicae meridionalis," *Le Muséon*, XXXIX (1926), 4, § 6.

## III

## HISTORICAL RESULTS

Monuments bearing Hittite hieroglyphic inscriptions have been found scattered over a wide area. The territory involved extends in a long strip from Sipylos on the western coast of Asia Minor eastward through the heart of that region, coming rather nearer to the Mediterranean Sea on the south than to the Black Sea on the north and continuing into North Syria between Marash and Hamath. Outside of this area such inscriptions have been found in only two places, Assur and Babylon. The Assur lead strips, containing probably business letters, come presumably from a country abounding in that metal, that is, from eastern Asia Minor. In favor of this supposition is the fact that the characters of the so-called Kara Burun inscription (CE V), from that part of Asia Minor, bear the closest resemblance to those of the Assur lead strips.<sup>1</sup> Mention of the city of Ḫalpa in two inscriptions, one on a bowl (Assur 8), the other on a stela (M II), shows that they originated at that old and important capital of a North Syrian state, though both of them were found at Babylon. Another Hittite inscription from Babylon (M I) proves its origin by mentioning Karkus, the city-god of Carchemish. These last three inscriptions were evidently carried off to Babylon by victorious armies.

The large area over which Hittite hieroglyphic inscriptions are found suggests that they cover a long period of time also. We cannot believe that the people who used them could quickly conquer such an area as that from Sipylos to Hamath, especially since there is a lack of historical documents and no such considerable conquest could have taken place without leaving an echo in the records of neighboring peoples. The oldest datable hieroglyphic inscriptions, the seals of Šuppiluliuma and Arnuwantaš,<sup>2</sup> show that already in their day, in the

<sup>1</sup> Or the strips may have been written in Assur in the style of eastern Asia Minor by a merchant of that region who had migrated to Assur.

<sup>2</sup> For the use of hieroglyphs at Boghaz Köi cf. H. H. von der Osten, "Four Sculptures from Marash," *Metropolitan Museum Studies*, II (1929/30), 112-32, and F. W. von Bissing, "Zur Datierung und Entstehung der chetitischen Bilderschrift," *Filologu biedribas raksti* (Riga), 1930, p. 67. Hieroglyphic legends on Boghaz Köi tablets are published in *JRAS*, 1912, pp. 1029-38 (by Sayce), and in *KUB*, VII, Pl. 1 (cf. *ibid.*, p. 39), and *KUB*, XXV, Pl. 35 (cf. *ibid.*, p. 81).

13th century B.C., the people who used this writing were firmly established in Asia Minor. The fact that Hittite kings used hieroglyphic writing at home and the far different cuneiform for international correspondence can be explained by one of two suppositions only: (1) the hieroglyphic was the national Hittite writing, locally used at first along with the cuneiform writing, afterward supplanted entirely by the latter; or (2) the hieroglyphic writing was used only by the peoples inhabiting the southern part of the great Hittite Empire and occasionally by the kings of Ḫattušaš. Since regular hieroglyphic inscriptions have not been found among the Hittite archives of Boghaz Köi, I am inclined to accept the second supposition. I should like, however, to point out the high degree of culture evidenced by the use of hieroglyphic by Hittite kings. A more cultured people never uses for its own purposes the writing of a less cultured people unless, as in this case, the writing is either older or is used by many inhabitants of its territory.

When Hittite hieroglyphic writing was introduced into Asia Minor is uncertain. The fact that it was rarely used in the kingdom of Ḫatti proper does not prove, however, that at that time, i.e., 15th to 12th century B.C., it was not used in southern Asia Minor. In opposition to the general opinion, I believe that the most splendid period of our hieroglyphs fell in the few centuries before the coming of those barbarians who about 1200 B.C. destroyed the Hittite Empire and forced many of the peoples of southern Asia Minor to seek refuge in Syria. The exiles took with them their national writing. Between the 10th and the 8th century B.C. there was a second period of splendor for the Hittite hieroglyphs, represented mostly by inscriptions of individual city-states such as Marash, Carchemish, and Hamath. That Hittite hieroglyphic was still written in Syria and Asia Minor in the 7th century B.C. is shown by the finding of a few seals with Hittite characters at Khorsabad, ancient Dūr-Šarrukīn, a city built by King Sargon II of Assyria.<sup>1</sup>

The presence of division marks and name tangs seems to me to be characteristic of relatively late inscriptions. The common impression that inscriptions in relief are older than those which are incised cannot

<sup>1</sup> Cf. M XXXIX. A seal very similar to M XXXIX 9 was found recently by Professor Chiera during his excavations at the palace of Sargon in Khorsabad.

be wholly justified, for the North Syrian inscriptions in relief are surely late.

We reach safer ground when we speak about the origin of Hittite hieroglyphic writing. On the one hand, it is certain that no oriental influence is present. Neither the boustrophedon arrangement of the lines nor the method of writing closed syllables can be explained as borrowed from Egyptian or cuneiform writing. On the other hand, these two important characteristics agree very well with two scripts of the western branch of the Mediterranean group—the Cretan pictographs and the Cypriote syllabary.

It would appear that our hieroglyphic writing uses some two hundred and twenty signs, consisting of two sorts. Some fifty-six are phonetic signs which are only occasionally ideographic; the rest have ideographic values only. The syllables represented by the phonetic signs all end in vowels, exactly as in the Cypriote syllabary. The latter was used at first for the autochthonous language only, but this was afterward entirely supplanted by the Greek language, in which most of the known inscriptions in Cypriote writing were composed. When I discovered this strange coincidence between the Cypriote and Hittite syllabaries, I immediately looked to see whether the signs in these two systems might not also agree with each other. Close examination of the Cypriote signs and variants<sup>1</sup> led to the conclusion that, although certain forms in these two systems resemble each other, there cannot be any borrowing by the Hittite from the Cypriote or vice versa. The values of identical signs in the two systems are *always* different; in fact, out of all the signs of the Hittite syllabary, among the thirty or so about the values of which I feel no doubts, I could find not one case of both pictographic and phonetic agreement with the corresponding Cypriote sign. Thus it appears very clearly that, if there was borrowing, it must have come about indirectly.

The Cypriote syllabary no doubt originated in the West. Two cases in which Cypriote forms accidentally agree with cuneiform characters do not prove anything against that origin, for the Cypriote syllabary as a whole differs far too much in principle from the cuneiform system to permit assumption of any real connection between these two

<sup>1</sup> Cf. esp. the great table opposite p. 80 in Hermann Collitz, *Sammlung der griechischen Dialekt-Inschriften* (Göttingen, 1884).

scripts. On the other hand, there is a real link, through the Cypro-Minoan signs, between the Cypriote syllabary and Cretan writing in both its hieroglyphic and its two linear forms.<sup>1</sup> But since unfortunately the Cretan writing is still undeciphered, we are not in position to prove that in addition to using some of the same pictures for their signs these two scripts are based on the same general principles.

Led by the connection between Cypriote and Hittite on the one hand and between Cypriote and Cretan on the other, I started to compare the Hittite and Cretan signs and was astonished to discover many correspondences not only in the objects represented, but also in their forms and in characteristic details. For instance, the Cretan and Hittite forms of Nos. 6, 10, 12, 13, 17, 27, 31, 32, and 39 in my table are entirely identical. It is interesting also to note the selfsame variations in Nos. 7 and 8. The pictures of a hippocamp (No. 19) and of a ship (No. 38) are very important, since they prove that the people who invented the ancestor of both Cretan and Hittite writing must have resided near the sea. These and other very instructive correspondences in form tend to show that the Cretan and the Hittite hieroglyphs had without doubt one and the same origin.<sup>2</sup>

The language of the hieroglyphic inscriptions offers more of a problem. As a basis for comparison between our language and all others which might bear upon it, I listed in two tables (see pp. 60-61) all the particles so far known from the Hittite hieroglyphic inscriptions. The formation of the particles is so distinctive that we should be able to find any correspondences available in cuneiform or Greek script, in spite of uncertainties as to the values of individual hieroglyphs, merely by comparing the untransliterated hieroglyphic groups and observing their systematic arrangement. I looked for similar particles in all the possible languages of Europe and Asia, and after long and tedious search I have to admit that they do not exist in any language known to us. Some languages are well enough known for comparison, even though we do not understand them. Among such languages which had to be discarded were Etruscan, Lydian, Lycian, Proto-Hatti (also

<sup>1</sup> Sir Arthur J. Evans, *Scripta Minoa*, I (1909), 68-77. From this passage are taken the Cretan signs illustrated on our p. 81.

<sup>2</sup> Moreover, the god Tarku is mentioned in a pre-Hellenic inscription from Praisos, Crete. Cf. Fritz Schachermeyr, *Etruskische Frühgeschichte* (Berlin, 1929), p. 237.



HISTORICAL RESULTS

No.	Cretan	Evans, <i>Scripta Minoa</i>	Hittite	Reference	No.	Cretan	Evans, <i>Scripta Minoa</i>	Hittite	Reference
1		4		M II:6	21		64		I M X:1
2		8		Assur f Vo 26	22		65		M XLII:9
3		10		A 11a:4	23		68		A 12:2
4		11		A 3:2	24		73		A 11a:4
5		12		A 1a:1	25		75		A 11a:4
6		13		A 13d:5	26		88		A 11a:1
7		14		CE II:3	27		92		A 6:2
8		15		CE I:1	28		97		A 17c:2
9		24		CE XVIII a:1	29		100		A 18j
10		31		M IX:1	30		107		II M LII:4
11		41		A 16c:9	31		109		A 11a:6
12		42		Assur e Ro 6	32		111		M V:2
13		44		A 12:4	33		111		A 11a:1
14		47		A 4a:2	34		112		A 12:3
15		50		A 2:6	35		112		A 1a:3
16		52		A 4a:2	36		114		I M X:1
17		54		A 14a:6	37		115		M III B:2
18		56		A 4a:2	38		116		M XI:2
19		58		A 12:4	39		130		M XI:3
20		62		A 12:4	40		133		A 6:8

because prefixal), Hurri-Mitannian, Haldian, and Elamite.<sup>1</sup> I hesitated longest over the Hittite language known from the Boghaz Kõi inscriptions, but even there I could not find similar formations.

Two languages, Luvi and Palai, either of which might be regarded as possibly identical with that of the hieroglyphic inscriptions, are still too little known to enable us to say anything definite about their linguistic connections. Friedrich in a brief article concerning the element *-muwa*,<sup>2</sup> basing his argument on the distribution of personal names containing it, concluded that the language of the hieroglyphic inscriptions is Luvi. Though the argument is very weak and questionable, I have no objection to it. Luvi is known to be an early dialect of the Hittite language and more under the influence of neighboring Asianic languages than its Hittite sister proper. Since most of the hieroglyphic inscriptions come from a period three or four centuries later, it would not be surprising if the Luvi language had acquired in the course of time many influences from other groups of languages. But it is all theory. All we can do at present is to await with eagerness the publication of the Luvi texts from the Boghaz Kõi archives. Then we may have safer ground for comparisons.

The hieroglyphic language presents a mixture of forms explicable on the one hand by Indo-European analogies but having on the other hand characteristics of the so-called Caucasian or Asianic group of languages. Indo-European features are: (1) the personal pronoun of the first person *ime(a)*, "I"; (2) the possessive pronouns *meas*, "mine," *tas*, "thine," *sas*, "his," *nas*, "our"; (3) the verbal endings *-ta*, *-sta*, *-stari*; (4) the case endings nominative *-s*, dative *-ā*, and accusative *-n*. On the other hand the following features must be considered strictly Caucasian: (1) the genitive case ending *-wa*, *-pa*; (2) the genitive-possessive formation *-was*; (3) the formation of the particles. In view of the Indo-European and Caucasian influences apparent in these hieroglyphic inscriptions, I had to conclude that both of those groups had participated in their evolution. Probably an originally Indo-European language was gradually affected by neighboring Caucasian languages until it became a mixture without any definite linguistic affiliation.

<sup>1</sup> The Cypriote language could not be considered because its possessive ends in *-okos* in contrast to the ending *-was* found in our inscriptions. Cf. F. Bork, "Die Sprache von Alasija," *Mitteilungen der Allorientalischen Gesellschaft*, V<sup>1</sup> (1930), 16.

<sup>2</sup> Johannes Friedrich, "Zu den kleinasiatischen Personennamen mit dem Element *muwa*," *KAF*, I (1930), 374 f.

Because of the great area over which Hittite hieroglyphic inscriptions have been found, some scholars have suspected that more than one language is represented in them.<sup>1</sup> My complete concordance shows clearly, however, that their vocabulary is a unit and that only one language is used throughout. Even dialectal differences are very few, as far as I could observe. The spelling *Karkameasa* from Gürün in Asia Minor (CE XVI:2) contrasts with the usual *Karkamesawa* from Carchemish. The ideogram for "king" plus the ending *-i* (II M XXXIII c:4), a unique combination, is possibly a dialectal variation; or it may represent the simple stem expressing the nominative without the ordinary ending *-s* (cf. p. 54).

If the language of the hieroglyphic inscriptions is a dialect of the cuneiform Hittite, the latter may assist us to trace the history of the hieroglyphic writing. Other systems of writing, such as the Egyptian, show that phonetic sign values are wont to develop according to the principle of acrophony. For example, if the picture of a foot in the Hittite hieroglyphic writing is pronounced *pa*, then the word for "foot" in the language of the people who invented that writing began presumably with *pa*. Now such a word, in the form *pariḫaš*, exists in Hittite cuneiform.<sup>2</sup> Again, the value *te*, written with a picture of the hairy back of the head, is derived from *tetanuš*, "hair."<sup>3</sup> Our *ka*, one of the hand signs, suggests the word *kalulupas*, "finger(?)."<sup>4</sup> Perhaps the value *ʔa* which I have found for the picture of a head is to be connected with *ḫalanta*, "head."<sup>5</sup> The value *ki*, pictured by the sole of the foot, seems related to *kiššaraš*.<sup>6</sup> This word, however, means "hand" (originally used for both the sole of the foot and the palm of the hand?). Analogous illustrations might be multiplied, were it not wiser to avoid comparisons between hieroglyphic sign values not yet fully established and the vocabulary of a language still as incompletely understood as the cuneiform-written Hittite of Boghaz Köi.<sup>7</sup>

<sup>1</sup> E.g., Sayce in JRAS, 1927, p. 713.

<sup>2</sup> Sayce, "Additions to the List of Names of Parts of the Body in Hittite," RA, XXVII (1930), 166.

<sup>3</sup> Sayce, "The Names of the Parts of the Body in Hittite," *ibid.*, XXIV (1927), 124, and J. Friedrich in MAOG, IV (1928), 55.

<sup>4</sup> *Language*, IV (1928), 127.    <sup>5</sup> Sayce, RA, XXIV (1927), 124.    <sup>6</sup> *Ibid.*

<sup>7</sup> Besides the acrophonic principle, an artificial development in the nature of phonetic dissimilation may appear in the group of four hand signs which include the sound *n* and in the three "stroke" signs which I have interpreted as containing *r* or *y*.

INDEXES  
THE SYLLABARY

Monu- mental (Carche- mish)	Cursive (Assur)	Value	Page	Monu- mental (Carche- mish)	Cursive (Assur)	Value	Page
		a	17			ku	29
		ā	31			gu	18
		e	19			ha	47
		i	18			he	42
		u, wi	29			hi	42
		a	46			ma	18
		i	46			me	27
		wa	30			mi	32
		wā	31			mu	32
		pa	41			ni	36
		pi	21			na	22, 23
		pā	48			nā	22, 23
		pū	49			ne	19
		pā	49			nē	19
		pū	49			nu	44
		ta	38			né	44
		te	35			ye	47
		ti	18			ri	13
		tu	35			yi	46
		tā	40			yu	47
		ka	27			rx	15
		ki	45				

Monu- mental (Carche- mish)	Cursive (Assur)	Value	Page	Monu- mental (Carche- mish)	Cursive (Assur)	Value	Page
		<i>la</i>	38			<i>x</i>	51
		<i>li</i>	37			<i>x</i>	51
		<i>li</i>	36			<i>x</i>	52
		<i>sa</i>	28			<i>x</i>	52
		<i>sa</i>	26			<i>x</i>	52
		<i>si</i>	25			<i>x</i>	52
		<i>su</i>	33			<i>x</i>	53
		<i>x</i>	51				

IDEOGRAMS EXPLAINED

Ideogram	Transliteration	Meaning	Page	Ideogram	Meaning	Page
	<i>halpi</i>		21		city	16
	<i>inti</i>	bull	36		conquer	69
	<i>karka/u</i>		27		god	54
	<i>karmatis</i>	ax	65		great??	70
	<i>karpárlas</i>	footstool	64		king	16
	<i>gutinilis</i>	offering	65		palace	70
	<i>miliu</i>	calf	71		prince	66
	<i>pirtinas</i>	vase	65		river	14
	<i>suppu</i>		37		ruler	69
	<i>tabis</i>	warrior	65		speak	72
	<i>tarku</i>	goat	34		sun	68
	<i>tarku</i>		28			
	<i>tirsas</i>	vine	10			
	<i>umenas</i>	land, country	16			
	<i>wirnasawa</i>	monument	69			
	<i>yurinas</i>	prince	64			

Ideogram plus Phonetic Complements	Transliteration	Meaning	Page
	<i>X<sup>1</sup>-mi-ni</i> (acc.)	column?	67
	<i>X-ka-pa-ni</i> (acc.)	bowl?	67
	<i>X-wā-si</i>	monument?	71
	<i>X-né+me-wi</i>	victory?	68
	<i>X-na-mi-i-wā-si</i>	son <sup>2</sup>	64

<sup>1</sup> Curved tips on this sign are to be seen in A15b\*.

<sup>2</sup> For other ideograms of relationship cf. p. 64.

## INDEXES

87

## PROPER NAMES DISCUSSED

GEOGRAPHIC	PAGE	PERSONAL	PAGE
Abinas .....	24	Aparias .....	49
Alaisa .....	38	Astituma .....	66
Amati .....	7	Gurpas .....	41
Gurgum .....	18	Ĥanis .....	48
Ĥalpi .....	20	Intilimi .....	36
Karkames .....	27	Irpikis .....	71
Mera .....	35	Kamanas .....	54
Milit .....	71	Katis .....	66
Miri .....	37	Kiikis .....	45
Miska .....	33	Kiwamas .....	45
Misu .....	32	Martes .....	71
Ninipi .....	19	Matis .....	20
Parka .....	48	Miĥas .....	66
Saguri .....	14, 26	Mirĥalimis .....	47
Tama .....	39	Mitalis .....	38
Tini .....	18	Miwas .....	32
		Nemes .....	68
		Pammas .....	41
		Sagapas .....	50
		Siĥinas .....	67
DIVINE		Šuppiluliuma .....	37
Gupappis .....	42	Tarkutumme .....	34
Ĥipas .....	42	Utania .....	40
Karkus .....	27	Yurtawes .....	51
Tarku .....	28, 34		

## OTHER WORDS DISCUSSED

WORD	MEANING	PAGE	WORD	MEANING	PAGE
<sup>2</sup> ami .....	now??	68	<i>siniri nene-</i>	as fol-	
<sup>2</sup> apis .....		67	<i>sa</i> .....	lows?	74
<sup>2</sup> arwāmes .....	favorite	54	<i>takas kišā</i> ..	(a title)	74
<sup>2</sup> axwa* .....	to	74	<i>tas</i> .....	thine	57
<i>awā</i> .....	make	59	<i>tayurkas</i> .....	two-year-	
<i>ei</i> .....	here??	68		old (ani-	
<i>ime</i> or <i>imeā</i> ..	I	56		mal)	47
<i>ittāneās</i> .....	(a title)	71	<i>unnētine</i> ...	carved?	71
<i>meas</i> .....	mine	57	<i>wāi, wāia,</i>		
<i>nas</i> .....	our	58	<i>wās, etc.</i> ..	this	58, 69
<i>pii</i> .....	(an adverb)	58	<i>-wi</i> .....	and	62
<i>sas</i> .....	his	58			
<i>siliā</i> .....	build?	70			

\* The *x* means an unknown letter.

## TEXTS TRANSLATED

SOURCE	PUBLISHED	PAGE	SOURCE	PUBLISHED	PAGE
Assur . . . . .	Assur, Pls. 2-7	72	Ivriz . . . . .	II M XXXIV A	71
Babylon . . .	Assur, Pl. 8	67	" . . . . .	II M XXXIV B	71
Carchemish.	A 11a	66	Malatya . . . .	M XVI A	70
Hamath . . . .	M III B	69	" . . . .	II M XLVII	70
" . . . .	M IV A	69	" . . . .	CE XXI	70
" . . . .	M IV B	68	Nigdeh . . . . .	II M LIII	67