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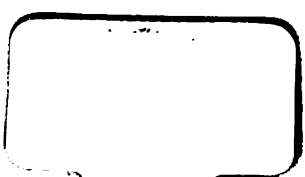
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ON
THE FIRST AND SECOND KINDS
OF
PERSEPOLITAN WRITING.

BY THE
REV. EDWARD HINCKS, D.D.

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ON
THE FIRST AND SECOND KINDS
OF
PERSEPOLITAN WRITING.

IN the course of my inquiry into the exact powers of the characters in the Egyptian alphabet, my attention was directed to the second kind of Persepolitan writing, as one, a comparison of which with the Egyptian might throw light upon both. From a cursory examination of this writing, it appeared to me that it agreed with the Egyptian in some remarkable particulars, such as making no distinction between the hard and soft sounds corresponding to each other, and having several characters to represent the same sounds in different words. This observation made me desirous of investigating the nature of the writing more fully; and I accordingly procured the work of Westergaard, who is the only writer that has made any considerable progress in deciphering it, as well as the last work of Lassen, containing his latest views on the first Persepolitan writing. An examination of these works, with constant reference to the inscriptions themselves, led me to the conclusion that the authors had, in some important points, misconceived the nature of both these kinds of writing. I found that many rectifications of the views put forward by them were requisite, before the true nature of the languages and systems of writing could be correctly understood. These rectifications, as, if I do not greatly deceive myself, I flatter myself I have ascertained them, I now lay before the Academy, as a companion to my paper on the hieroglyphic character.

To avoid the inconvenience of frequently using the cuneatic characters, I give, once for all, a list of them, arranged according to the order of their constituent parts, without any reference to their value. This arrangement, so far as respects the first kind of writing, is due, I believe, to Seyffarth; and, as respects

the second, to Westergaard; I will then refer to the characters by their numbers, using the Roman numerals, I. and II., to distinguish the two series, should there be any doubt which is meant. I will also use these abbreviations on other occasions, to denote the first or second kind of Persepolitan writing, or the people that used it. This seems preferable to using the terms Persian or Median, which assume facts that are very questionable.*

My attention was given to the first kind of Persepolitan writing, as necessary to the understanding of the second; on account of many words of I., which are transcribed into II., and because the many proper names which appear in both, often, though not always, express the same pronunciation, so far as the genius of the two languages will admit. There are four points in which it appears to me that Lassen's account of I. needs rectification. 1st, As to the existence of guna diphthongs in the middle or at the end of words, which he does not recognize. 2nd, As to the use of 2 (*w*) after 26 (*u*), and of 16 (*y*) after 33 (*i*). 3rd, As to the nature of the secondary consonants, as I propose to call them, *generally*. And 4th, As to the powers of some particular consonants, both primary and secondary, which he has mistaken. I will mention these several points in order.

1. Lassen's rule for inserting a short *a* in words is, that it may be inserted between two consonants when there is no other vowel. Now, it appears to me that it may be added to any primary consonant, and that to some, as I will presently shew, it *must* be added, when *i* or *u* follows. In this case it may either combine with the vowel as a *guna*, forming a diphthong, or be sounded as a separate syllable. As examples of the former, I give the words which Lassen writes *bagibis*, *âqunus*. The root of the first is *baga*; and, in the second, the conjugational addition to the root before the verbal personal endings is *na*. I would, therefore, supply *a* in these two cases as a *guna*, converting *i* into *ê*, and *u* into *ô*, reading *bagêbish* and *âqunôsh*. I will give examples of diæresis when I come to speak of the secondary consonants, my present observation being merely introductory to what I shall then have to say.

2. Lassen admits that *ija* and *uwa*, at the end of words, are sometimes to be sounded as long *î* and *û*; but in general he gives them the pronunciation *ija* and *uwa*. The difference between him and me on this point is, as to the frequency

* I have *now* no doubt that these are their proper designations.

* a cannot be removed after it or i without either the introduction of the corresponding numeral, it or i, or the suspension of the utterance
since the it case is is. As the numeral is in ordinary cases necessarily introduced before the words, it is unnecessary to
write it. This has to be regarded the statement in the text as correct, and the note as, to say the least, unnecessary. 17.5.24.

with which these different modes of reading the same characters should be adopted. He seems to consider the reading the two characters as one syllable to be rare, whereas I believe it to be the most common mode; and I read many words thus, without a final *a*, which he reads with it. I think, too, that it was not always a *long i* or *u* that was intended to be expressed. Though there are instances of words terminating with *i* or *u*, they are very rare; and it appears to have been considered incorrect spelling: *ij*, or (as I would write the latter character, 16) *iy* and *uw*, seem to me to be, for the most part, used as we should use *i* and *u* at the end of a simple or compound word, by no means implying that the vowel was to be lengthened. Thus, I read the two last syllables in Lassen's *ámija* as one, *ámi*, "I am;" and so, *ḡátija*, *ḡti*, "he says;" translating both words as verbs in place of adjectives, as Lassen imagines them to be; and, combining this principle with the last, I read, instead of Lassen's *tjija*, *tyé* for *tyai*, which is just the nominative plural masculine of the article or relative pronoun *tyas*, used in the *Védas*. Lassen does not admit that this use of *ij* and *uw* for *i* and *ú* could have place in the middle of a word. Here again I differ from him. I read *úza* for *uwaža*, as the name of Suza; and so in some other instances. But, further than this, where an *a* is to be supplied after *iy* or *uw*, in the middle or end of a word, or where the *a* is actually written, I would drop the semivowel, as being a mere fulcrum for the *a*, necessary, according to the genius of I., which did not admit the possibility of *i* or *u* preceding *a*, but unnecessary in our mode of writing. Thus I would write *martiam* for "man," and *Uáraznis*, the name of a country, without the semivowel.* The rule, then, which I would propose on this subject, is this: "*y* after *i* and *w* after *u* are not to be expressed; if an *a* is not expressed after the semivowel, it is sometimes to be supplied, but by no means generally."

3. I distinguish the consonants of I. into two classes, primary and secondary; the former were such as could be used before the vowel *a*, expressed or supplied;

* Since this was written, I have deciphered the third Persepolitan writing to a considerable extent; and I find that the name of this country was expressed in it by *ubarasbaya*, *ba* being the only mode of expressing both *wa* and *ma*; hence I infer that *w* was sounded in this word, and probably *w* and *y* in other analogous instances. My principal reason for making this slight correction here is, that the reader may infer that in other instances, where a correction is not made, the statements made in the text have been confirmed by my subsequent researches. *

the latter were such as could not be used before *a*, but took the place of some of the primary consonants before *i*, *u*, or *r*. Lassen thinks that these secondary consonants differed in power from the corresponding primary ones; he does not, indeed, give them the names of primary and secondary, nor does he recognize their connexion in the manner that I do; and, in particular, he supposes them all to be aspirated. On the contrary, I believe them to be perfectly equivalent in sound to their primaries, or to be modifications of them, such as necessarily arose from the juxtaposition of the following vowel; and I consider them to be remains of the syllabic mode of writing formerly in use, retained for the sake of distinguishing syllables with single vowels and with guna diphthongs, which it was necessary to distinguish for grammatical purposes, and which, nevertheless, could not be distinguished if only three vowels were used, and if there were no secondary consonants.

The manner in which this distinction appears to me to have been made will be made evident by the following example. The primary form of the letter *m* was 3; but it had also a secondary form, 17, only used before *i*. Lassen writes this *ṁ*, and maintains that both *m* and *ṁ* could be used before *i*; whence he argues that they must express different sounds. I, on the contrary, maintain that his *m*, 3, is never used immediately before *i*, but that when it appears to precede it, an *a* is always to be supplied, converting the *i* into *el*; thus, according to my view of the matter, while 8, 33 may be read either *ni* or *nel*, 17, 33 signifies *mi* only, and 3, 33 *mel* only. It was necessary to distinguish these, because the former (with a mute *y* following it, as lately mentioned) is the termination of the first person singular present in verbs; whereas the latter (with the same addition of *y*) is an enclitic pronoun, used for "my." Thus, what Lassen reads "*utamija khsathram*," and translates "tum hoc regnum," I read "*uta-mel khsathram*," and translate "meumque regnum." I combined the two words "and my" into a single word, as in Latin, but in I. the conjunction was the principal word, and the pronoun the enclitic, the reverse of what it is in Latin. In like manner *del*, which Lassen writes *dija*, was an enclitic pronoun of the second person singular, signifying "thy."* Instead, then, of using new signs to express the secondary consonants, as if they expressed different sounds from the primary ones, I write them by the same signs, conceiving that they are sufficiently distinguished by their position; and I lay it down as an invariable rule, that if a primary con-

* This is an error; it is the analysis of the third person plural, signifying "their", as I suppose too; but at any rate the analysis of the 2^d person sing. in *die* (No. 4.58) - 4.5.24.

sonant precedes *i* or *u*, when a secondary consonant existed of the same value as the primary one, and appropriate to that vowel, an *a* must be interposed, either as a distinct syllable or as a guna to the vowel.* The same rule applies to such combinations as *yi* or *wu*, which are inconsistent with the genius of the language. Thus, I write the name of Darius, *Dárayawôsh*; I call the country *Haráútish*, which Lassen writes *Haruwatis*, inserting an *a* between *r*, *9*, and *u*, because there is a secondary *r*, *5*, which alone can precede *u*, and, on the other hand, dropping the *wa* after *u*, pursuant to the rule laid down in No. 2. The Greek name is *'Αραχωσία*. The strong breathing between the vowels, here represented by *χ*, was, I presume, derived from some other Iranian dialect than that of I. In like manner I write *Tigrakhôdá* for Lassen's *khudá*, and so in other instances. The want of this *a*, to be supplied before a vowel, has led Westergaard astray in analyzing the transcriptions of II. It is the principle of that mode of writing to express every vowel; but that principle has not been recognized by Westergaard, in consequence of his having been led to give characters the powers of single consonants, which really expressed consonants with *a* at the end.

Before leaving the subject of these secondary consonants I would observe, that, though it was an abuse, the secondary consonants were used *occasionally* to express syllables. Such was the old custom, as we may infer from its being the practice in II.; and though the alphabet of I. was constructed on the principle of not recognizing it, it was hard to banish from the language a mode to which they had been accustomed, and which still prevailed in neighbouring dialects, and, perhaps, in the popular mode of writing the language I., which was, doubtless, as in Egypt, different from the mode of writing used on the monu-

* Within the last month, Mr. Norris of the Royal Asiatic Society has communicated to me the following facts, which appear to me decisive in favour of the rule here laid down. In the great inscription at Bisitun, the names of Cyrus and Babylon have the *r* or *l* expressed by *5*, the secondary form, in the nominative, and by *9*, the primary form, in the genitive; and that of Margiana has *22*, the secondary form of *g*, in the nominative, and *25*, the primary form, in the genitive. According to my mode of reading, the declension is, according to the analogy of the kindred languages, *N. Kurush*, *G. Kuraush*; *N. Margush*, *G. Margaush*; as in Sanscrit, *N. Sínus*, *G. Sínós*, for *Sínaus*; in Zend, *N. pasush*, *G. paseush*. But what sort of a declension would be *N. Kurush*, *G. Kurush*; *N. Margush*, *G. Margush*, according to Lassen's reading of the characters?

ments. Even in the inscriptions of Darius, there seems to be one instance, at least, of a character representing a syllable. I allude to the name which is in one place written *Shuguda*, and in another *Sóg(u)da*; where the secondary form of *g* preceding *u* must, I think, be read syllabically *gu*. In the inscription of Artaxerxes Ochus, the secondary form of *w* before *i* is used more than once to express the syllable *wi*, as is the secondary form of *m* for *mi*. The knowledge which we now possess of the strictly syllabic nature of II. enables us to account, in the most satisfactory manner, for all these anomalies. An old custom, though discountenanced at court, is not easily eradicated from a people, and will occasionally shew itself. I should add that there are two instances of double letters regularly used in I. Instead of a secondary form of *t* to be used before *r*, analogous to 19, the secondary form of *p* before *r*, I. used 34 to express the combination *tr*. The character 15, too, which is used with 8 (*n*) to express "king," has been supposed by Westergaard to be *rp*, thus giving the word *narpa*, from *nar*, "a man," and *pa*, "to defend," a compound which is said to be used in Sanscrit.

4. I now come to consider the errors which Lassen has committed in respect to the powers of individual letters. There have been, as yet, thirty-three characters met with, exclusive of double letters and contractions, such as *tr* and *rp*. I arrange these as three vowels, nineteen primary consonants, and eleven secondary consonants. As to the vowels, sixteen of the primary consonants, and nine of the secondary ones, the only objection that can possibly be raised to Lassen's values is, that he does not give the same values to the nine last as to the corresponding primary characters, but imagines distinct values for them. There remain five characters, three primary, and two secondary, of which Lassen's values at least need to be verified; and as to one of these, that numbered 10, it has been proved by Holtzmann, in the clearest manner, that his value is altogether wrong; that it is related, as a secondary letter before *i*, to *d* and not to *k'*, or *ch*. Of the other four I will endeavour to settle the values in what follows. But though Lassen has given correct values to the sixteen primary consonants in question, they are not always such as suggest their pronunciation to an Englishman. I will, therefore, substitute other values for them adapted to England. The alphabet will then stand thus, the first value of each character being Lassen's and the second my own. As to the vowels and semivowels I refer to the observations already



made. It should be observed that the breathing, 21, expressed by *h*, was a very slight one. When initial it was scarcely, if at all, distinguishable from 30 (*a*); and when medial it indicated a fresh emission of the voice after an interruption, like the Arabic *hamza*.

THREE VOWELS :

30. *á, á*33. *i, i*26. *u, u.*

NINETEEN PRIMARY CONSONANTS :

2 semivowels,	16 <i>j, y</i>	2 <i>w, w.</i>
2 breathings,	21 <i>h, h</i>	27 <i>kh, kh.</i>
2 labials,	35 <i>p, p</i>	6 <i>b, b.</i>
2 dentals,	7 <i>t, t</i>	28 <i>d, d.</i>
2 gutturals,	13 <i>k, k</i>	25 <i>g, g.</i>
2 palatines,	29 <i>k' ch</i>	?
4 sibilants,	14 <i>ç, s</i>	?
	32 <i>s, sh</i>	?
3 liquids,	3 <i>m, m</i>	8 <i>n, n</i> 9 <i>r, r.</i>

ELEVEN SECONDARY CONSONANTS, VIZ. :

4 before <i>i</i>	31 <i>v, w</i>	10 <i>k'h, d</i>	17 <i>ṁ, m</i>	6 <i>j, ?</i>
6 before <i>u</i>	11 <i>χ, kh</i>	20 <i>d'h, t</i>	23 <i>dh, d.</i>	
	24 <i>q, k</i>	22 <i>gh, g</i>	5 <i>ṙ, r.</i>	
1 before <i>r</i>		19 <i>f, p.</i>		

The characters 12, *z*, 1 *z'*, and 18, *ᶑ*, as Lassen denotes them, are the soft sounds of *ch*, *s*, and *sh*; but it is a difficult question to decide which represents the soft sound corresponding to each letter, as well as to which 6, *j*, corresponds. In the inquiries which I am about to make, I will use Lassen's values of these four letters, till I establish my own in lieu of them. I remark, in the first place, that it seems hopeless to attempt the solution of this problem by the etymology of words. All the words in which any of these letters occur, the etymological relations of which I have been able to ascertain, seem to have had, in their original forms, a hard *g*, which has been capriciously softened down into all these letters, just as the hard *k* has been into *s*, *sh*, and *ch*. The word *zanânâm* points to the Greek root *γενν*, in Sanscrit *jan*. The first syllable in *wazarka* is a

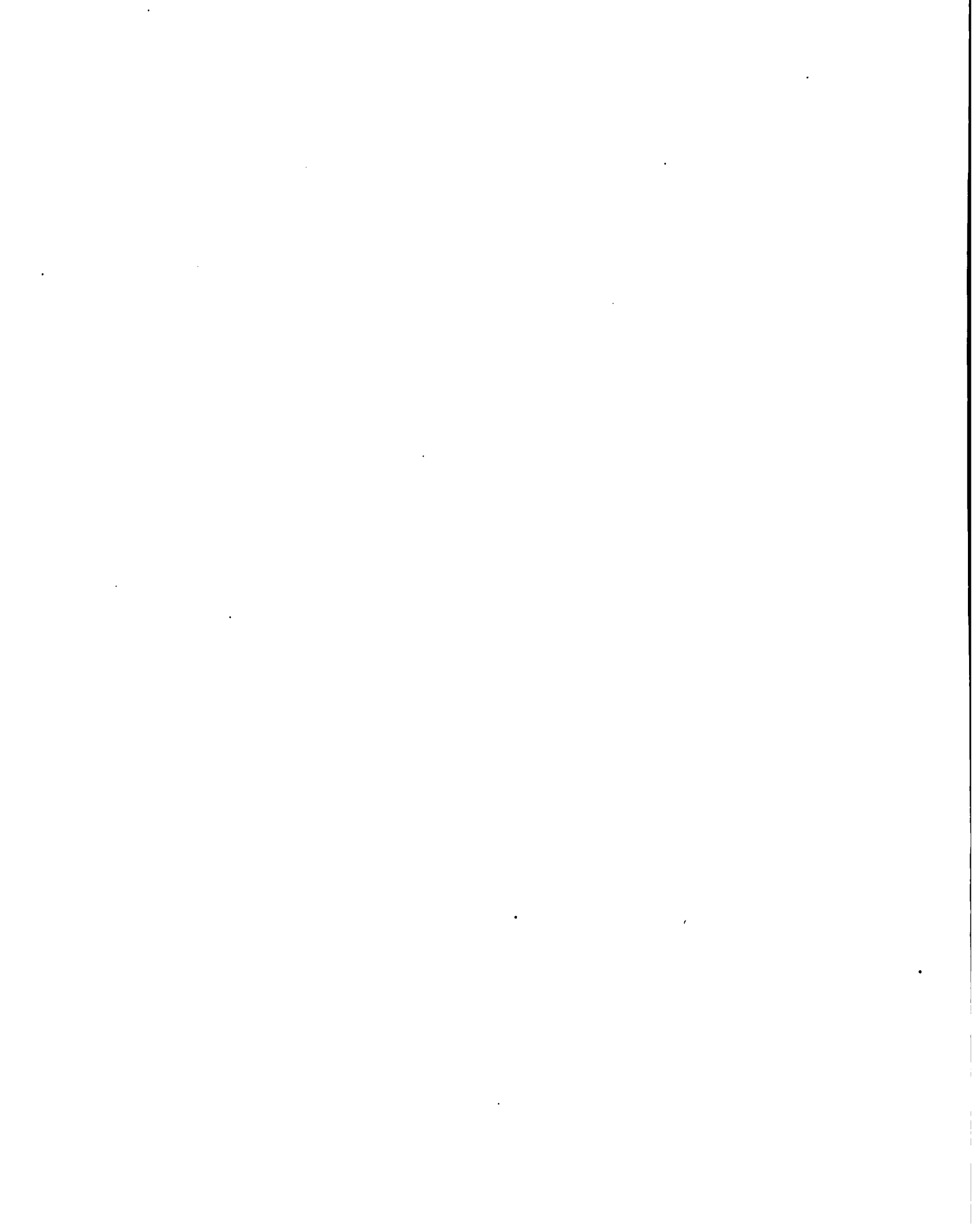
softening down of *mag*, as I shall have occasion to shew hereafter; on this, however, no stress should be laid, as it is not a word properly belonging to the language of I., but transferred from another language. The same root appears in *maz*, part of the word *mazdâ*, but it also appears with a different letter in the superlative *mašišta*. Probably the original form, of which this is a softening down, was *magwistas*, the positive being formed on the analogy of the Latin *suad-vis*, or Greek ἡδύς, for ἡδ-*Fis*. The word *šâti* is the Greek *φᾶτι*; the original form was *gvati* or *gwati*, from which both this Greek form, and the Gothic *quat*, as well as the Latin *inquit*, and the Persian *gu*, *gusten*, are all derived. Again, the word *âzamiâ*, *adveniat*, is the third person singular, potential or optative, from *âzam*, compounded of the preposition *â*, *ad*, and *zam*, "to come," which is not found in Latin or Greek,* but is the Sanscrit *gam*, Gothic *quiman*, and the Anglo-Saxon *cuman*.* We have thus the three letters in question, all in different words, representing the hard *g* of a parent language, akin to the European languages. It must, therefore, be by the help of transcriptions alone that the value of each can be ascertained.

The transcriptions to be looked to are those in II., in Greek writings, and in the modern languages of the country. In order that the transcriptions in II. should be available for this purpose, it is necessary to use the precaution of not assuming the value of any of these letters, in the inquiry into the powers of the characters of II. To this I have carefully attended; I have used as data the values of the other letters of I., but have carefully refrained from using as such the values of any of these three letters.

The letter *z* of Lassen occurs in the names *Zaraka* and *Uârasmi* or *mis*, in both of which it is transcribed by *s*. I read the names in II. *Ersa.ra.an.ka* and *Wa.ra.s.wi.s*. In explanation of this I would observe that the syllable *Er* signifying in II. "land," is here prefixed to the name of the first of these people, as it is in other cases substituted for an equivalent prefix, *ga* or *ša*. I

* Unless, indeed, it appears in *ven* for *gvên*. The difficulty is in the interchange of the nasals at the end. That *vivo* was *gvigvo* (whence the preterite in *ixi* and supine in *ictum*), connected with *vigeo*, and with the Gothic *quiva*, "living," our "quick," admits of no question; and this is in Sanscrit *jiv*; in Greek βίβ, dropping the guttural, and ζε, softening down the guttural and dropping the labial. There would, therefore, be no difficulty in a Latin *vem* representing the Gothic *quim*; but I am not aware of there being authority for changing the *m* of a Latin root into *n*.

* This is Bullen's interpretation & I have no doubt of its being right. It begins his letter to the Academy of on 25th Feb 74.
(The letter is in the volume of the papers, containing his passage) he says "If it is possible to give a sense
to the word 'djamija' as a verb form as a noun; - but I still doubt the possibility of such a meaning with the phrase. It
can only mean I think will be about a sign post; & in neither of these senses could we have a literal 'III'." It is
not clear how 'djamija' compares to 'ma' in and with the relative; & so it 'ma' with 'biya' (No. 14.59) 'biya' 'devito'. It is not
clear how it is then similar with the relative in following sense with the indication; & if he begins with it is, he must
naturally understand the passage when it means. 'Ma' (his 'biya') is the historical ^{or relative} justification.



would also observe that the nasal in the first name, dropped in I., is retained in II.; that *w* is, in the second name, as always in II., used for *m* followed by a vowel; and that the corresponding hard and soft sounds were not distinguished; nor, generally speaking, were *s* and *sh*. These transcriptions, then, leave it open whether *z* was the soft sound of *s* or of *sh*; but I think they prove that it was not that of *ch*, for this would, I should think, have been written with a *t* before *s*. The Greek transcriptions are *Σαράγγαι* and *Χωράσμοι*, both with *σ* in Herodotus; but Arrian writes the former name with a *Z*, and Strabo with a *Δ*, *Δράγγαι*. In modern Persian, the *σ* in the latter word becomes *z*, and in Zend they are both represented by the corresponding letter. *z'* occurs only in the one name, which, in II., is totally different. The Greeks represented it by a *σ*, *Σούσα*, and in modern Persian it is represented by *z*. The third of these letters occurs in three names of countries; *Parθawa* was probably *Persawa*; though the second character, which is partly defaced, may have been different from *θ*, which I take it to be. *Aθura* is clearly *As.su.ra*; the third, *θαtagush*, is *Er.t.ta.ku.s*; the syllable *θα* being translated into *er*, in place of being transcribed. This connects *θα* etymologically with *ga*, *γῆ*, and with the Zend *za*. The Greek transcriptions are *Πάρθοι* and *Παρθυαῖοι*, *Ασσύριοι* and *Σαρταγύδαι*. I may add that *Μίθρα*, the Sun God, was written *Μίθρας* by the Greeks. It appears to me evident that the *θ*, in these transcriptions, had the sound of our soft *th*, or *dh*; and that it was substituted for the soft sibilant, to which the Greeks had no proper equivalent in their language, their *ζ* being properly a double letter. It is exceedingly improbable that this was the sound of the Persian letter in question, as we know that the modern Persians cannot pronounce it, but are obliged to substitute for it, when it occurs in Arabic words, the English *z*.

In transcribing names of countries, it is certain, from what has been already said, that II. did not, in most instances, transcribe the names from I. The supposition that they did led Westergaard into many errors. Thus, he reads the name of India, with hesitation, *Sidhush*, the name in I. being, according to Lassen, *Hidhus*. He inclines to believe the first letter a different one from that to which he gives the sound of *sa*, though closely resembling it; otherwise, he would have to represent the word, according to his alphabet, by *Saithush*. I read *Si.n.tu.s*, as I read *Ersaranka* for *Zaraka*, restoring the *n*, which I. had omitted.

There are transcriptions of another sort, however, in which words appearing in I. are copied into II., and from these we may hope to gather the exact pronunciation of the letters. I observe, then, first of all, that the I. word *tacharam*, a sort of building, is transcribed in the inscription B, at the end, *ta.t.sha.ra.m*. In this word there are two characters used, which appear not to be used in native words, namely, II. 37, which represents *m* final, and II. 74, which is evidently a modification of II. 73, *sa*, and which, from its use in this place, cannot, as it appears to me, have been any other modification of it than *sha*. Now, in representing the word *paruzanânâm*, the syllable *za* is represented by this character, 74. This could not, I think, have been the case, if *z* had the power of *j*, for then *pa.ru.ut.sha.na.na.m* might have been written, as *ta.t.sha.ra.m* was written for the I. *tacharam*; nor, again, could it be equivalent to our *z*, or our *s* in *is*, for this would have been represented by simple *sa*, 73: I conclude, then, that Lassen's *z* was the soft sound of *sh*, equivalent to the French *j*.^{*} This is confirmed by the transcription of another word, *wazarka*, declined as an adjective, "very great," in I., but clearly a foreign word. It belongs to a language different from both I. and II., but nearer II. It resembles II. in the radical part *waz*, the *w* being substituted for *m*, for this is a form of the root *mag*, &c. It resembles II. also in the form of the superlative, *arka*. The form in II. is *arra*, evidently derived from *arka* by assimilation, as in *ersárra*, from *ersa*; and in transcribing this word, it is represented by *akka*, using another mode of assimilation, as *ικπος* was made *ικπος* or *ικκος*. Now, in transcribing the second consonant of this word, this people used, in general, the character just mentioned, 74, *sha*, but in one instance it is represented by the combination of another character with this. This is in the inscription O, that of Darius from Mt. Alwand. It is here preceded by the character signifying *na*, 4, which is here used to mark that the consonant should be softened. So the Egyptians expressed the *d* at the beginning of the name Darius, by *n* and *t* united; and in the Leyden Papyrus, where foreign words are represented in Enchorial characters, *n* and *s* are employed

^{*} I have since found that in the third Persepolitan writing, at Nakshi Rustam, the name *Zaraka* begins with a character of the same form as II. 74; while *za* is expressed in *Satagush* and *Paršana* by a character which is interchanged with one of the same form as II. 73, and which had certainly the value *sa*.^{*} These facts confirm the conclusions at which I had arrived in the text.

The statement here made is erroneous; I inserted the character number 6288 in the alphabet at p. 22 of the subsequent papers.

The letter begins the name corresponding to Phalagush (ϕ Σαρραγῦδαί) & is really equivalent to 86, of the same year as II.73; but

the form which indicates the name corresponding to Parthava is ω ?. See *iranica* in p. 25 of *filii* papers. 47.5.24.

The only alterations which I feel inclined to make in this transcript & translation, are the following.

Thāti for zāti, and kshāyatiā, for perhaps kshāyathī, for kshāyaxia; and yet, on reading other the arguments in favour of z, I could not help thinking that I was too hasty a convert to the opposite opinion. Finding that the name of Partia was properly written with th in the language of that country, may we then th have been converted to z in ancient, or we know it is in modern, Persian. The etymology of mathistia and thāti favour the value z; for g is hardly admissible to th, though Qéw & Qav.ov are said to be converted as sh. Dyp & Qyp. See let 1 & Division. In the translation, for Qinnamadae, Qinnam, and approximately be substituted Qinnamadae tussator. pādi, pāta are the 2^d & 3^d pers singular of the imperative. 67. 5. 24.

to express *z*. The syllable, then, which Lassen writes *za*, is expressed by *n'sha*, a combination which, by analogy, should represent a softened *sha*, or *zha*. This being settled, it remains to decide whether Lassen's *z'* or *ʒ* was our soft *s*; and though the transcription of the name Susa, in I., which would then be *Uja*, is a difficulty, I think there is an immense preponderance of argument in favour of *ʒ* being soft *s*, or *z*. It is twice transcribed by *s* in II., which *z'* never is; and the reading the transcription of the name of Assyria in I. "*Ajura*," appears to me attended with far greater difficulties than to read Susa "*Uja*." I, therefore, give the letters 1, 18, and 12, the values *j*, *z*, and *zh*. With respect to 4, it cannot be a secondary value of 18, for this is used repeatedly before *i*; on the contrary, 12 is never so used; and the character 12 is much more frequent than 1. I, therefore, class 4 with 12, as its secondary value before it, although there is no positive proof that it is not a *j*.

I conclude with transcribing a passage as Lassen writes it, and as, according to my corrected method, it ought to be written. I take the conclusion of the inscription E.

⊖âtija khsjârsâ, khsâjaʒija wazarka; wasnâ Auramazdâha ima hak'his
Zâti khshyârshâ khshâyazia wazharka; washnâ Aûramazhdâha ima hadish
 âdam âqunwam; mâm Auramazdâ pâd'huwa hadâ bagibis; utamija khsa-
âdam âkunawam; mâm Aûramazhdâ pâtu, hadâ bagêbish; uta-mê khsha-
 thram utâ tjamija kartam.
tram utâ tya-mê kartam.

I place also in juxtaposition Lassen's translation and my own :

Generosus (sum) Xerxes, rex magnus. Ex voluntate Auramazdis hanc
Dicit Xerxes, rex magnus. Ex voluntate Auramazdis hanc
 aulam-columnarem ego erexi. Me, O Auramazdes, tuere, (*cum*) diis *hujus loci,*
aulam ego feci. Me, O Auramazdes, tuere, unâ cum diis,
 tum *hoc regnum, tum hoc palatium.*
meumque regnum, atque meum opus.

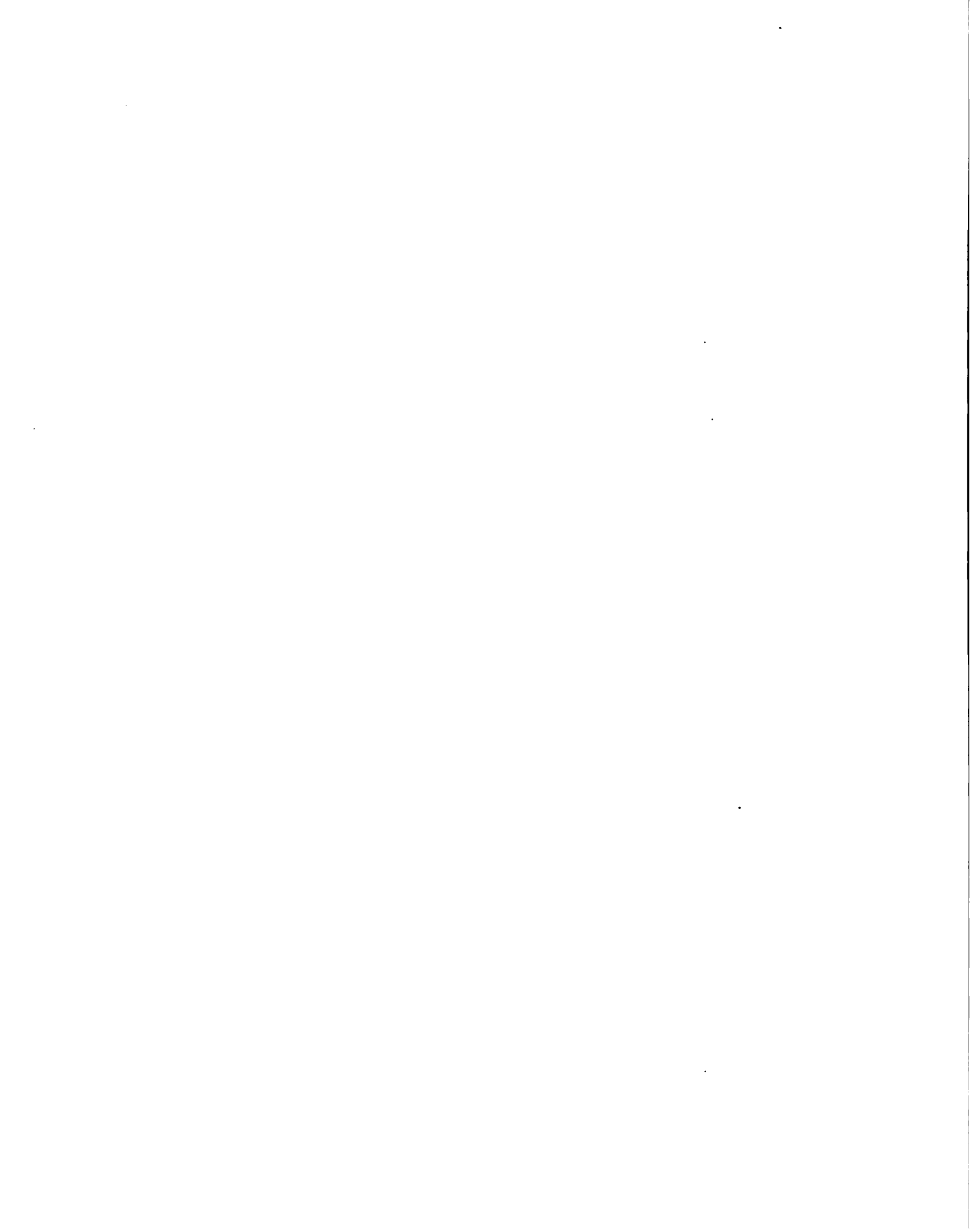
In the first part of a critique on Lassen's work, by Holtzmann, the mis-translations *hujus loci* and *palatium* are noticed, but the initial sentence is not

touched on; and the attempt at explaining the enclitic *mē*, "my," is worse than Lassen's.

I now come to consider the second writing. Here I adopt a great number of Westergaard's values of the characters. As to many of them, however, I differ from him more or less. In some I reject his modifications of the values of consonants, which, it appears to me, this people never intended to distinguish. In some cases I add vowels to his values, thus making characters to represent syllables, which he made simple letters. In other cases I substitute a different vowel for his; and in some cases I differ altogether as to the value of the character. These differences will be seen in the catalogue of the characters, where I first give his value, if he has given any, and then my own, if I have been able to satisfy myself as to it. They will also appear from comparing passages as transcribed by him and by me. In this place I will mention the differences between us, in respect to general principles.

1. Westergaard thinks that II. had six vowels, *a, ā, i, u, e,* and *o*, and sixteen consonants, *q, k, t, p, kh, ph, th, j* (i. e. *y*), *r, w, s, sh, z, h, n,* and *m*; and he thinks that the characters represented, in the first place, these twenty-two characters, and then syllables, composed of the consonants followed by vowels.

I think that there were four vowels, *a, i, u,* and *er*, which this people regarded as a proper vowel; and only five consonants, *p, t, k, s,* and *n*; that besides these nine simple sounds, there were characters representing combinations of the five consonants with preceding and following vowels; and that the vowels also formed combinations with each other. Of these there were or might be twelve, viz., *ai = ē, ya, yu, yer; au = ó, wa, wi, wer; aer = ár, ra, ri, ru.* It is probable that many combinations which were theoretically possible had no representatives at all, while many had two, or even three, which were perfectly equivalent, as in the case of the Egyptian hieroglyphics. Besides what may be called the regular combinations, consisting of one consonant and one vowel, there were some which represented more complicated combinations, that happened to occur frequently, such as *tas* and *rus*, in which a vowel lay between two consonants, and *ersa*, in which there were two vowels joined to one consonant. There were also characters, such as 37 and 74, already noticed, which were confined to foreign words, representing sounds occurring in them, which were not used in the ordinary words of the language, or, if used, were not distinguished.



2. Westergaard thinks that, when a simple consonant is placed before a syllable, of which it is the initial sound, it is meant as a sign that the consonant is to be pronounced hard; *k.ka*, is, according to him, *ka* only, while *ka* might be *ka* or *ga*. This appears to me utterly unfounded. In the name of the father of Darius, the same character occurs as begins the name of Darius himself. It is not *ta* in the latter case, and *t.ta*, in the latter, but in both *ta*; on the other hand, *n.na*, is frequently used for *na*, where there is no distinction of hard and soft sounds admissible. I regard this use of a consonant, which is, in point of fact, unnecessary, as analogous to the completion of the Egyptian syllabic signs. There was this material difference, however;—the Egyptians generally, though not always, completed their syllabic signs by the addition of a vowel, whereas in II. they were completed by prefixing a consonant.

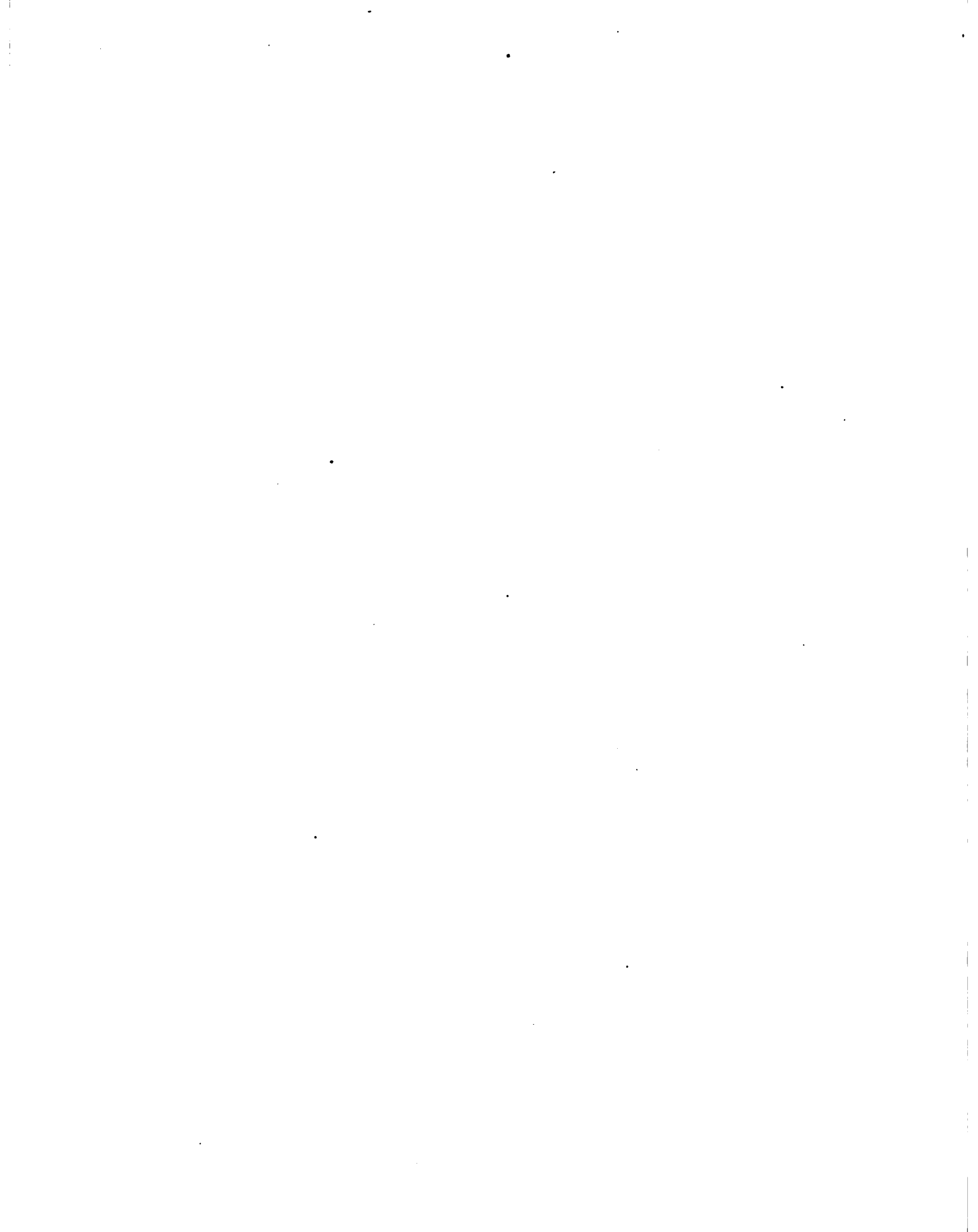
3. Westergaard thinks that all the vowels were not expressed in II., and that a short *a* was sometimes to be supplied, as in I. I think, on the contrary, that every vowel was expressed *at least once*, and often more than once; for, whether by way of lengthening the vowel, or to suggest deficient letters in case of a defect in the stone, it was customary to write vowels *twice over*, at the end of the consonant preceding them, and before the consonant following them. This could not be done in every instance, but it seems to have been affected, and we meet with instances of it very commonly, as will appear in the specimens. In such cases it would be an error to pronounce the vowel twice; *per.ersa* is simply *persa*, *an.na.ap* is *anap*; for the same duplication of a letter was applied to the consonants as to the vowels.

The remaining differences between Westergaard's mode of reading and mine regard matters of detail. I now give a specimen of a passage transcribed in both manners. I should observe that the initial signs, 1 and 56, are prefixed to proper names, and other important words. It will be observed that he has given values to some signs which I have left unvalued, and *vice versa*. From the reference to the figures it will at once be seen where we agree and where we differ. The passage I choose is the commencement of the inscription on the tomb of Darius, and I distinguish the representatives of each character by points (·).

3.	4.	27	23.	73.	23.	13	3.	76.	13.	57.	51	11.	31	1.	28.	39.	42	51.	64.	51
a	·n(a)	·p	ra	·sha	·ra	·r	a	·u	·r(a)	·z	·da	k	·ka	Q	·ru	·—	ta	·s	·ta	
an	·na	·ap	er	·sa	·er	·ra	an	·u	·ra	·sh	·ta;	k	·ka	K	·ru	·n	ta	·as	·ta;	

3. 81. 19	22. 25	51. 64. 51	11. 31	56. 55. 66	25. 63. 12.	45. 51
an.kha.kh	ju.tu	ta.s.ta	k.ka	Wo.thi	tu.t'h.thu.sh.ta	
an.ku.k	yu.tu	ta.as.ta;	k.ka	— .ka?	tu.ut.tu.s.ta;	
11. 31	80. 47. 15. 37	25. 63. 12. 45. 51		56. 55. 66. 23. 13. 4		11. 31
k.ka	shi.j(a).ti.m	tu.t'h.thu.sh.ta		Wo.thi.ra.r.n		k.ka
k.ka	si.ya.ti.m	tu.ut.tu.s.ta		— .ka.er.ra.na;		k.ka
56. 51. 24. 47. 67. 76. 45		56. 71. 23	22. 32. 70. 51	81. 23	23. 5. 81. 63. 4	
Da.ri.j(a).w.u.sh		Ku.ra	ju.t.—.da	kha.ra	ra.sa.kha.t'h.n	
Ta.ri.ya.wa.u.s		Ku.er	yu.t.tas.ta;	ku.er	er.si.ku.ut.na	
56. 71	81. 23	23. 5. 81. 63. 48. 4		34. 77. 37. 51. 32. 15. 13		56. 38
Ku	kha.ra	ra.sa.kha.t'h.i.n		phi.ni.m.da.t.ti.r		Jo
Ku;	ku.er	er.si.ku.ut.n.na		pu.ni.m.ta.t.ti.ra		Yu
56. 51. 24. 47. 67. 76. 45		56. 71	23. 73. 23. 13	56. 71	56. 71. 63. 23. 13	56. 71
Da.ri.y(a).w.u.sh		Ku	ra.sha.ra.r	Ku	Ku.t'h.ra.r	Ku
Ta.ri.ya.wa.u.sh,		Ku	er.sa.er.ra	Ku	Ku.ut.er.ra;	Ku
56. 51. 72. 38. 45. 22		79. 45. 73. 51. 4.	45. 25. 4	56. 71	1. 28. 39. 42	
Da.h.jo.sh.tu		wi.sh.sha.da.n(a).sh.tu.n		Ku	Q.ru.—	
Ta.i.yu.s.tu		wi.s.sa.ta.na.s.tu.na;		Ku	K.ru.n	
5. 28. 69.	13. 23. 13	23. 73. 3. 4				
sa.q.qu	r.ra.r	ra.sa.a.n				
si.k.ku	ra.er.ra	er.sa.an.na				

Until the last word but one, there is no difference between us as to the division or interpretation of the words, except, indeed, as to the precise meaning of the compound epithet of *taiyustu*, "provinces;" but Westergaard takes *saqqurrar* as one word, the genitive of *sa*, "this," whereas I divide the word into two; making *sikku* the genitive *hujus*, from a nominative *si*, and taking *rarra* as an adverb in the superlative degree "most," forming the superlative of the adjective to which it is prefixed. Thus I take *rarra ersa* to be equivalent to *ersarra*. I



may here mention that the bracket between two syllables is intended to imply that the *a* of the former is to be taken as a guna to the vowel of the latter, converting *u* into *ô*, *i* into *ê*, and *er* into *âr*. In the above transcription I have uniformly represented the same character by the same letter or letters; but Westergaard has arbitrarily used *ta* and *da* for 51, and so in other instances. The translation of the above passage is as follows. I connect together words which represent the same word in the original by hyphens, and supply in brackets two short words, which are here omitted, apparently by mistake, but which are found in other similar inscriptions, and in this place in I.:

“Deus maximus (est) Auramazdes, qui [hanc] terram creavit; [qui] cœlum istud creavit; qui hominem creavit; qui fortunam creavit hominum; qui Darium regem constituit; unum, multorum regem; unum, multorum gubernatorem. Ego (sum) Darius, rex maximus, rex regum, rex provinciarum omnia-gignentium, rex terræ hujus maximè grandis.

As a further specimen I give the passage in E, of which the corresponding passage in I. has been already given:

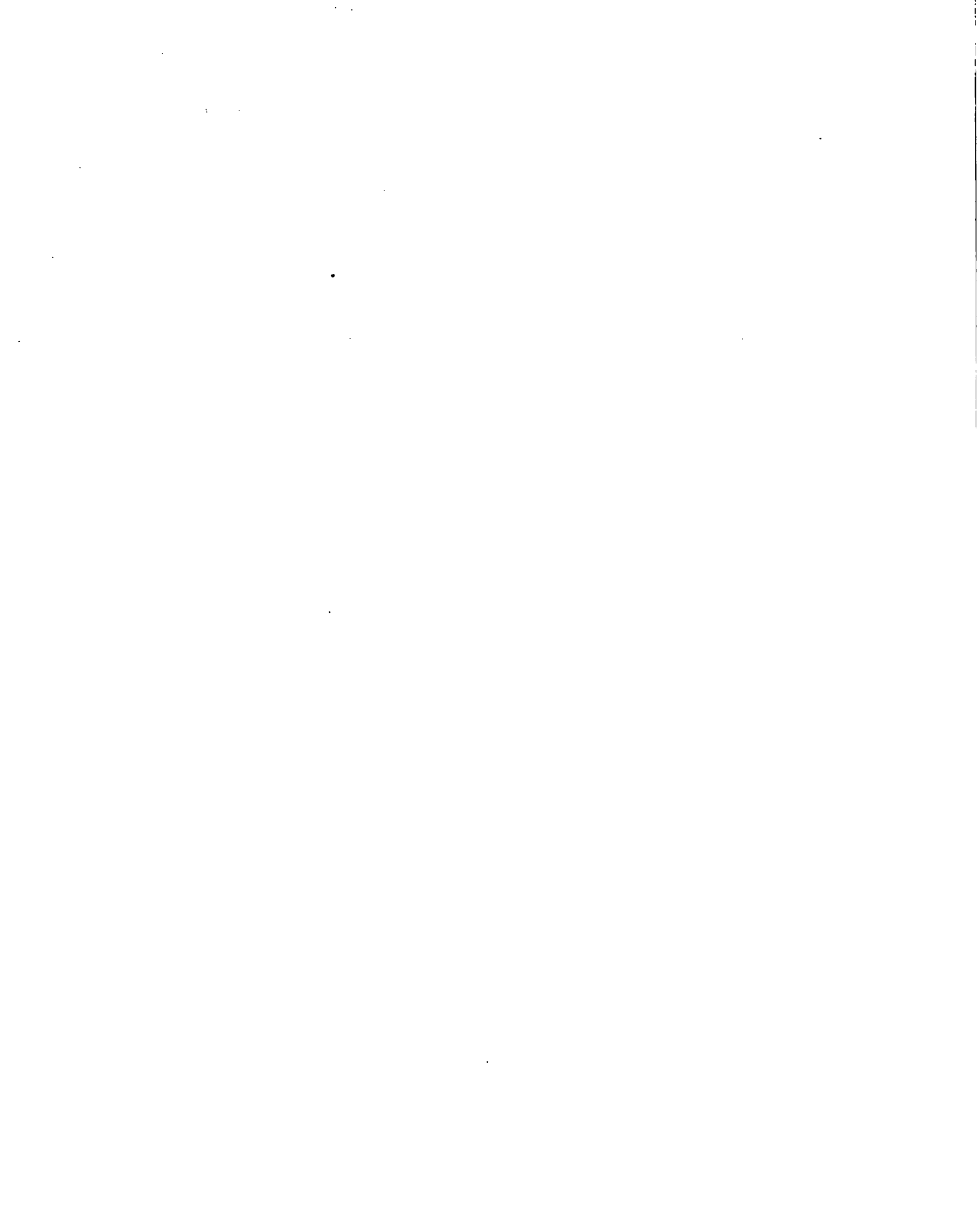
4. 3. 24.	56. 19. 5. 23. 73.	56. 71.	23. 73. 23. 13.	74. 76. 79. 48.
n . a . ri	Kh . sa . ra . sha	Ku	ra . sha . ra . r .	z . u . vi . i .
na . an . ri	K . si . er . sa	Ku	er . sa - er . ra ;	sha . u . vi . n .
Dicit	Xerxes	Rex	magnus ;	ex voluntate
3. 76. 19. 57. 51. 4.	5. 1. 78. 5. 66.	56. 38.	22. 32. 51.	56. 38.
a . u . r(a) . z . da . n	su	— sa . thi	Jo	ju . t . ta Jo
an . u . ra . sh . ta . na ,	si ¹	Er . si . ka(?)	Yu	yu . t . ta Yu
Auramazdis	hanc	Aulam	Ego	feci ; Me
3. 76. 13. 57. 51.	42. 77. 45. 17. 45. 16.	3. 4. 27. 33. 25.	47. 51. 31.	69. 32. 51.
a . u . r(a) . z . da	— ni . sh . — sh . —	a . n(a) . p . pi . tu	i . ta . ka	qu . t . ta
an . u . ra . sh . ta	n . ni . s . su . s . ser	an . na . ap . pi . tu	i . ta . ka	ku . t . ta
Auramazdis .	tuere,	Diis	cum ;	atque
1. 54. 42. 69. 28. 26?	69. 32. 51.	27. 60.	22. 32. 51. 13.	
— qu . q . we	qu . t . ta	p . pu	ju . t . ta . r	
— . n . ku . k . vi	ku . t . ta	ap . pu	yu . t . ta . ra	
Regnum meum	atque	id-quod	feci.	

Westergaard divides the four characters after the fourth word into *zu vii*; I divide them into *sha uwin*, or read them in one word, *shówin*. He takes the character 42 after the vocative, as an interjection; I have found it to be an *n*, and join it to the following word. The enclitic pronoun, after the word signifying kingdom, is injured; Westergaard reads 57, but I think the other mode of completing it more probable. In a parallel passage (D. 18), 79 is used, which seems interchangeable with 26.

When the great inscription from Bisitun, which it is understood that Colonel Rawlinson has copied, shall be published, our knowledge of this language will be considerably increased. Characters will, no doubt, be found there which do not appear in any of the inscriptions yet known, and data will probably be obtained for valuing the greater part of the characters which are now without values, as well as the new ones. Meanwhile, I hope that what has been said will prove interesting, as relating to an ancient language, which, as far as I am aware, has no resemblance in its inflexions to any language of the Indo-Germanic family; though in the fact of its having inflexions it agrees with the languages of that family, in what has been often stated to be their distinguishing characteristic.

NINE SIMPLE SOUNDS.								
A.	I.	U.	ER.	P.	T.	K.	S.	N.
75.	46; 72.	76.	23; 78?	40.	30; 32.	11; 19; 28.	45.	42; 48.
COMBINATIONS OF THE ABOVE SIMPLE SOUNDS.								
. . <i>ya</i> , 47	<i>wa</i> , 67; 75	<i>ra</i> , 13	<i>pa</i> , 49	<i>ta</i> , 51; 50?	<i>ka</i> , 31; 66?	<i>sa</i> , 73	<i>na</i> , 4	
<i>é</i> , ? . . .	<i>wi</i> , 26; 79	<i>ri</i> , 24	<i>pi</i> , 33	<i>ti</i> , 15	<i>ki</i> , ?	<i>si</i> , 5; 80	<i>ni</i> , 77	
<i>ó</i> , ? <i>yu</i> , 22; 38	. . .	<i>ru</i> , 39	<i>pu</i> , 60; 34?	<i>tu</i> , 12; 25	<i>ku</i> , 69; 71; 81	<i>su</i> , 52; 17?	<i>nu</i> , ?	
<i>dr</i> , 10 <i>yer</i> , ?	<i>wer</i> , ?	. . .	<i>per</i> , 14	<i>ter</i> , 53	<i>ker</i> , 43	<i>ser</i> , 16	<i>ner</i> , 36	
.	<i>ap</i> , 27	<i>at</i> , ?	<i>ak</i> , ?	<i>as</i> , 64	<i>an</i> , 3	
		* <i>m</i> , 37	<i>ersa</i> , 8; 82		<i>ut</i> , 63		* <i>sh</i> , 57	
		* <i>va</i> , 29	<i>rus</i> , 68		<i>tas</i> , 70		* <i>sha</i> , 74	

* Characters marked with a star were probably confined to foreign words.



CATALOGUE OF THE CHARACTERS.

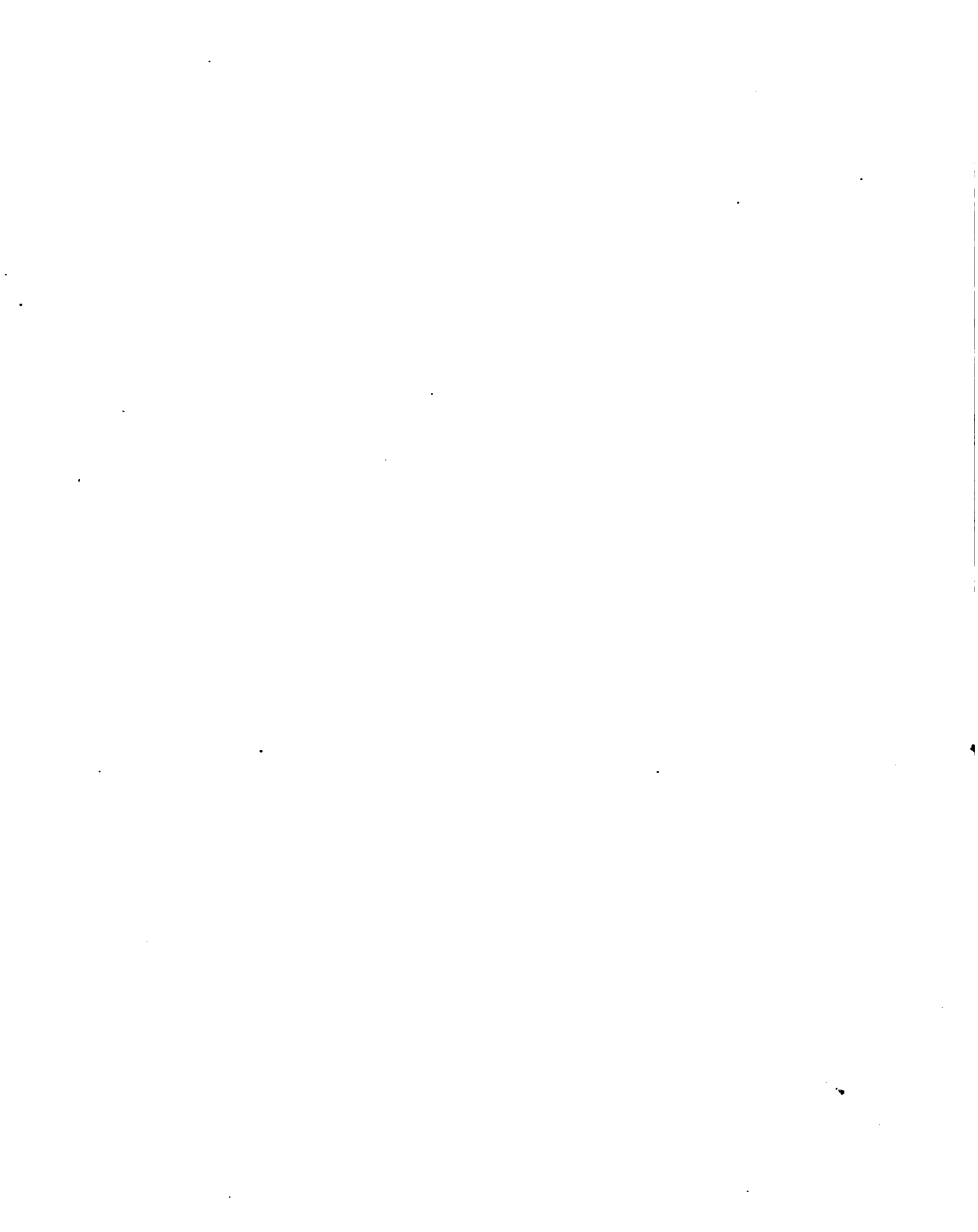
		L.	H.			W.	H.			W.	H.			W.	H.
I. 1	𠂇	z'	j	II. 1	𠂇	initial	sign	36	𠂇	pe	bar	71	𠂇	ku	ku
2	𠂈	w	w	2	𠂈	—	—	37	𠂈	m	*m	72	𠂈	h	h
3	𠂉	m	m	3	𠂉	a	an	38	𠂉	jo	ju	73	𠂉	sha	sa
4	𠂊	g'	zh(i)	4	𠂊	n	nā	39	𠂊	ru	ru	74	𠂊	za	*sha
5	𠂋	r	r(u)	5	𠂋	sa	sa	40	𠂋	ph	p	75	𠂋	o	a
6	𠂌	b	b	6	𠂌	—	—	41	𠂌	—	—	76	𠂌	u	u
7	𠂍	t	t	7	𠂍	—	—	42	𠂍	—	bar	77	𠂍	ni	ni
8	𠂎	n	n	8	𠂎	as	as	43	𠂎	khu	ker	78	𠂎	—	—
9	𠂏	r	r	9	𠂏	—	—	44	𠂏	—	du	79	𠂏	vi	wi
10	𠂐	kh	d(i)	10	𠂐	ā	ār	45	𠂐	sh	s	80	𠂐	shi	si
11	𠂑	χ	kh(u)	11	𠂑	kh	ak	46	𠂑	e	i	81	𠂑	kha	ku
12	𠂒	z	zh	12	𠂒	thu	tu	47	𠂒	j	ya	82	𠂒	ash	ash
13	𠂓	k	k	13	𠂓	r	ra	48	𠂓	i	in		𠂓	or	lus
14	𠂔	ç	s	14	𠂔	pha	per	49	𠂔	pa	pa		𠂔	—	—
15	𠂕	rp	rp	15	𠂕	ti	ti	50	𠂕	—	ta		𠂕	—	—
16	𠂖	j	y	16	𠂖	—	ser	51	𠂖	ta	ta		𠂖	—	—
17	𠂗	'm	m(i)	17	𠂗	—	—	52	𠂗	su	su		𠂗	—	—
18	𠂘	s	z	18	𠂘	—	—	53	𠂘	th	ter		𠂘	—	—
19	𠂙	f	p(r)	19	𠂙	kh	k	54	𠂙	—	—		𠂙	—	—
20	𠂚	d'h	t(u)	20	𠂚	—	—	55	𠂚	wo	—		𠂚	—	—
21	𠂛	h	h	21	𠂛	—	—	56	𠂛	initial	sign		𠂛	—	—
22	𠂜	gh	g(u)	22	𠂜	ju	ju	57	𠂜	z	z		𠂜	—	—
23	𠂝	dh	d(u)	23	𠂝	ra	ra	58	𠂝	—	wash		𠂝	—	—
24	𠂞	q	k(u)	24	𠂞	ri	ri	59	𠂞	—	—		𠂞	—	—
25	𠂟	g	g	25	𠂟	tu	tu	60	𠂟	pu	pe		𠂟	—	—
26	𠂠	u	u	26	𠂠	ve	wha	61	𠂠	—	—		𠂠	—	—
27	𠂡	kh	kh	27	𠂡	p	ap	62	𠂡	—	—		𠂡	—	—
28	𠂢	d	d	28	𠂢	q	ka	63	𠂢	th	ut		𠂢	—	—
29	𠂣	k'	ch	29	𠂣	wu	*va	64	𠂣	s	as		𠂣	—	—
30	𠂤	ā	ā	30	𠂤	t'	at:	65	𠂤	—	—		𠂤	—	—
31	𠂥	v	w(i)	31	𠂥	ka	ka	66	𠂥	thi	thi		𠂥	—	—
32	𠂦	s	sh	32	𠂦	t	t	67	𠂦	w	wa		𠂦	—	—
33	𠂧	i	i	33	𠂧	pi	pi	68	𠂧	ro	ro		𠂧	—	—
34	𠂨	thr	tr	34	𠂨	phi	ph	69	𠂨	qu	ku		𠂨	—	—
35	𠂩	p	p	35	𠂩	—	—	70	𠂩	—	tas		𠂩	—	—

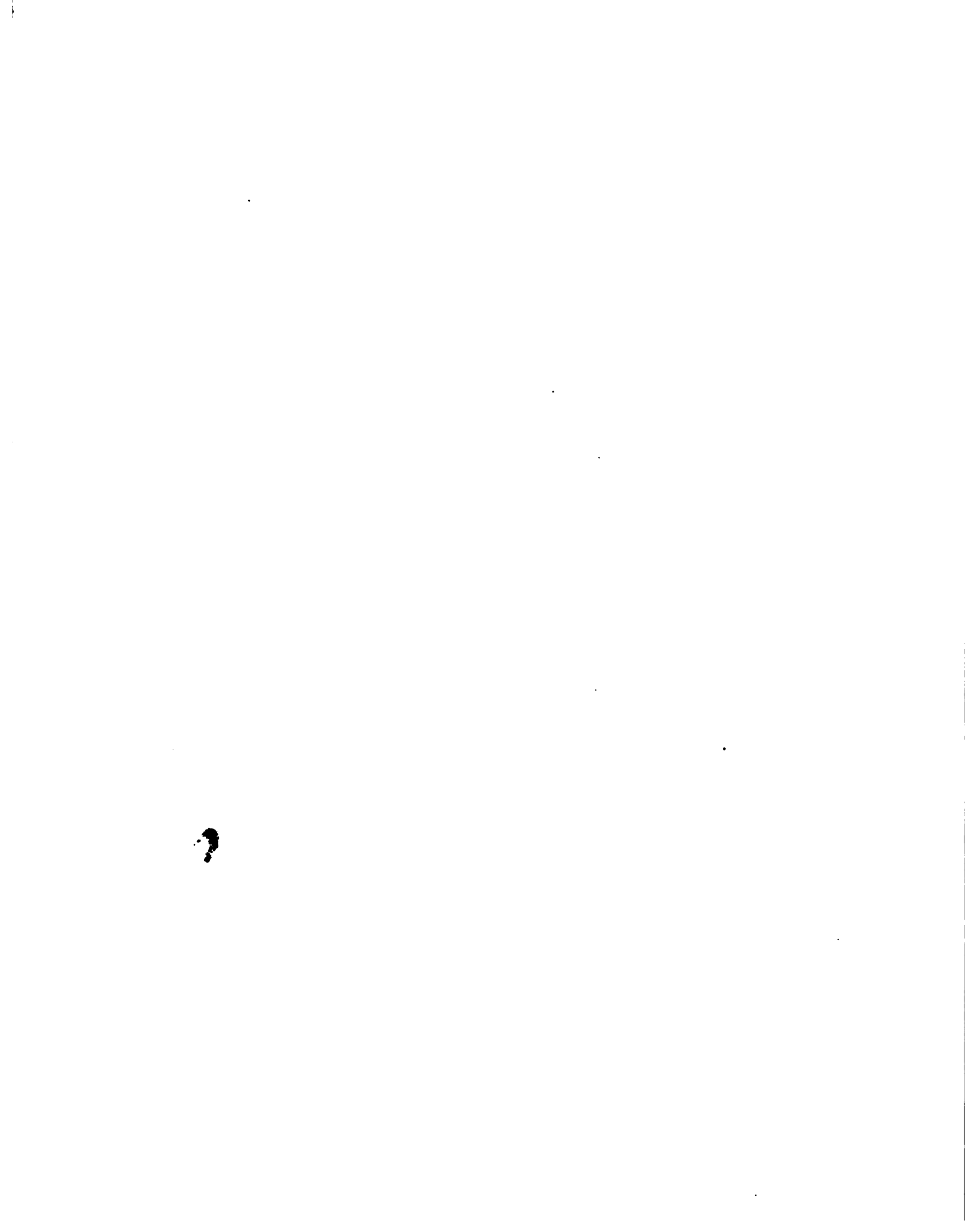
POSTSCRIPT.

Since the above was written, I have applied myself to the third Persepolitan writing, which agrees in character, and, to a great extent at least, in language, with the Babylonian inscriptions, and to the Assyrian writing in Schütz's inscriptions. Having as yet a very scanty supply of data, I have not been able to prepare alphabets of either of these modes of writing. I have, however, ascertained that they both agree in principle with the second Persepolitan. In both, some of the characters represent elementary sounds and some combinations. In both, two or more characters are used to represent the same sounds. In both, no vowel is omitted, but vowels and consonants are repeated in two consecutive characters. The number of elementary characters is greater in both these modes of writing than in the second Persepolitan. In the latter, a single vowel was rarely expressed after a syllable terminating with the same vowel, but this was commonly done in the Babylonian and Assyrian, in which, of course, the simple vowels were of much more frequent occurrence. In the second Persepolitan, *m* was expressed by *w*, but in the Babylonian by *b*, which accounts for the same name being written Berodach in the Second Book of Kings, and Merodach in Isaiah. I have found the name of Babylon in the inscription on a piece of baked clay, shaped like a barrel, brought from the ruins, and in those on a few of the bricks.* I have also found the name of Nineveh on the bricks brought from that place. Both the Assyrian and Babylonian languages appear to have much in common with the Semitic languages; but some of their roots are common to them with the language of the second Persepolitan inscriptions, with which also they have many characters in common. I have found it to be a general rule, though it admits of some exceptions, that where a character occurred in two or more alphabets, it had the same value, or nearly so, in all of them. Thus, the *pa* of the second Persepolitan is *pa* in Assyrian, and *ba* in Babylonian; and so in other instances. The first Persepolitan alphabet, on the contrary, had nothing in common with any of the others.†

* *m*, *w*, *b*, and *p*, are all expressed alike in Babylonian. The name of Babylon, variously written, is found on all the bricks from that city.

† It may be proper to state here that the body of the paper was written in the beginning of May, this postscript in the beginning of June, and the notes at the end of August.





AN interval of several weeks has elapsed between the completion of the printing of this paper and the issue of the private copies of it. During that time the long-expected Bisitûn Inscriptions have been published, and I have carefully examined the whole of them.

That being the case, I think it right to state to my readers, that this examination has confirmed me in the conclusions to which I had previously come, so far as respects the three general corrections of Lassen's views, which I have proposed in this paper.

The *third* of these, including the theory of the Secondary Letters, is, I believe, *altogether new*; in the others, I have been partially anticipated.

With respect to the values of individual letters, I find that two which I have given are certainly erroneous. No. 4 is a secondary form of No. 1, and should be valued as *j* (*i*); No. 11 is a secondary form of No. 3, namely, *m* (*u*).

Major Rawlinson has discovered a new letter \llcorner , which he expresses by *n'*; it is the secondary form of No. 8 before *u*, or *n* (*u*).

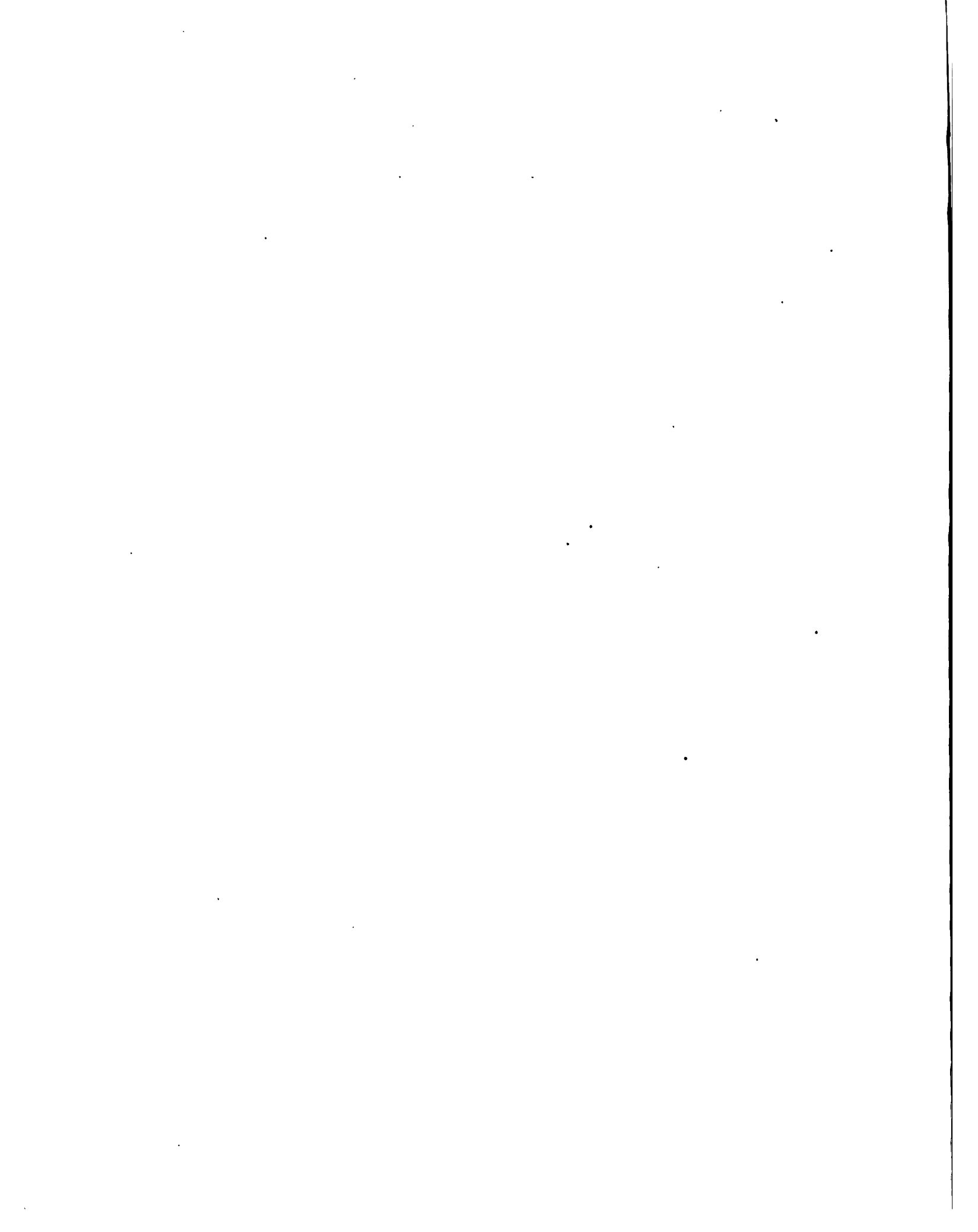
I suspend my opinion as to the four letters, Nos. 12, 15, 18, and 19, which Major Rawlinson expresses by *z*, *q*, *th*, and *f*, till I have examined his reasons for assigning them these values, which are to be given in a part of his memoir not yet published; but as yet, I prefer all my values to his, except the last. Should this have to be altered, a slight modification must also be made in the value of No. 34.

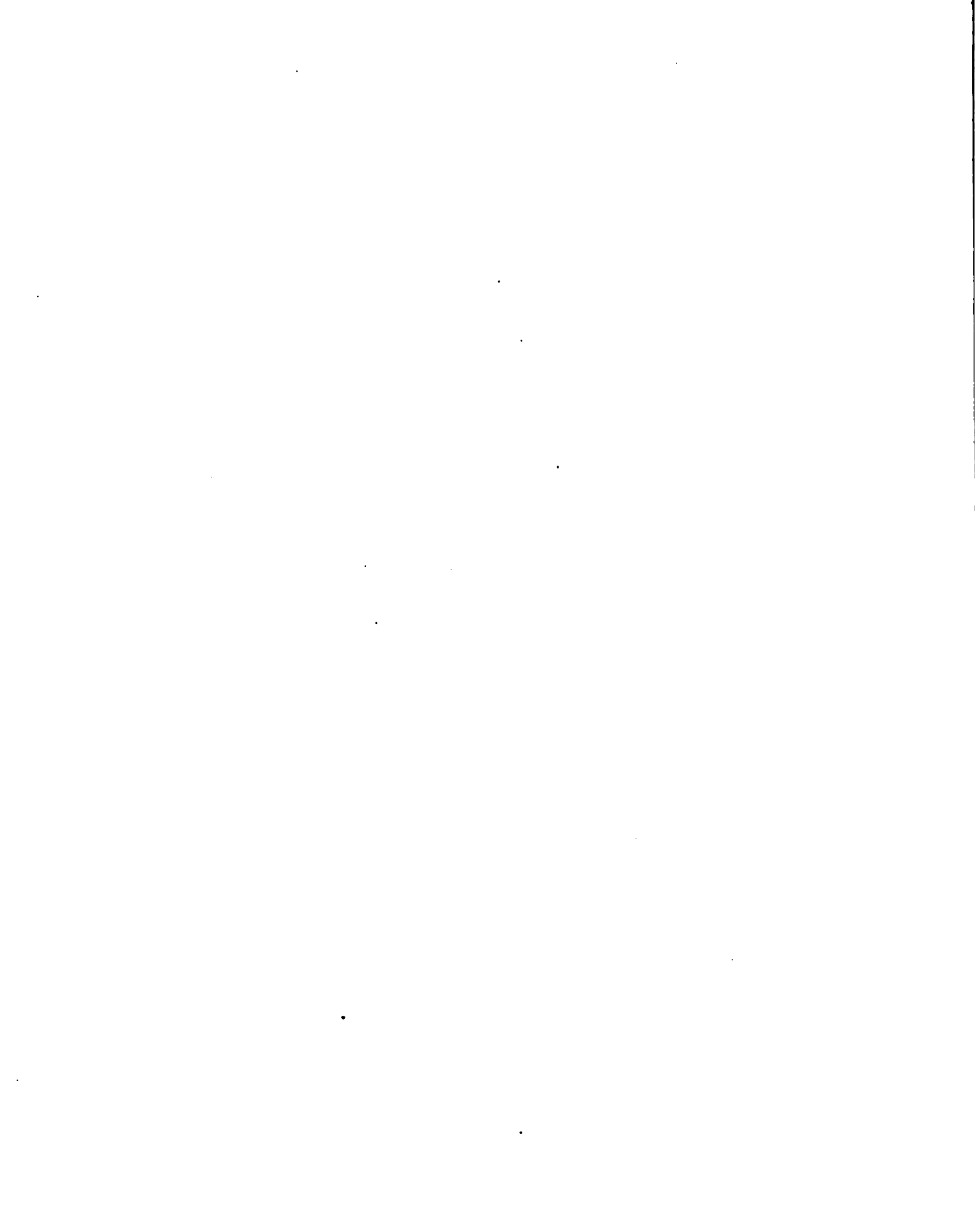
As to the other letters of this alphabet, I am perfectly satisfied that the values given to them, in this paper, are all correct.

The Median character, No. 28, should be *wa*, not *k*.

E. H.

Killyleagh, 22d Oct., 1846.





ON
THE THREE KINDS
OF
PERSEPOLITAN WRITING,
AND ON
THE MODE OF EXPRESSING NUMERALS
IN
CUNEATIC CHARACTERS.

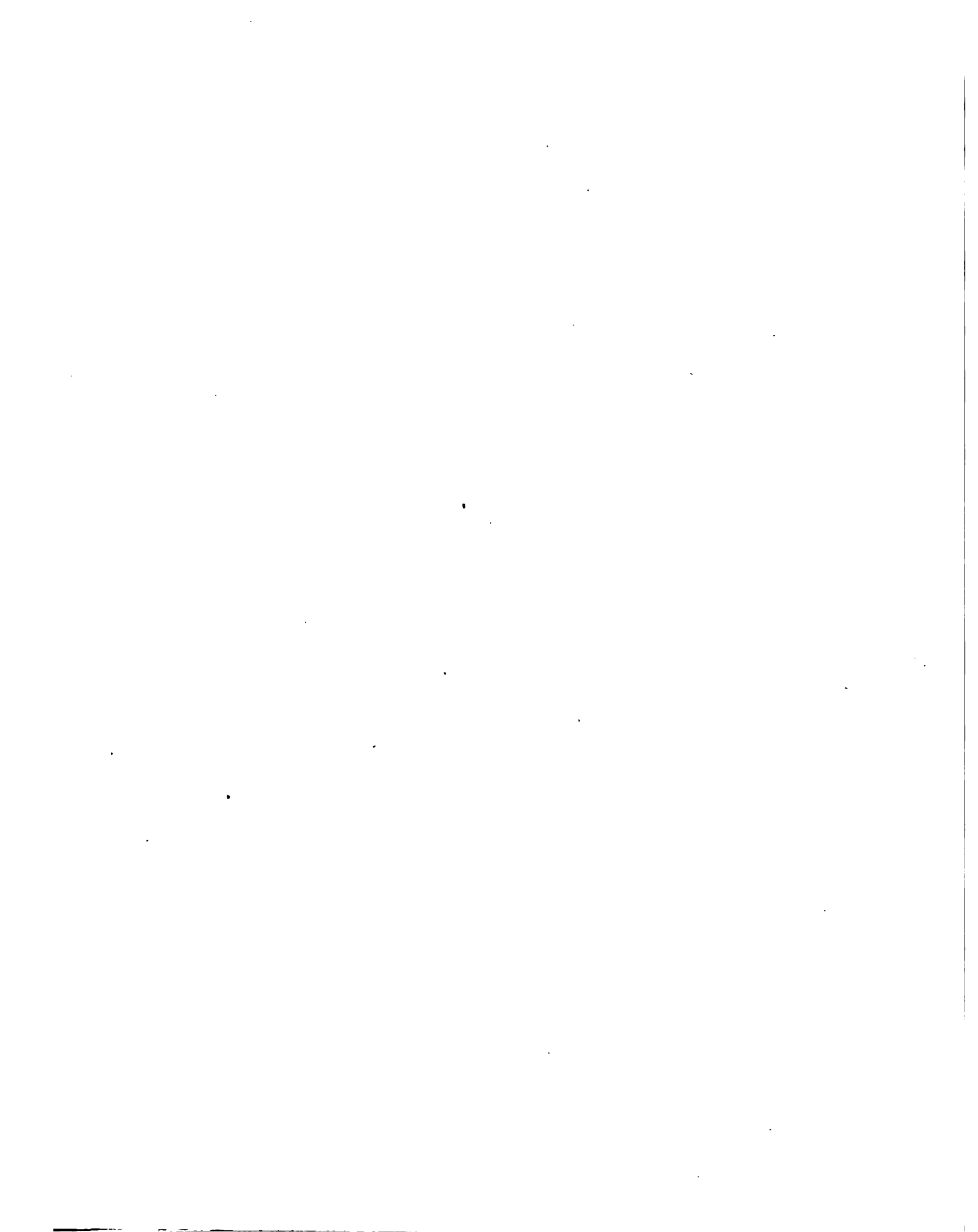
BY THE
REV. EDWARD HINCKS, D. D.

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ON
 THE THREE KINDS OF PERSEPOLITAN WRITING,
 AND ON
 THE BABYLONIAN LAPIDARY CHARACTERS.

SINCE my paper "On the first and second Kinds of Persepolitan Writing" was printed, I have received a copy of the Bisitun inscriptions of the first kind; and I am happy to be able to say, that they completely confirm the three *general* corrections of Lassen's mode of reading which I proposed in that paper. I will mention some points that appear to me very strongly in favour of my views.

1st. Instances occur, in which words which terminate in 33, 16, *iy*, or 26, 2, *uw*, when they stand alone, are deprived of the final semivowel when an enclitic is attached to them. Thus, *imiya*, "these" (as Major Rawlinson reads it, after Lassen), which occurs alone, IV. 80, occurs IV. 77, with the enclitic *wá*, "and," and is written *imiwá*. *Huwa*, "he," with the enclitic for "to him," is written *hushiya* in the Persepolitan inscription H. 3. This I regard as positive proof that, *in these words*, the final syllable, as the Major writes them, should be dropped. We cannot, however, infer that, where the semivowel was retained before the enclitic, it was sounded as *wa* or *ya*. This same word is, in III. 11, written *huwa* before an enclitic, and yet it must have been sounded *hu*. In *some* words it was sounded as in *har'uwashim*, from *har'uwa*, "all," and *shim*, "him," II. 90; but by no means in all. According to my mode of reading, these words would be *imé*, *imé-wá*; *hu*, *hú-shé*; *haruwa*, *haruwa-shim*; the enclitic making no change in the pronunciation of the word to which it is attached.

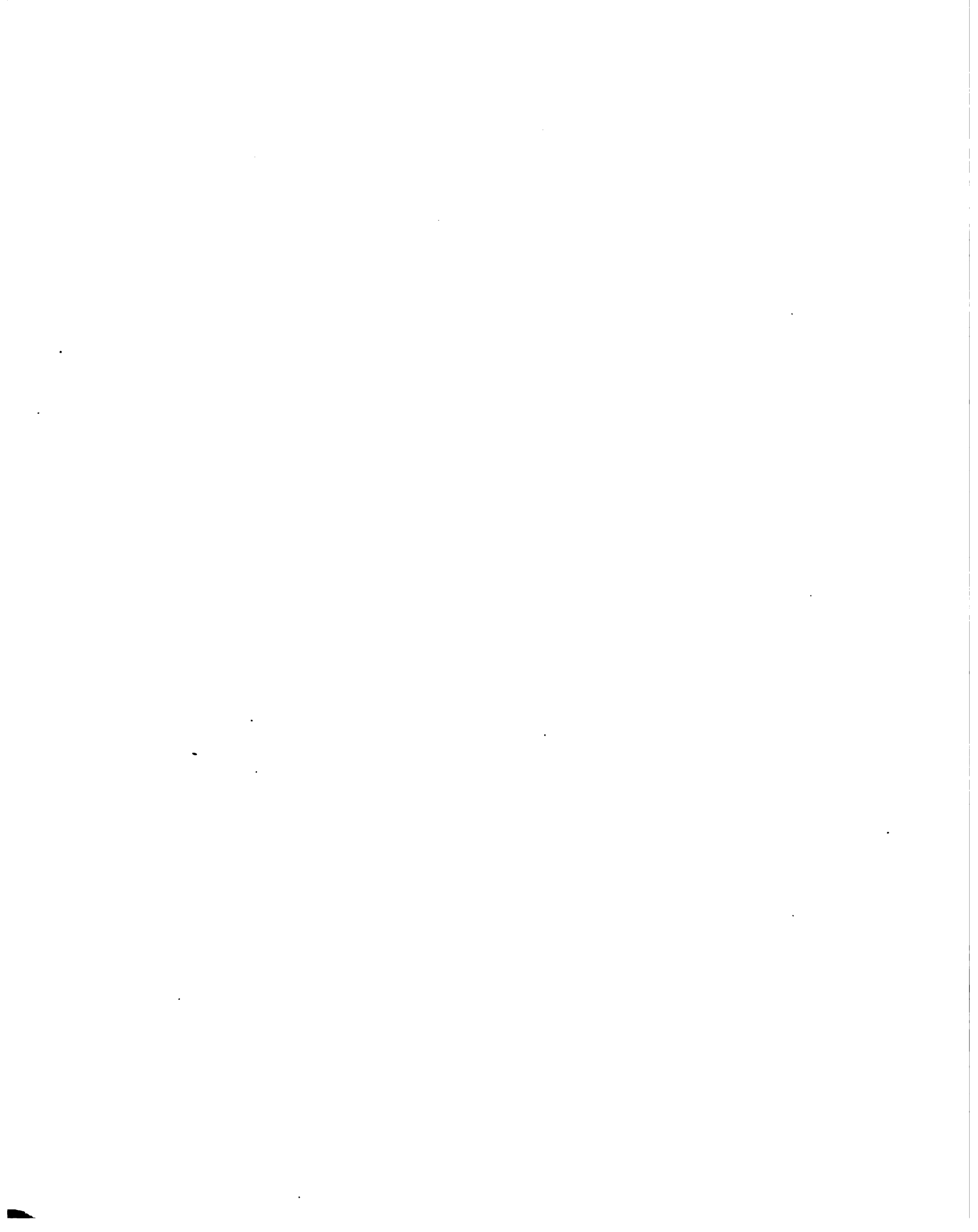
2nd. Instances occur in which prepositions which terminate with the semivowel, when alone, omit it in composition with words beginning with consonants. Thus, *patiya* is found alone, II. 43, and *an'uwa*, I. 92. Both these occur, also,

in composition, prefixed to consonants, as IV. 71, *patikará*, and I. 58, *an'ushiyá*. Surely it follows from this, that the prepositions were pronounced as dissyllables, *pati* and *anu*. Before a vowel the semivowel is retained, as in *patiyáisha*, I. 13, 18, which is compounded of the former preposition and *áisha*, which occurs alone, I. 93.

3rd. Some new words occur, in which transcriptions or analogy of other languages, in a manner, compel us to read the two letters as a single vowel, even in the middle of a word. Thus, the name of the younger son of Cyrus is, according to Major Rawlinson, *Bartia*, and in the accusative, *Bartiam*. The name given to this prince by Herodotus clearly shews that its final syllable should be read *di* in the nominative, and *dím* in the accusative. The pronoun of the second person singular is, in the nominative, *t'huwam*, IV. 37. This would be, according to my mode of reading, *túm*, which is precisely the Zend form. In II. 75, we have *dhuwarayá*, meaning, "at the gate," the locative singular from *dhuwará*. I read this word *dúrá*; and it appears to me evident that it corresponds to the Greek *θύρα*. I will presently notice the bearing of this correspondence on the value of the initial letter in the word.

4th. I mentioned in my former paper one word in the inscriptions of Darius, in which a secondary letter was used to express a syllable. The Bisitun inscription supplies a great number of analogous instances. Thus, No. 31 is used for 31, 33, twice in I. 4, in the name of the father of Darius; and elsewhere, in this and in other words, as in I. 69, 71, &c. Major Rawlinson reads in these places *Váshtáspa*, *vátham*, &c.; I read *Wishtáspa*, *wizam*, &c. In like manner, No. 24 is used for 24, 26, in I. 93 and elsewhere. The Major reads here *Nabukhadrachara*, without even a distinguishing mark after the secondary letter, such as he used in *vátham*. Elsewhere he reads *khu*, No. 26 being supplied. I read, in both cases equally, *ku*.

5th. When a primary letter occurs before *i* or *u*, in a case where a secondary letter proper to that vowel existed, I laid it down as a rule that *a* is to be interposed, sometimes as a distinct syllable, but generally as a *guna*, or, I should have added, a *vridhi* to the vowel. I gave some instances of this, and I added more in my note. I will now give some additional ones, including some in which the Major's translation appears to me erroneous, from his not having been aware of this rule. In I. 78, after words signifying "he rose up," come *Bábiruwa*



káram, with the primary *r* before *u* in the first word. The Major places a stop before these words, and translates them "the state of Babylonia." I read the first word *Bábirau*, taking it as the locative, and translating it with the preceding clause, "he rose up at Babylon." The Sanscrit locative, in the corresponding declension, ends with the *vridhhi* diphthong *au*. In like manner, II. 15, he takes *Mádiya*, as he reads it, for an epithet of the following noun, *kárahya*; but it is the locative, and should be read *Mádé*, "he rose up in Media; he said thus to the people." In II. 77 he reads *awiya Hagamatániya*, and translates the two words in his interlineary version "ad Ecbatanam;" but the primary *w* cannot precede *i*; we must interpose an *a*, and thus I read *awé Hagamatáné*, the locative again, and translate "in that Ecbatana," making the first word a case of the demonstrative pronoun, *awa*, instead of a preposition.

6th. The interchange of the primary and secondary letters when, in the course of inflexion, the vowels which follow them are changed, appears to me inconsistent with the supposition that they had different values. The most remarkable instance of this interchange which occurs is in the words signifying "a liar," and "he (or they) lied." These are, according to the Major's mode of reading, *darujhana* and *adhur'ujiya*, or *jiyasha*. Here are two words evidently from the same root, and yet they have not a single consonant in common! The former is, according to my system, written with three primary consonants, and the latter with three secondary ones, *having the same powers*, and thus I make the radical parts of the words only to differ in respect to their vowels. I read them *drójana*, *aduruji*, and *adurujtsha*. These last words correspond in form to the Sanscrit *asvantí* and *asvanishan*, from the root *svan*, *sono*. By analogy the root should be *duruj*; but it seems to have been the custom in the old Persian language, when a verb began with two consonants followed by a vowel, to insert that vowel between the consonants in certain of its tenses. The real root would then be *druj*, forming *drójámi* in the present, after the analogy of the first Sanscrit conjugation. Hence we have *drójana* with all the consonants primary ones; while in the aorist, *adurujtsham*, the dropping of the *guna*, the repetition of the *u* which follows the liquid before it, and the *i* of the tense ending, require secondary letters to be substituted for the primary ones, there being such in this instance in all the three cases.

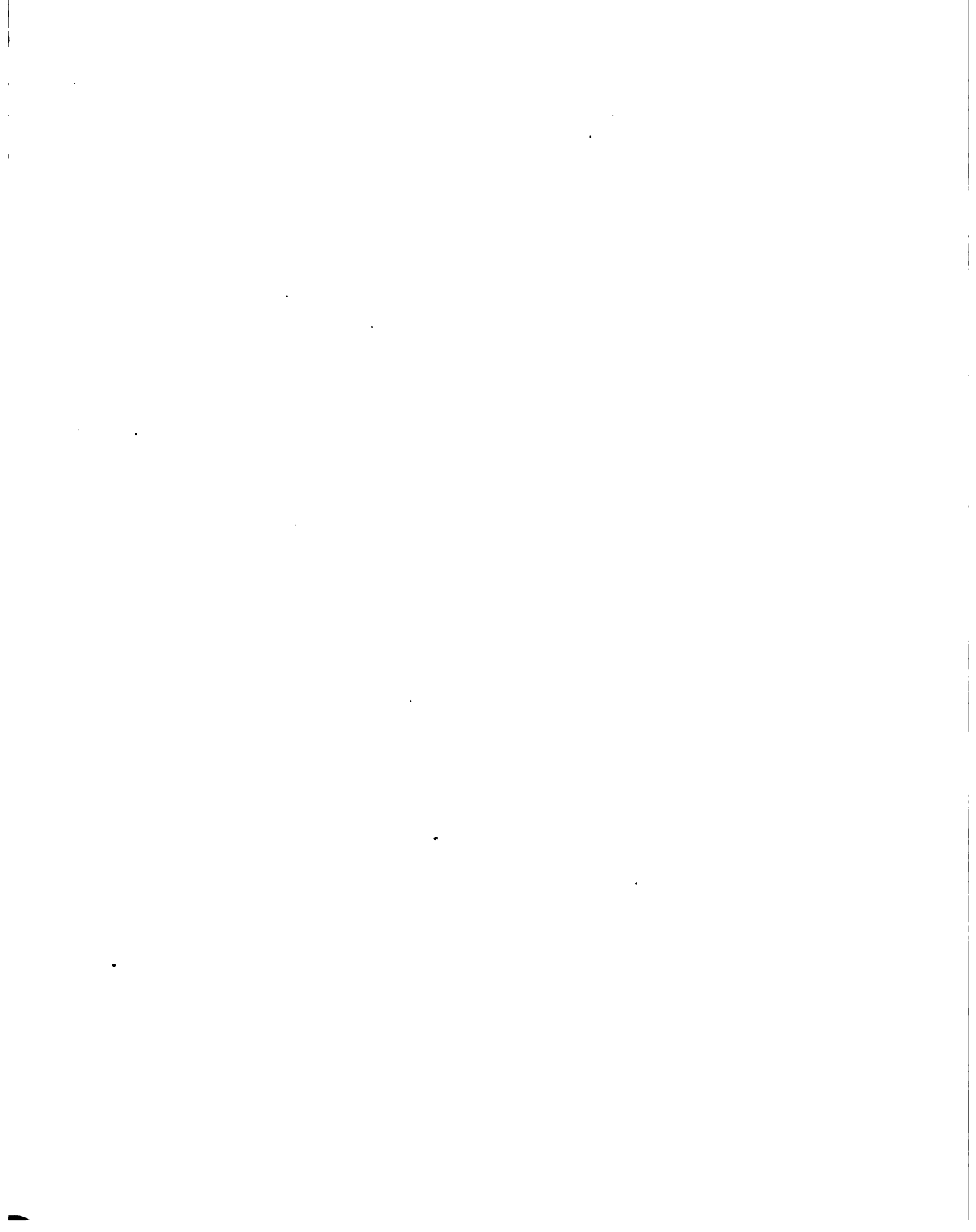
7th. The manner of forming the derivatives of roots ending in *u* furnishes a

distinct argument in favour of the identity of sound of one primary letter and its secondary, those which Major Rawlinson calls, after Lassen, *w* and *v*. When a root ending in *u*, which, as I have already observed, when it stands alone, is terminated with *uw*, enters into composition with a word beginning with a consonant, or combines with a termination so beginning, the *w* is dropped, as *par'uzanánám*, *am'utha*, from the roots *par'uw*, *am'uw*, in Sanscrit, *puru*, *amu*. According to my method, the roots are *paru*, *amu*, and the derivatives *paruzhanánám*, *amu-za*. Before a word or ending beginning with a vowel *w* should in all instances be inserted. If the vowel be *a* it is so; thus, in II. 8, we have *uwaspá umartiyá*, *εὔππος εὔανδρος*, where the root *ú bene* takes a *w* after it when preceding *aspa*, *equus*, though in the following word, where it precedes a consonant, no *w* appears. Now it is well worthy of notice that, when the second part of the compound begins with *i*, the secondary form of *w* before *i* is invariably interposed instead of the primary *w*. Thus, from *Bábir'ush*, "Babylon," as Major Rawlinson writes it, he deduces *Bábir'uviya*, "a Babylonian." According to my method, the words would be *Bábirush*, *Bábiruviya*, the secondary *w*, No. 31, expressing not *v*, but the simple semivowel *w*, introduced for euphony, or rather necessarily sounded after *u*, when another vowel follows it without a suspension of the utterance.

It appears to me that these arguments completely establish the correctness of the three general principles contained in my paper. In the two first of them I have been partially anticipated by Major Rawlinson and by Holtzmann, who, however, do not apply them to one-half the cases that I do; but the great principle of secondary letters I believe to be altogether my own, and it affects the mode of reading of a very large proportion of the words of the language. With respect to a few of the letters of the alphabet, I have to correct the values which I gave in my paper; but no change which I have to make is inconsistent with the three general principles above mentioned. I will now briefly notice the new light which the Bisitun inscription throws on the values of individual letters.

I have to notice, in the first place, the discovery of a new letter, \llcorner , which Major Rawlinson values as *n'*. It is *n(u)*, or the secondary form of No. 8, before *u*. Another new letter, which he calls \bar{n} , is, in fact, the Median character No. 4, as he himself remarks. It was, I conceive, used by mistake by a Median





sculptor for the syllable *na* ; and I read the syllable which the Major expresses by *nan* as *n.na*, or simply *na*.

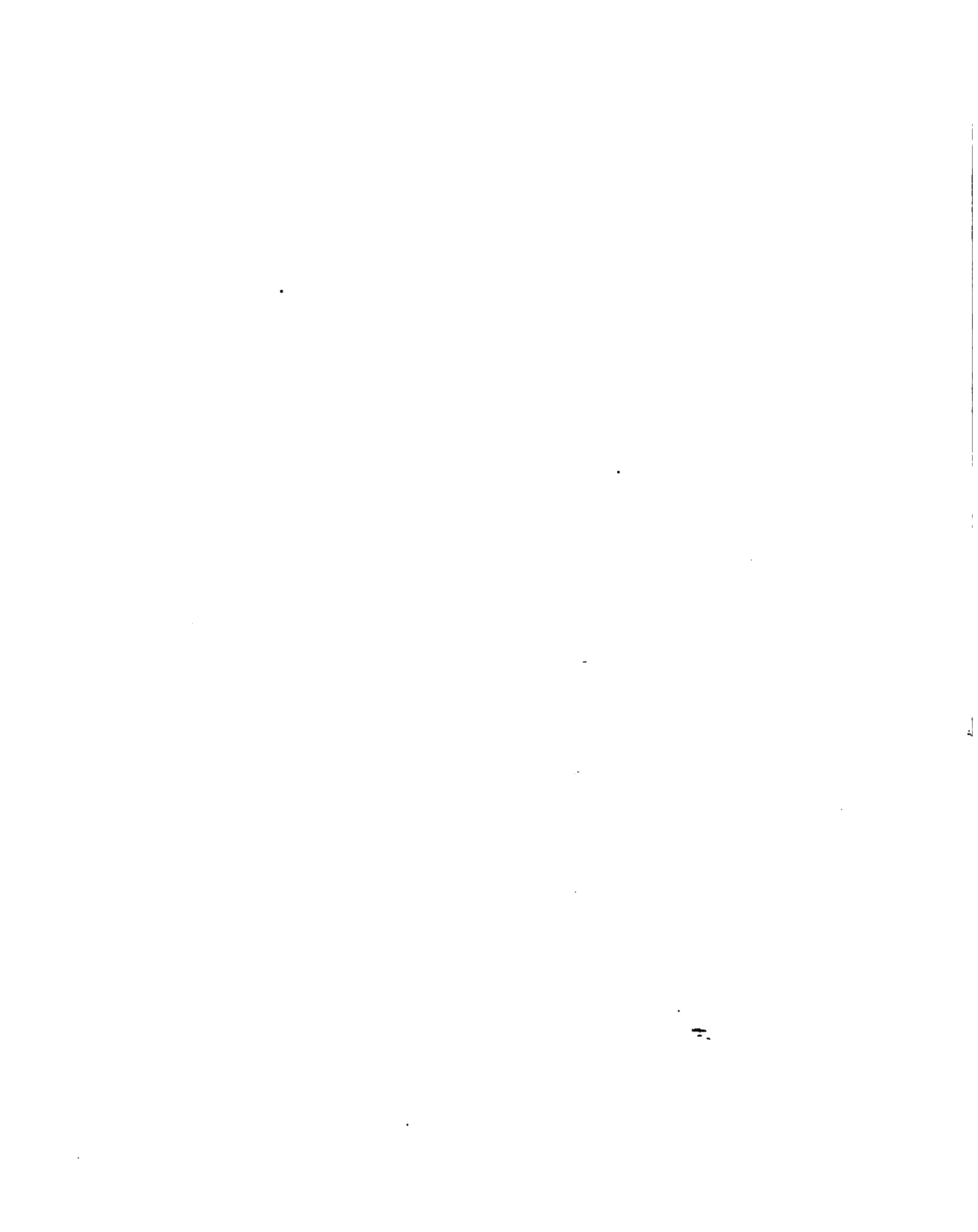
From what has been already said on the root *druj*, it appears that No. 4 is the secondary form of No. 1, and not of No. 12. Its value is *j(i)*, not *zh(i)*. These letters, being etymologically connected with *g*, No. 25, and *kh*, No. 27, and being transcribed by a Babylonian character, which certainly contains the consonant *k* or *g*, must certainly be *j*. Neither *z* or *zh* are admissible for them.

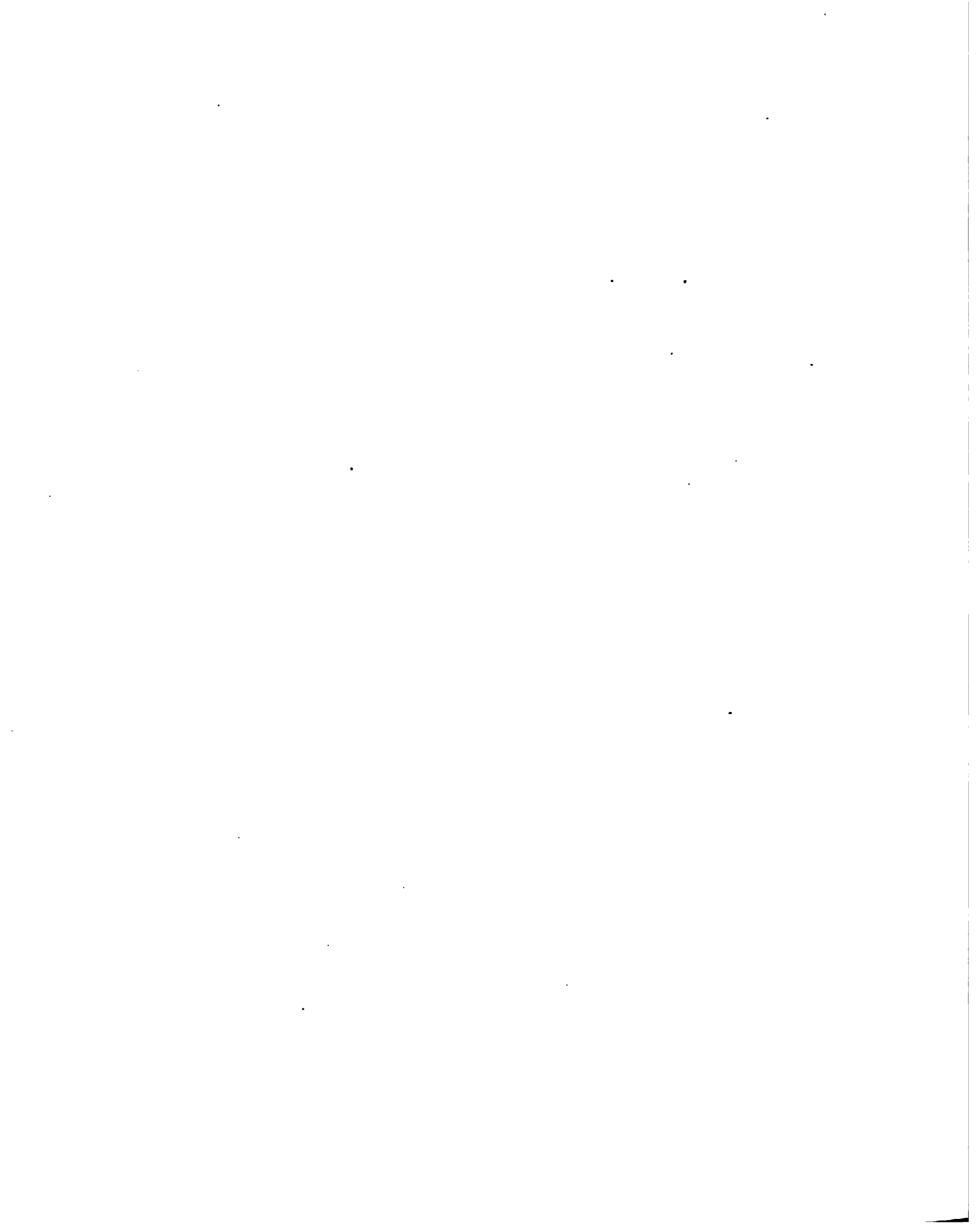
No. 11 is the secondary form of No. 3, *m*, not of No. 27, *kh*. It is *m(u)*, not *kh(u)*. This appears fully from the inscription, in which *Mudráya*, the country whose name begins with this character, is clearly identified with Egypt. This was the value which I myself had originally assigned to No. 11, but I was led astray by Westergaard's positive statement, that the Median character, No. 28, which begins the corresponding word, was a *q* or *k*. I now see that he had no ground for that statement save Lassen's hypothesis, that the country in question was not Egypt but Kurdistan. The value of that Median character will, of course, have to be corrected.

No. 19 is used at Bisitun without an *r* after it, in a word which Major Rawlinson writes *kufa*. According to my principle, the first vowel should be *gunaed*. On the authority of this word, I must make No. 19 a primary letter, having the same relation to *p* and *b* as No. 27, *kh*, has to *k* and *g*. Accordingly, I write it *ph*, making the above word *kópha*. I still think, however, that *p* cannot precede *r* without an intervening *a*, and that if it should do so by analogy, it would become *ph*. Thus, *parasámi*, "I punish," has for its participle *phrasta*, "punished," whence *uphrastam*, "well punished," in IV. 38. The word which the Major reads *prítá*, and translates *salvete*, as if from a root *pri*, corresponding to the Sanscrit one, I take to be *parítá*, compounded of the preposition *para* and the root *i*, *eo* ; and I translate it "go forth." Now, if *r* be so decided an aspirate that the *Tenuis p* cannot precede it, as appears to be the case ; and if, as also appears to be the case, it is never preceded by *k* (to avoid which conjunction of letters the Persians used *ku* for the Sanscrit *kri*), we may safely infer that No. 34 was *thr*, not *tr*. The declension of *pitá*, which makes in the genitive *pithra* with this letter, is strictly analogous to the change in the participle of *parasámi*. Here, then, I restore Lassen's value, and I think we may now safely regard this

as a double letter, not as a secondary syllabic character. The class of secondary letters preceding *r* must, it seems, be rejected.

I must now say a few words on the letter No. 10, as to the value of which I differ from Major Rawlinson, and the use of which letter has been pointed out to me as an objection to my theory of secondary letters. I feel quite confident that my value (founded on Holtzmann's) is right; that the Major's is wrong, though much less astray than Lassen's; and that the facts connected with the use of this letter are quite consistent with my theory. The objection proceeds on the supposition that No. 10, which the Major writes *ē*, is connected with No. 7, *t*; so that, if my theory were correct, it would be a secondary form of that letter; whereas No. 7, *t* itself, precedes *i* in instances where no *a* can intervene; as *e. g.* in the third person singular of the present *asti*, "he is," and the like; and again, Nos. 7 and 10 appear to be interchanged. As to the first point, I stated in my former paper, and still state, that No. 10 is the secondary form of *d*, not of *t*. I admit that No. 7 precedes *i*, both immediately and with *a* intervening, there being no secondary form of it before *i*; but I deny that *di*, as the Major writes it, that is, 28, 33, ever come together, except in the inflexion of a noun ending in *da*, in the enclitic pronoun *dē*, or in some other similar case, where a *guna* to the *i* is required by analogy. As to the alleged etymological connexion between No. 7 and No. 10, I cannot discover it. The only *apparent* instance of such a connection is in the imperative of certain verbs, where the 2, *s*, the 3, *s*, and 2, *pl*, are written with *tīya*, *tūwa*, and *tā*, according to the Major's orthography; *di*, *tu*, and *tā*, according to mine. These I compare with the Greek and Sanscrit forms. They are the terminations annexed to a root which terminates with a vowel. In Greek we have *ἴθι*, *ἴτω*, *ἴτε*. Bopp gives *s'rud'hi* as the Veda form of the Sanscrit, corresponding to *κλύθι*; the other persons end in *tu* and *ta*. Now, it is admitted that, in the old Persian, *da* corresponded to the Greek *θα* or *θη*, and to the Sanscrit *d'ha*; *dadāmi* was the equivalent of *τίθημι* and *dad'hāmi*; but it has not yet been admitted that *di* and *du* were the old Persian equivalents of *θι*, *θυ*, and *d'hi*, *d'hu*. This, however, is what I contend for, as a part of my theory of secondary letters; and it is in perfect accordance with this theory that I found above *dūrā* as the equivalent of *θύρα*; and that I now find *di* to be the termination of the second person sin-





gular of the imperative, corresponding to θ and $d'hi$, while tu and $tá$ are, in the other persons, corresponding to $\tau\omega$, $\tau\epsilon$, tu , ta . Lest, however, any one should persist in thinking that the letters which I call secondary should have an aspiration, because θ and $\theta\nu$, $d'hi$ and $d'hu$, have, I observe, further that d , in the old Persian, in all its forms, primary and secondary, corresponds to the Greek δ as well as to θ ; to the Sanscrit d , as well as $d'h$. The old Persian *dadâmi* corresponds equally to $\delta\acute{\iota}\delta\omega\mu$ and to $\tau\acute{\iota}\theta\eta\mu$; to the Sanscrit *dadâmi* and *dad-hâmi*; and so do the secondary forms of d ; *dhuwitiyam*, as the Major writes it, *duwitiyam*, as I write it, corresponds to the Greek $\delta\epsilon\acute{\upsilon}\tau\epsilon\rho\nu$, the Sanscrit *dvittiyam*; while his *yatiya*, my *yadi*, is the Sanscrit *yadi*. With respect to the alleged interchanges of Nos. 7 and 10, I observe, that if they be not errors of the sculptor, which I believe them to be, they are interchanges of *di* and *ti*, not interchanges of a primary letter with its secondary one. The instances are two. In one (III. 14), the imperative singular terminates in *ti* instead of *di*. The same sentence in the plural had occurred not long before, and the sculptor was apparently repeating it. After he had written the t he perceived his mistake, but he could not well correct it: in another imperative, however, connected with this by the conjunction "and," he wrote *di*. The other instance is the name of a month, which occurs twice; in one place it is written with *ti*, and in the other with *di*. It is uncertain which was right, and a confusion between syllables so like in a long word should have no stress laid on it.

The Bisitun inscription does not appear to me to throw any new light on the value of No. 12.* As to No. 18, it seems at first sight in favour of its having the value *th*; since, with a after it, it corresponds as a termination of pronominal adverbs to the Sanscrit *tas* or *d'has* (the former the more frequent, but the latter, I believe, the original form), and the Greek $\theta\epsilon\nu$ (for $\theta\epsilon\varsigma$, as in the first person plural of verbs, $\mu\epsilon\nu$ for $\mu\epsilon\varsigma$). To this, however, it may be objected that,

* It may, indeed, be said, and with some appearance of reason, that the argument drawn from the Median transcription, *tatsharam*, is affected by the rectifications of the Median alphabet made in the present paper. I now read the word *t.ta.sha.ra.m*. Consequently, I cannot rely on the argument drawn from it, to prove that No. 12 was not *j*. This, however, is abundantly evident from other considerations; and the argument that it was *zh*, and not *z*, appears to me unaffected by the change.

as above shewn, *da* would be the termination corresponding to *d'has* and *ḍev*; for the old Persians always dropped *s* and *u* after *a*. *Da*, however, would also correspond to the Greek *ḡa* in *ἔνḡa*, which is in the Vedas *d'ha*, in the later Sanscrit *ha*, in *iha*. Now, it was necessary to make a distinction between adverbs which differed in signification, as *there* and *thence*. If *awadá* was to signify *there*, some other termination must be used to form a word signifying *thence*; and it appears to me that *za* is at least as likely a modification of *da* as *tha* is. It may also be considered as bearing on this question, and therefore I think it right to mention, that the genitive singular of the pronoun of the second person singular, *túm*, begins with No. 18. It is what I should read *zuwám*. This has certainly no etymological connexion with the nominative, but neither has *maná* with *adam*, nor *amákham* with *wayam*, the genitives and nominatives of other pronouns. There is no corresponding Sanscrit form, for I cannot consider *tava* to correspond, which is the genitive in both Sanscrit and Zend; and in the absence of such, it does not appear to me that any inference can be fairly drawn as to the value of the letter. I suspend my opinion till I see what Major Rawlinson has to say in support of the values which he has given, after Lassen, to these two letters; but I certainly incline strongly to think that those assigned in my former paper are the true ones.

No. 15 is not used in the Bisitun inscription. It has occurred to me, however, that it is rendered highly probable by the Babylonian deciphering that its value was *iya* or long *i*. It is only used after No. 8, *n*, in a word signifying "king." Now, the Babylonian word signifying "king" was certainly *ni*. If this word, or *niya*, with the usual termination, was adopted into the Persian language, it could not well be written with the ordinary letters, for they compose the word *ni* or *ne*, "not;" and the character actually used bears a very strong resemblance to that which represents *y*, and might therefore naturally be selected as suitable to represent the new word.

In respect to the second or Median kind of writing, I am satisfied that the general principles announced in my former paper are correct; I have to add to them, however, a new one, which I ascertained from the inscriptions of the third kind to prevail in *them*, and which I have since found to be also applicable to the Median inscriptions. It is this: if a character which expresses a syllable commencing with a consonant, be preceded by a character expressing the same

50 is Chi or represents it, as appears from before the same first received by King Chitankalona. p. 293. 47-10-12.

syllable (neglecting the distinction between *i* and *u*), or a syllable containing the same consonant followed by *a*, the first of the two characters loses its vowel, and becomes, in fact, a mere expletive, as I explained in my former paper that the simple consonant would be under the same circumstances.

This has led me to some important rectifications of values.

The three following characters, which I made to consist of a consonant preceded by a vowel, really represent the same consonant followed by a vowel, namely, 3, *na*; 27, *pu*; 63, *tu*.

The three following, which I made simple consonants, really contain a following vowel, viz. 30, *ta*; 32, *ta*; 42, *na*.

No. 28, which begins the name of Egypt, should be *wa*, not *k*. I make its value commence with *w*, because this is used for *m* in other instances; and I make it to end with *a*, because it is the second character in the name, answering to the Persian *Hômarw*[*étâ*], as I supply the deficient letters. I read the Median name, which is 76, 28, 36, 32, 50, *O.wa.pi.l.ta*. Where a vowel is suppressed, pursuant to the new principle above laid down, as in 32 in the present word, I substitute an apostrophe for it.

I have no longer any doubt that 50 is *tā*; 54, not valued before, is *si*.

In addition to the foregoing, I make the following changes in the printed alphabet:

17 is *sa*; 22, *u*; 29, *washa*; 33, *pu*; 34, *pi*; 36, *pi*; 38, *u*; 57, probably *wash*; 76, *ô*; 78, *sa*. There is no ground for giving 66 the value suggested for it.

Besides having a phonetic value, *na*, No. 3 is used as a non-phonetic initial before the name of Ormazd, as the corresponding Babylonian character is. This name is 3, 76, 13, 57, 51, which I now read **O.ra.wash.ta*. The word signifying God is written 3, 4, 27, or with 33 or 36 added, i. e. *n'.na.pu*, *n'.na.p'.pu*, or *n'.na.p'.pi*. The Babylonian word is *nabu*, and it might have been better to have always used *b* in place of *p* in the Median.

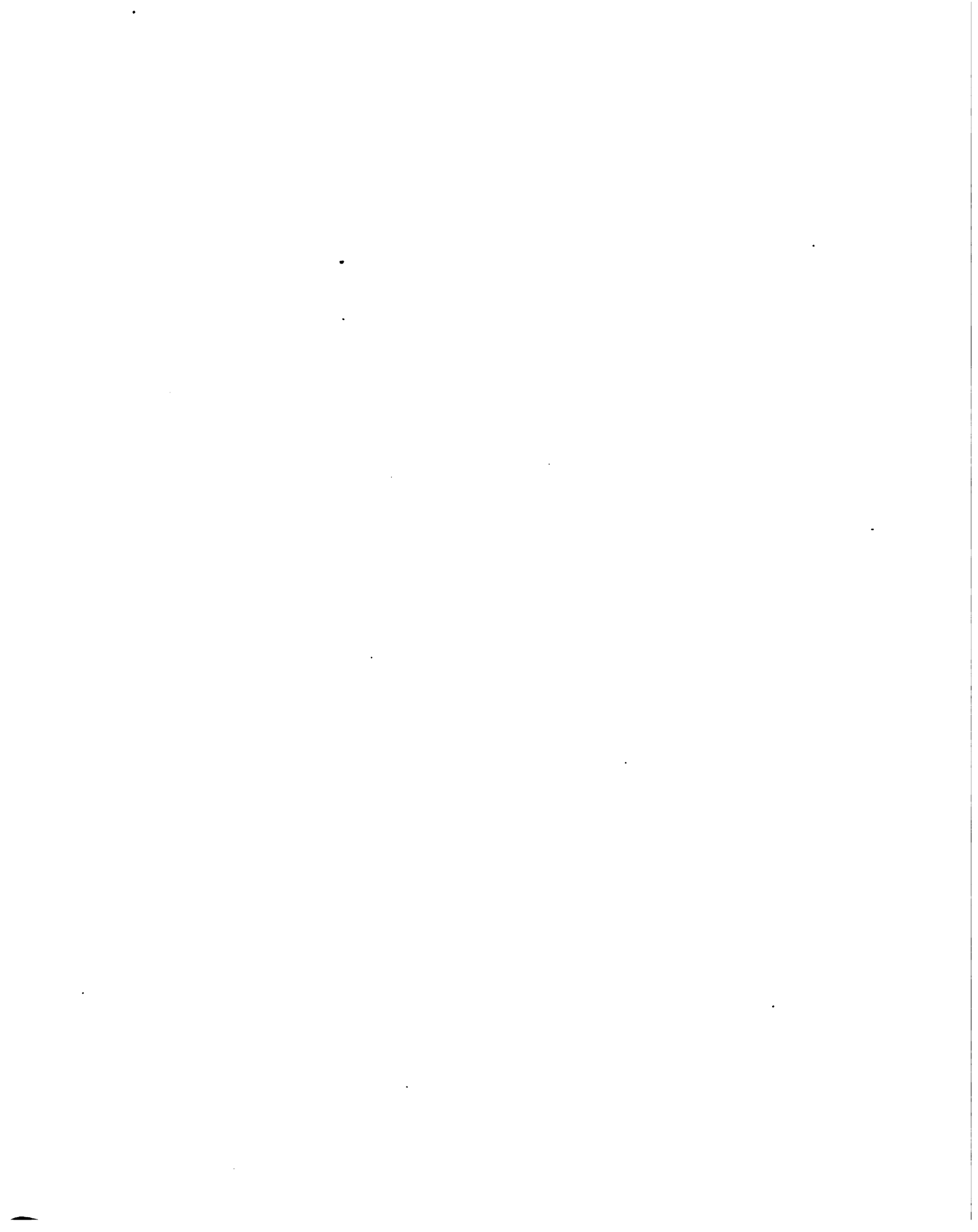
It is worthy of notice that, in the name *Owapita*, above quoted, the character which denotes *pi* or *bi*, in this last word, is used to express *wi*; a proof that in Median these sounds were sometimes confounded, as they always were in Babylonian.

To the third kind of Persepolitan writing the name of Babylonian may be

given with perfect confidence, from the identity in form of its characters, and those of the cursive writing on the clay cylinders, barrels, &c., found at Babylon. Since the date of my last paper I have made considerable progress in deciphering both this cursive character, and the lapidary characters used on the Babylonian bricks, and in the great inscription of the East India Company. Although much remains to be done, I have thought it right to take the earliest possible opportunity of communicating to the Academy the progress which I have already made.

I should begin with stating that, in this field of discovery, I have no predecessor who has published anything to the purpose, except the venerable Professor G. F. Grotefend, who, very early in the present century, made a commencement in the deciphering of all the three kinds of Persepolitan writing. Not having seen his "New Contributions to the elucidation of Persepolitan Wedge Writing," published in 1837, I cannot state precisely in what degree he has anticipated me; but he must be admitted to have discovered the nature of the Babylonian characters, as partly syllabic and partly expressive of letters, and the fact that certain lapidary characters corresponded to certain cursive ones. He correctly transcribed the entire name of Darius into lapidary characters, though he did not, as I conceive, assign perfectly correct values to more than two of the five characters which it contains. He was, I believe, ignorant of the two important facts that, in this mode of writing, as in the Median, a syllable commencing with a consonant may take that consonant before it at the pleasure of the writer, *s.sa* being, for instance, used in place of *sa*, *n.ni* of *ni*, and the like; and that several equivalent characters might be in use to represent the same letter or syllable. I should not suppose that the cursive characters to which he gave correct values amounted to ten, nor that he assigned values approximating to the true ones to more than ten others. For the reason, however, which I have already given, I cannot speak confidently on this subject. About a year ago, a M. Lowenstern published a small work on the Babylonian character in Paris. I have not seen it; but, from a letter which its author published in the Literary Gazette, containing an account of his system, it is evident to me that he is far behind Grotefend. Dr. Seyffarth's attempt is another complete failure.

The data to which I have had access are, 1st, the Achæmenian inscriptions



published by Westergaard, in the *Memoirs of the Royal Society of Antiquaries of the North* for 1844, and marked B, C, D, E, G, H, L, M, and NR, together with the inscription on the Venice vase of Artaxerxes. This work did not reach me till about a month ago; but I had previously seen other copies of all these inscriptions but three.* The other inscriptions, F, K, and O, have not yet reached me. 2ndly. The great inscription of the East India Company, containing 619 lines of lapidary characters brought from Babylon, the inscriptions on the Babylonian bricks, a comparative table of eighteen kinds of which is given by Grotefend at the end of his "*New Contributions to the Elucidation of Babylonian Wedge Writing, 1840*;" the beginnings of certain inscriptions in the cursive character which Grotefend places in comparison with the legends on the bricks in this plate; a complete barrel inscription published by Mr. Rich; and a fragment of an inscription on a clay cylinder, published by Sir R. K. Porter, which I discovered to contain a transcript of portions of the great inscription of the East India Company;—a most important discovery, as the equivalence of certain cursive and lapidary characters, which bore scarcely any resemblance to one another, was thus demonstrated, as well as the equivalence to each other of different lapidary characters, as, for example, 111 and 238, in the published list, which are constantly transcribed by one and the same cursive character. All these Babylonian documents are of the age of Nebuchadnezzar the Great, and contain his name and titles, which Grotefend thought to be forms of prayer. Other Babylonian documents in the cursive character, containing contracts executed in the reigns of Darius, Xerxes, and Artaxerxes, have been published by Grotefend in different numbers of the *Zeitschrift für die Kunde des Morgenlandes*. These I have not yet examined.

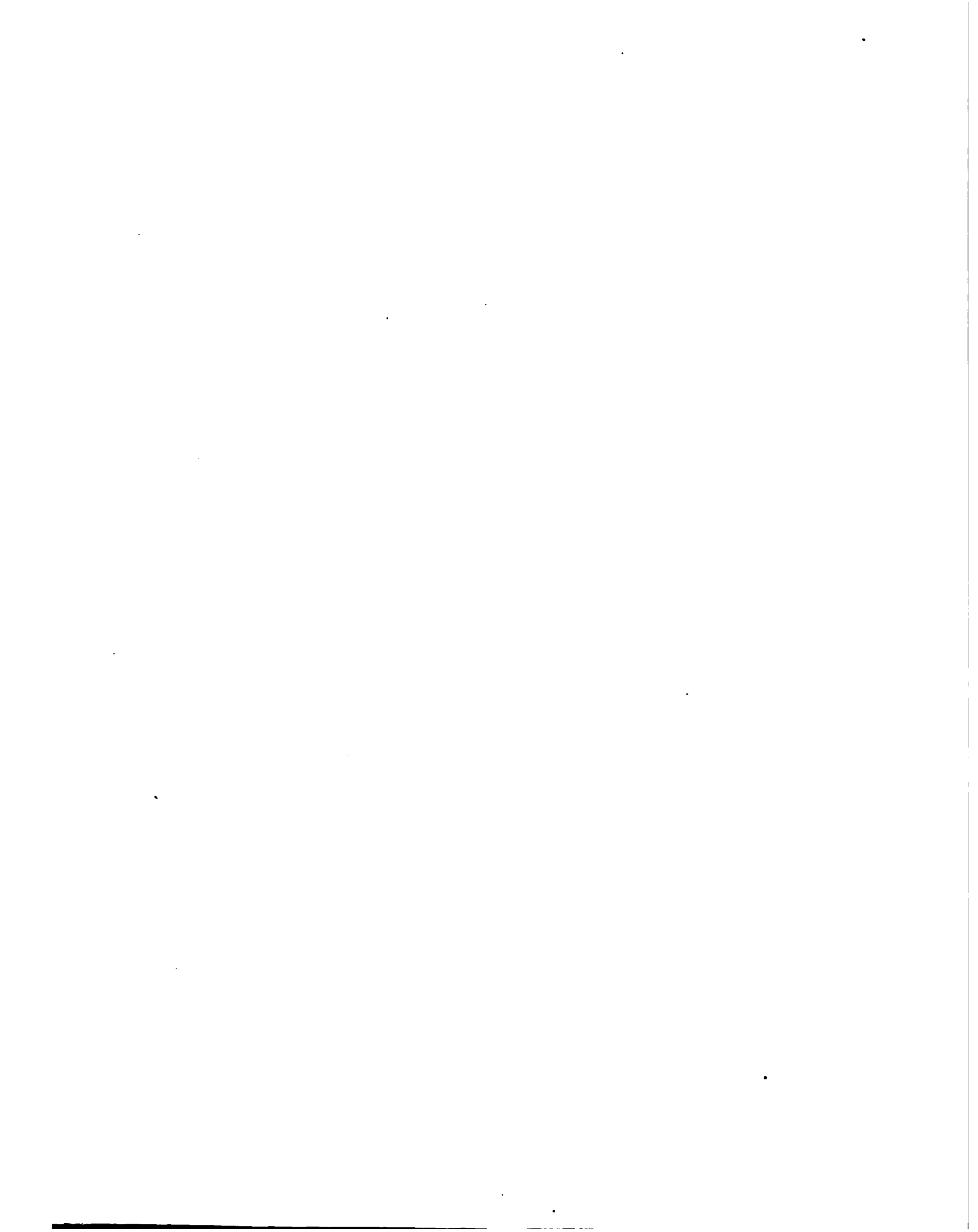
It will be observed, on inspection of the table, that many of the cursive characters are exactly, or almost exactly, of the same form as the corresponding lapidary ones; such are those numbered 1, 3, 4, 5, 7, 9, &c. Another class, though decidedly differing, have, nevertheless, such a resemblance that their

* I have to thank Mr. Norris, of the Royal Asiatic Society, for his kindness in transmitting to me a manuscript copy of the part of the inscription N. R., containing the names of the provinces, several weeks before I received this work from my bookseller. He at this time remarked to me the use of No. 35, as an initial sign before names of countries, but not its phonetic value. Its signification, as "a country or province," had been pointed out by Grotefend.

values cannot be mistaken ; such are 6, 8, 11, 13, &c. In 10, 36, 40, and some others, there is a resemblance traceable, though not very obvious. In other cases, where the difference seems very great, a comparison with other characters shews that a correspondence in form exists to such a degree as to prove that, if one was not copied from the other, both had a common origin. Compare, for instance, 2 and 46 ; 40 and 58 ; 55 and 60 ; 20, 43, 53, 66, in all of which the cursive character has one-half the wedges in a given direction that the corresponding lapidary character has. In a few cases, such as 30, 35, 39, 71, the equivalence of the characters would never have been suspected, if they had not been observed to be similarly used.

The first step in this deciphering was, of course, an analysis of the proper names occurring in the Persepolitan inscriptions, and a comparison of them with their equivalents in the first and second kinds of writing, and, where possible, in Hebrew and Greek. It will be observed that some of the Babylonian names correspond much more closely to the Greek forms than either the Persian or Median. See, in particular, the names of Cyrus and Darius. This deciphering of the proper names determined the values of many characters ; more were determined by comparing different modes of writing the same words in the inscriptions which commence with the same formula, and in phrases of common occurrence found elsewhere. I also observed some Median words transcribed in one of the inscriptions, and a few other words that, though altered, appeared to be of Persian or Median origin. When the equivalence of the two sets of characters, lapidary and cursive, was ascertained, more values were determined by comparing the proper names in the great inscription, in their various forms, with their representatives in other languages, and by comparing the different forms in which words of the great inscription which occur in formulas that are frequently met with, are written.

The following page contains seventy-six Persepolitan cursive characters, with the Babylonian lapidary ones which most nearly correspond to them. Before I enumerate the other Babylonian lapidary characters which have the same values, I will make some general remarks on the mode of reading the characters, followed by observations on a few which I have distinguished by the sign †.



THIRD PERSEPOLITAN CHARACTERS,

WITH THEIR VALUES, AND WITH THE CORRESPONDING LAPIDARY CHARACTERS.

	1	† A.				20	N.				39	Bu.				58	S.		
	2	† Ya.				*21	† Ana.				40	„				59	„		
	3	„				22	Na.				41	† „				60	„		
	4	I.				*23	† „				42	„				61	As.		
	5	U.				24	† „				43	„				62	„		
	6	„				25	„				44	„				63	„		
	7	† „				26	Nu.				45	Bar.				64	Ua.		
	8	† „				27	„				46	Ak.				65	† Sa.		
	9	Yu.				28	„				47	Ka.				66	„		
†	10	R, Er.				29	† „				48	Ku.				67	„		
	11	„				30	† „				49	„				68	„		
†	12	† „				31	„				50	„				69	Su.		
	13	Ra.				32	„				51	Ta.				70	„		
	14	„				33	„				52	„				71	„		
	15	„				34	Ba.				53	„				72	„		
	16	„				*35	† „				54	† „				73	„		
	17	Ru.				36	† „				55	Da.				74	„		
†	18	† „				37	Bu.				56	„				75	Sar.		
	19	„				38	„				57	S.				76	† PLS.		

Thus marked (*) also used as non-phonetic initials. Thus marked (†) see observations.

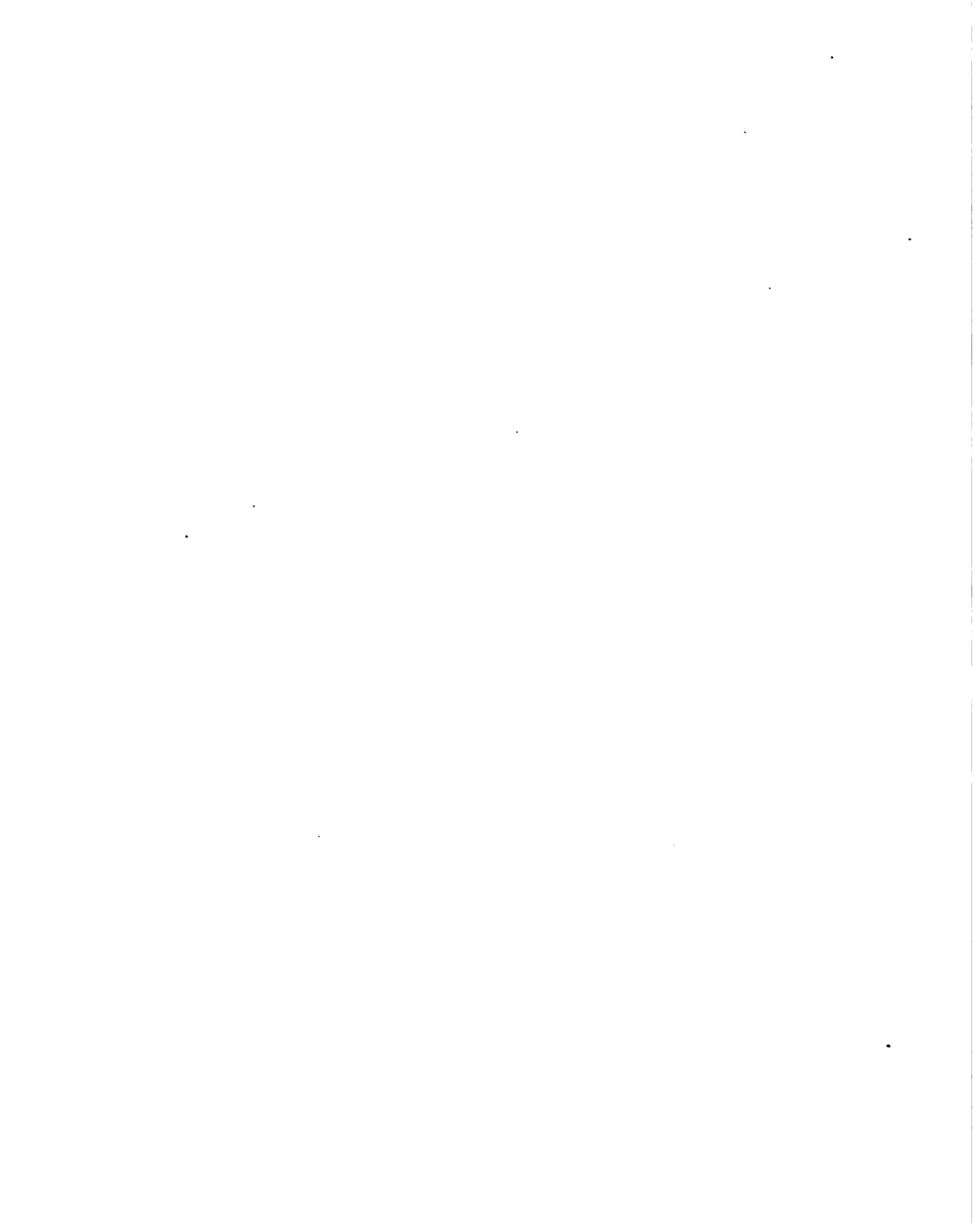
A character which represents a consonant followed by *a* generally loses its vowel, if it precedes a character in the same word which represents any syllable beginning with the same consonant; and a character which represents a consonant followed by *u* generally loses its vowel, if it precedes a character of the same value. In these cases I substitute an apostrophe for the vowel that is to be suppressed. If three characters which represent syllables commencing with the same consonant concur, two only are to be sounded; and those which are equivalent in value, if concurring, are to be reduced to one syllable. Thus, 35, 43, 41, *ba, bu, bu*, in the name of Babylon, are to be read *ba.b'bu*. It is possible, however, that this may have been regarded as a compound word, and that, on this account, the first syllable was pronounced distinct; for, in other instances, the first and second syllables seem to be reduced to one, and the third to be pronounced separately.

The vowels *i* and *u* are scarcely distinguished; and, in the application of the preceding rule, syllables commencing with the same consonant, and terminating with *i* and *u*, are regarded as equivalent. I have, therefore, classed them together, placing, however, those characters first which appear most decidedly to have contained *i*, and those last which always expressed *u*. For greater distinctness 4 is added to these ambiguous syllables when *i* is intended to be pronounced, and 6 when *u*. I am not sure whether 5 be not an ambiguous or intermediate vowel, or whether it be equivalent to 6.

The consonants R and L are not distinguished; nor are B, P, W, and M; nor K, G and KH; nor S and the other sibilants, except in one instance: see note on 65. CH appears to have been expressed by S, and J by K; but, perhaps, not in every instance.

1. Rather *Aleph* than A. In some cases it appears to have the value *i*; and it is remarkable that the Median character which corresponds in form, No. 72, was an I. This character is used in the Persepolitan inscriptions to express "son of."

2. This is interchanged with both the preceding and following. I should give it the value *a*, if I could depend on the manner in which the name of Artaxerxes is written on the Venice vase being correct. [I suspect, however, that 2 was used by mistake for 46; see the transcription.] In other cases, the charac-



ter clearly represents *ya*, and, when preceded by a syllable terminating in *a*, the compound, *aya*, seems to have expressed *i*.

7, 8. Both these are used, I believe, exclusively for the conjunction "and." The corresponding Median letter is *au* or *ó*, but I think it better to give these characters the value U, which, if not accurate, is a safe approximation.

12. [Used by abbreviation for the words 12, 66, *er.sa*, and 12, 75, 15, *er.sar.ra*, being transcriptions of the Median 23, 73; 23, 73, 23, 13; which as read by me, are identical in sound. They signify "great," "very great."]

18. Signifies "the earth," "land;" and it may be doubted whether it was not, in some cases, a non-phonetic initial. I believe that this word was simply *Lu*.

21. In the word 21, 48, elsewhere written 1, 22, 48, *a.na.ku*, "I," it is clearly phonetic. I presume the word *ana* signified "one."

23. Prefixed non-phonetically to the name Ormazd, and also used by abbreviation for the word 23, 22, 39, *n'.na.bu*, "God." The word signifying "heaven" is written 23, 41; I am uncertain whether it should be read *na.bu* or *nabu.bus*, "the dwelling of God," considering both characters to be used as abbreviations for words. This is, I think, the more probable; and the same may be said of the Median word signifying "heaven."

24. Sometimes used to represent the word "man," which I believe to have been *bana*. See below.

29, 30. The former of these is sometimes, and the latter, I believe, always, used to represent the word *ni*, signifying "king."

35. Signifies "a province," pronounced *ba*; prefixed to the names of countries, generally as a non-phonetic initial; but in the name of Babylon it was sounded.

36. Used to express the word "man," which I believe to have been *bana*. It is written in the Persepolitan inscriptions which I have consulted in four ways, 36 alone; 36, 24; 34, 24; and 24 alone.

41. Used in the Babylonian inscription to express "a house," or "dwelling," almost synonymous with 54. I read it *bus*, as it seems to be the same word that occurs, written 39, 60, in the inscription L. In the Persepolitan inscription, C, it seems to signify "the world."

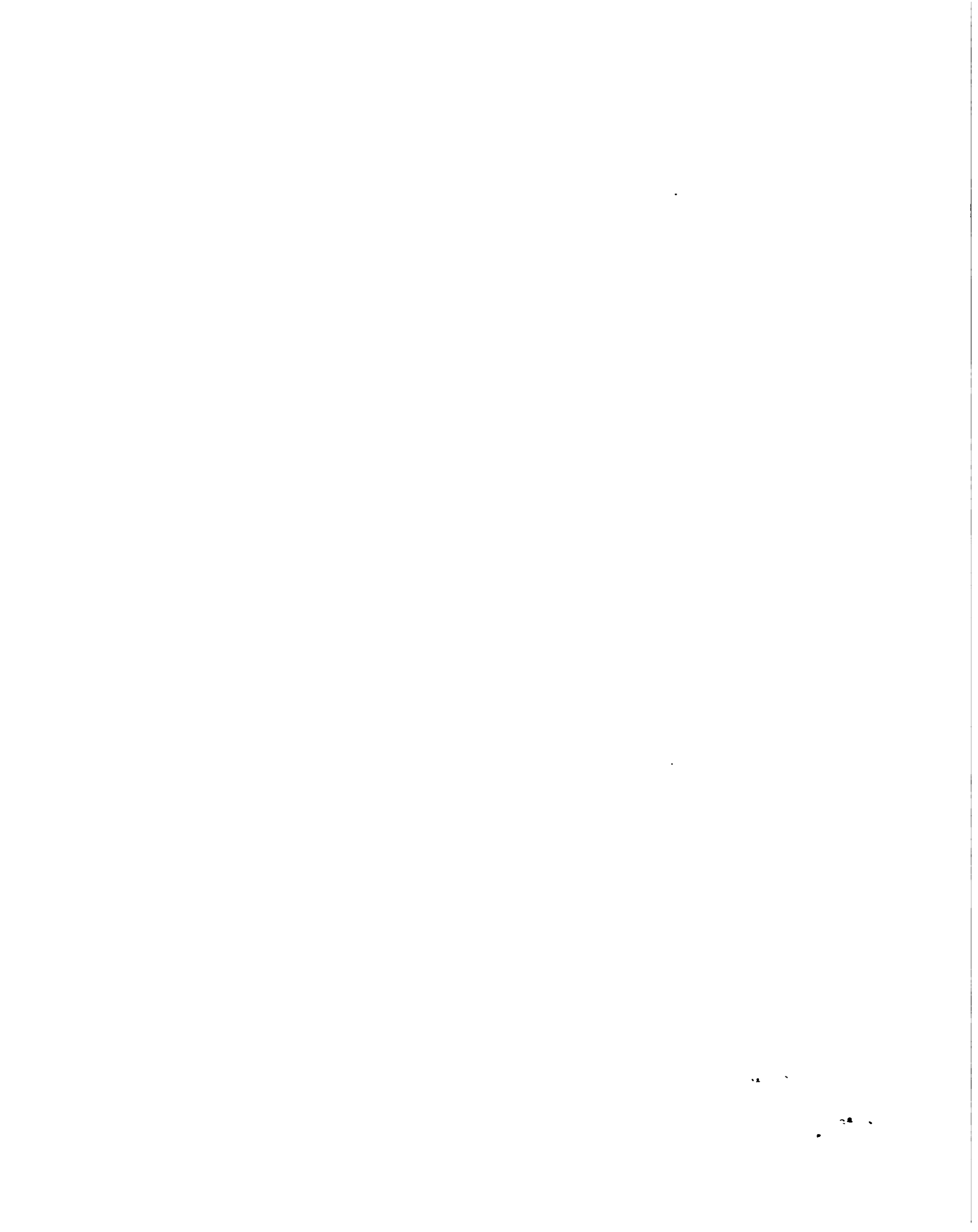
54. I suspect it is used as a non-phonetic initial in some words where it occurs. It signifies "a house," and is written in full, 54, 62 or 63, *ta.as*.

65. The first of these characters represents *sa*, and the second *sha*, in the Persepolitan inscriptions. These were not distinguished in the lapidary character.

76. [This character expressed the plural termination, whatever that may have been ; and it may not have been always the same.] The plural was also represented by doubling the word, whether represented by a single character or by more ; by adding a termination ; or by two of these three ways combined. I must observe that the plural sometimes denoted dignity, and not real plurality. Thus, in the inscription C, Darius is twice called by Xerxes his "fathers," in the plural.

On the interpretation of these inscriptions I am not prepared to enter at present, though I have already made some progress in explaining them.

N. B.—The remainder of this paper, containing a list of lapidary characters, with transcriptions of Babylonian and Persepolitan words, is omitted, being superseded by those in the following paper. A few sentences which are pointed out in that paper as incorrect are enclosed within brackets.



*On the third Persepolitan Writing, and on the Mode of expressing Numerals
in Cuneatic Characters.*

WHEN I laid before the Academy, at its last sitting, my alphabet of the third Persepolitan writing, with the corresponding lapidary characters, I by no means expected that it would prove perfectly correct. No first attempt at the alphabet of an unknown language has been so. I considered it, however, an approximation, and, probably, as near a one as could be attained by means of the data in my possession; and I looked forward to its being amended by those who had the command of more numerous inscriptions. There were some circumstances which left no doubt on my mind that error existed somewhere in it, though I could not discover where. The number of dentals was too small; there was no character for *tu* or *du*; the name in N. R. 11, answering to *Haraitish*, and the word corresponding to the compound epithet *wisadahyush*, in D. 11, were only *in part* legible; and the manner of writing the name of Ormazd, in the inscription H., and that of Artaxerxes, on the vase at Venice, could only be explained by supposing the sculptors to have committed errors. All these difficulties, and others connected with the great inscription of the E. I. Company, have been removed by an important rectification, or series of rectifications, which I have made during the last fortnight; and the language has, moreover, been brought to exhibit a much greater similarity to the other Semitic ones than I had at first supposed. I have, therefore, to request leave to substitute the alphabet which I now send for that in my last paper. As the correspondence between the cursive and lapidary characters in the plate to that paper* is correctly given, though the values of many of the characters are erroneous, and as the plate is, I believe, partly engraved, I propose to let it stand, with so much of the paper as is necessary for understanding it; but the transcriptions of Babylonian words into Roman characters, and the catalogue of Babylonian characters, will be superseded by those

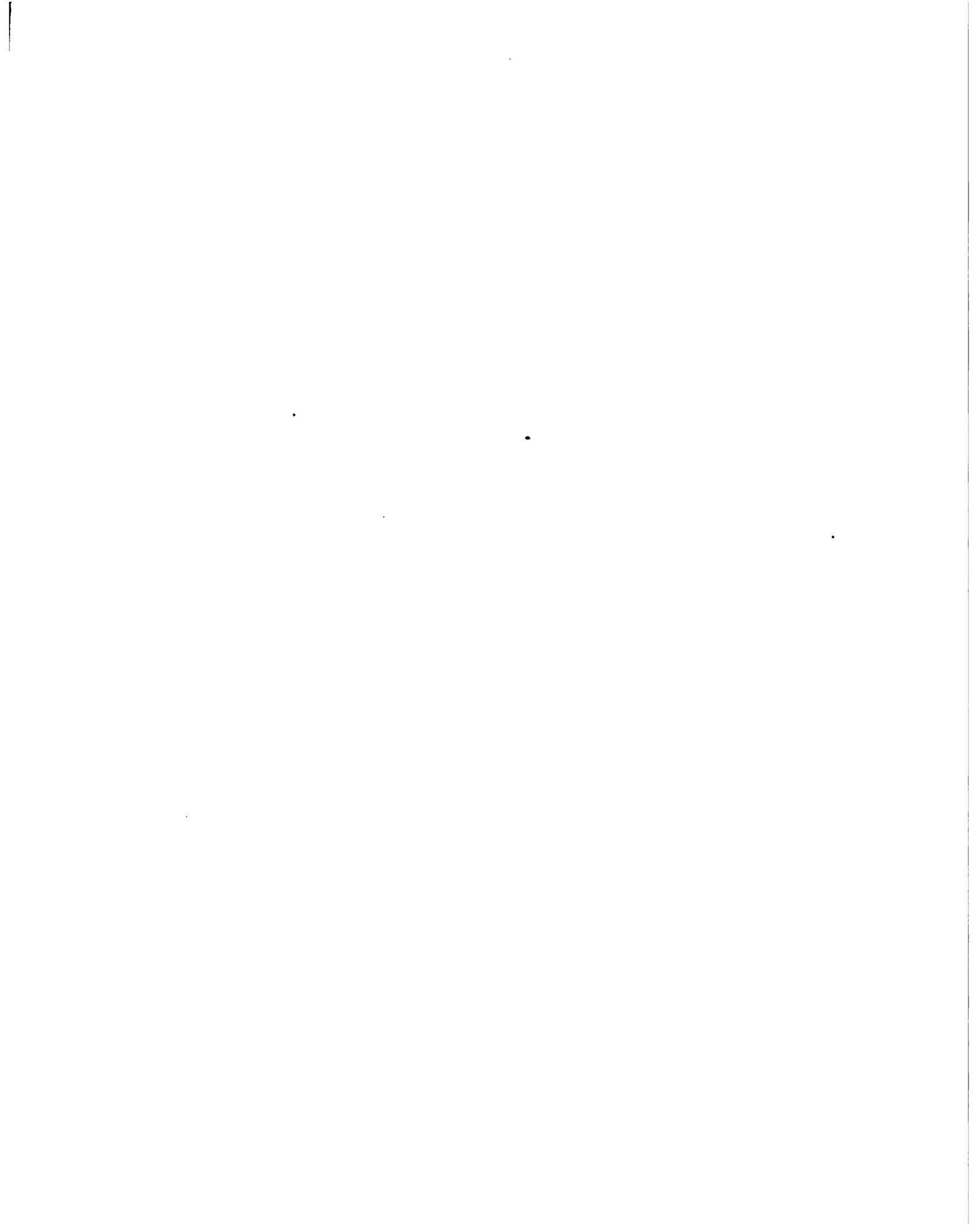
* The table of characters in page 15.

which follow, which are much more correct. In the plate which I now send I give no lapidary characters, but instead thereof I give many additional Persepolitan ones; and at the foot of it I give a series of numbers from the rock inscriptions at Van, exhibiting the mode of expressing numbers in Cuneatic characters, from 1 to 100,000. These are so arranged as to require no comment. The historic character of these inscriptions, of which I received a copy very recently, is obvious.

An important consequence of the rectifications of the Babylonian alphabet which I have now made is this. The name of Parthia is now read *Bartú*, instead of *Barsa*. This word is written in the old Persian with the letter of disputed value, No. 18, where I formerly read *s*, and now *t*. This reverses an argument on which I had relied in my former paper, for the value of this character being *z*; and combining this transcription with the mode of writing the word *wizé*, as I formerly read it, in the window-inscription of Darius, where the Babylonian has *in bit*, "in the house," I am now satisfied that the value of this character is *th*, as given by Jacquet, Lassen, and Major Rawlinson. There is now, then, I believe, an almost perfect agreement between the Major and me as to the first Persepolitan alphabet. That used in his transcription of the Bisitun inscription differed from that given in my first paper (read on the 9th June last), as to fifteen characters. As to three of these, I have adopted his values; as to nine others, he has adopted mine, though, as I understand, without any knowledge of my having given them; and as to two more, we have both altered our values, so as to be now in agreement. We now differ, I believe, as to only one character, No. 12; and it is of little consequence whether this *properly* represented *z* or *zh*, as it was the only character that could be used to express both these sounds.

I will now briefly sketch the method by which I was led to these rectifications. The key word was the name of Susa, which begins with the characters 74, 34 of my former alphabet, read *Su.ba*. The Persian begins with *U.wa*, which, according to the principles laid down in my first paper, and in agreement with the Greek transcription, should be read *ú*. At first I was inclined to read it *uwa*, making the word a trisyllable, on the authority of the Babylonian; but afterwards I felt confident that the two first Babylonian characters must express *sú* only. From this I inferred that the same method of expressing *ú* might be used in other words, and a corresponding method of expressing *t*; and, conse-





quently, that, when two characters were used to express one syllable, it was not certain that they commenced with the same consonant, as I had before assumed; for the latter might equally well be a *labial* or *guttural*, lengthening the preceding *u* or *i*. This led me to a new analysis of the name of Nebuchadnezzar, which I formerly read, as it occurs in the first line of the great inscription of the E. I. C., *Nabu.k'.ku.r'.ra.sa.ar.ra*, and now *Nabu.k'.ku.ba.ru.ba.sa.ra*, with the values of three characters altered, including a very important one, the sixth in the word. The change in the value of this character, No. 66 of my former paper, shewed me that I had erred in assuming that the words signifying "great," in E. 1 and 6, were transcriptions of the Median words *ersa* and *ersarra*; and I was thus led to seek other values for the characters in these words which I had valued under this misconception. This led me to other rectifications; and, in conclusion, observing the greatly increased resemblance to the Semitic dialects which the language assumed in consequence of these changes, I thought it best to alter the vowel notation, substituting *e*, equivalent to the Hebrew *Sheva*, for the *u* of my former alphabet. The simple characters, then, consist of consonants followed by these two vowels, *a* (·) and *e* (:). The other vowels are represented by combinations of these with each other, with or without the intervention of certain semivocal labials and gutturals, distinguished in the alphabet by having a † prefixed to them. Thus, *a.be* is *au*, or *â* (†); *a.ge*, *e* (··); *e.be* or *e.ba*, *û* or *ô*; and *e.ge* or *e.ga*, *†*; while the short vowels proceed from the concurrence of two *e*'s, the latter of which becomes mute, while the former is generally to be sounded as *i*, but occasionally as other short vowels. Further researches may, perhaps, supply more accurate rules; but I feel confident that, by following these, the pronunciation will be attained in a very approximate manner. The concurrence of two equivalent syllables will be readily seen to be analogous to the Hebrew *dagesh*. It is found, however, in cases where *dagesh* could not occur in Hebrew, as in *ne.ne*, when initial. Here, I have little doubt, the duplication has the effect of lengthening the vowel, or detaching it from any syllable containing *e* that might follow. I read the above *n'ni*, or *n'nē*; *ne.ne.be* must be read *n'nē.be*, not *n'neb*.

I class the letters in six divisions, labials, gutturals, dentals, nasals, linguals, and sibilants. Some of these are subdivided, as will be seen in the alphabet given on the following page.

CORRECTED THIRD PERSEPOLITAN ALPHABET.

Characters in the first division of each class regularly represent the consonants belonging to it followed by *e* (:); and those in the second the consonants followed by *a* (-). Values different from those are annexed to the characters which admit them. *al.* denotes "always"; and if it be not used, "sometimes" is understood. *in.* signifies "when initial"; *fi.* "when final"; and *abb.* "by abbreviation". * is prefixed to characters which are sometimes used as non-phonetic initials; and † to labials and gutturals, which, when not accompanied by equivalent characters, combine with the preceding vowel; sometimes when it is an *a*, and always when it is an *e*; the former becoming *â* (ˆ) or *ê* (˙); the latter *û* (ˆ) or *ü* (˙). When dissimilar consonants, both followed by *e*, meet, the latter is mute, as it also is, for the most part, after *a*.

<p style="text-align: center;">LABIALS, B, ETC.</p> <p style="text-align: center;">ב פ ב ו</p>	<p>* 20 "province."</p> <p>21 <i>abb.</i> "man."</p>	<p>41 is.</p>	<p>61 </p> <p>79 <i>alt</i></p>
<p>† 1 <i>in.</i> <i>N</i>; <i>abb.</i> "son."</p> <p>2 <i>al. abb.</i> "son."</p> <p>3 <i>in.</i> <i>N</i></p> <p>4 <i>al.</i> "and."</p> <p>5 <i>al.</i> "and."</p>	<p>* 22 "one."</p> <p>23 </p> <p>† 24 </p> <p>† 25 </p> <p>† 26 </p>	<p style="text-align: center;">DENTALS, T, D.</p> <p style="text-align: center;">ת ט ד</p> <p>42 <i>the</i></p> <p>43 <i>the</i></p> <p>44 <i>ik</i></p> <p>45 <i>the</i></p> <p>46 <i>at</i></p> <p>47 </p>	<p>62 </p> <p>63 </p> <p>64 do. "king."</p> <p>65 do.</p> <p>66 do. "king."</p> <p>67 do. <i>al.</i> "king."</p>
<p>† 6 <i>in.</i> <i>a</i> "and."</p> <p>† 7 <i>in. al.</i> <i>a</i></p> <p>† 8 </p> <p>† 9 </p> <p>10 [see 34, 45, and 78.]</p> <p>11 </p> <p>12 </p> <p>13 </p> <p>14 </p> <p>15 <i>ab</i></p> <p>16 <i>in.</i> <i>N</i></p> <p>17 <i>ib</i></p> <p>18 </p>	<p style="text-align: center;">GUTTURALS, G, ETC.</p> <p style="text-align: center;">ג כ ן ך</p> <p>† 27 <i>in. al.</i> <i>i</i>. <i>i</i></p> <p>† 28 <i>in. al.</i> <i>i</i>. <i>u</i></p> <p>† 29 <i>ku</i></p> <p>† 30 </p> <p>† 31 <i>in. al.</i> <i>q</i></p> <p>† 32 <i>ku</i></p> <p>† 33 </p> <p>34 </p>	<p>48 </p> <p>49 </p> <p>50 <i>ta</i></p> <p>51 </p> <p>52 <i>abb.</i> "house."</p> <p>53 <i>da</i></p>	<p style="text-align: center;">LINGUALS, R, L.</p> <p style="text-align: center;">ר ל</p> <p>68 </p> <p>69 </p> <p>70 </p> <p>71 </p> <p>72 <i>wa</i></p> <p>73 <i>abb.</i> "earth."</p> <p>74 </p> <p>75 </p> <p>76 </p>
<p>† 19 <i>ba</i></p>	<p>35 <i>fi. al.</i> <i>a</i> "my."</p> <p>† 36 </p> <p>† 37 <i>al.</i> as termination of plural.</p> <p>† 38 </p> <p>39 <i>q</i> <i>kha</i>.</p> <p>40 do.</p>	<p style="text-align: center;">NASALS, N, ן</p> <p>* 54 <i>abb.</i> Nebe, "God."</p> <p>55 </p> <p>56 <i>abb.</i> "man."</p> <p>57 </p> <p>58 <i>abb.</i> "earth."</p> <p>59 </p> <p>60 </p>	<p>77 </p> <p style="text-align: center;">SIBILANTS, S, ETC.</p> <p style="text-align: center;">ש ז ם</p> <p>78 </p>

Omitted in Proper Place.

CUNEAIC NUMERALS.

1	2	3	4	5	6	7	8	9	10	20	30	40	50	60	70	80	90	100
200	1000	2000	10,000	2665	17,342	1270												

273 corresponds to K^o 86. & is temp. ca. "f. 180" 132 is I think the same. K^o 3 & 16. loc 135. I believe also H^o 2.

222 is interchanged with 90 & is temp. S; 51 corresponds to K^o 70 & is temp. S - 17.8.13

The following is a list of the Babylonian characters which correspond to these. A reference to each Persepolitan character in the alphabet follows the number of the Babylonian one which most closely corresponds to it in form. These characters are numbered as in the list published by Mr. Fisher in 1807, up to 287; I have added nine other characters, chiefly compound ones.

LABIALS.

be, we; the first five also, when initial, *e* or *ă, ŋ*. 4 (No. 1); 135 (No. 3), 136, [a house, *bit* ;] 273, 132, 175, 176, 201 (No. 2) [son]; 21 (No. 4), 289 (No. 5 = 32 + 121, 2, or 3) [*always* and, *u* ;] 46 (No. 6) [*when initial, generally* and, *u* ;] 71 (No. 7), 116, 117, 118, 119 (No. 8), 120, 121, 122, 123, 128, 130, 178, 179, 180, 222 (No. 9), 51. All the preceding, when not joined with a second character of like power, are in general *we*, and combine with a preceding vowel, forming *u* with *e*, and *au* or *ă* with *a*. 26 (No. 10), 25, 208, 209 (No. 11), 37, 59 (No. 12), 60, 275 (No. 13), 225 (No. 14), 233, 234, 79 (No. 15), 253 (No. 17), 254, 44 (No. 18), 294 (= 32 + 51), 76, 115, 159; 2 [two, both]; 276, 277, 278, 279.

ba, wa; 111, 112 (No. 19); 238 [*generally, wa*]; 83, 88, 183 (No. 20) [a province; also a non-phonetic initial of names of countries]; 171, 172 (No. 21).

añ; 1 (No. 22); *ar*, 291 (No. 23 = 32 + 73); *bar* or *war*, 104, 105* (No. 24); 177, 178 (No. 26); *bare*, 263; *bis*, 166, 169.

GUTTURALS.

ge, ye; 12 (No. 27), 41, 42, 43 (No. 28), 23, 24 (No. 29), 31 (No. 30), 151 (No. 31, and with same initial value) 113 (No. 32), 141, 142, 143 (Nos. 33, 95), 288 (No. 94, = 4 + 4), 295 (No. 34, = 26 + 273), 283, 284, 40. All the preceding, or nearly all, when not joined with a second character of like power, are, in general, *ye*, forming, with a preceding *e, i*, and with a preceding *a, ay* or *é*.

* I give this value to these characters, because the transcriptions show that it was that of the corresponding cursive character in Persia; yet I think it probable that the final *r* was dropped at Babylon. The common word, 287, 231, 105, seems to correspond to the Hebrew צלם or צלמא, in the emphatic form, meaning "a (divine) image." This could scarcely have been sounded with a final *r*. On the gems, this word precedes the name of Nebuchadnezzar in the legend which encircles his head; and it is there in the plural number.

ga, ya ; 249 (No. 35) [*where final, always my, ya*]; 50 (No. 37) [*always affirmative of the plural, ya*. 22 is, I believe, an ideographic sign of the plural, standing for the proper termination, whatever that may be]; 153, 154 (No. 36) [*generally, ya*]; 165, 167 (Nos. 39, 40) [*generally, kha*].
is ; 262 (No. 41).

DENTALS.

te ; 34 (No. 43), 195, 196, 197, 198, 269 (No. 44), 290 (No. 45, = 26 + 202) 203, 204 (No. 46), 187, 188, 189 (No. 47), 38 [*as plural termination*].

de ; 260, 270 (Nos. 48, 49).

ta ; 272 (No. 50), 17 (No. 51), 81, 82, 182, (No. 52) [*abb for tas, house*; it appears sometimes to be used as a non-phonetic initial of names of buildings].

da ; 268 (No. 53).

ti ; 16, 97, 98, 99; *dasi*, 248.

NASALS.

7/7
ne ; 28~~8~~ (No. 54) [*used by abbreviation for 28~~8~~, 140, 225, n'nebe, God*; also as a non-phonetic initial, and in conventional symbols for the names of different deities. Thus, 287, 287, or 287, 94, are to be read *Bil*, the name of the principal Babylonian deity]; 27 (No. 55), 257 (No. 56), 256, 258, 191 (No. 58), 193 (No. 59), 194, 160, 228, 229 (No. 57), 230, 91, 92, 93, 139, 140 (No. 60).

nu ; 28 (No. 62), 274.

ni ; 292 (No. 63), 293 (No. 64), 212, 192 (No. 65), 103 (No. 66), 206 (No. 77) [*always meaning king, as the preceding frequently do also*].

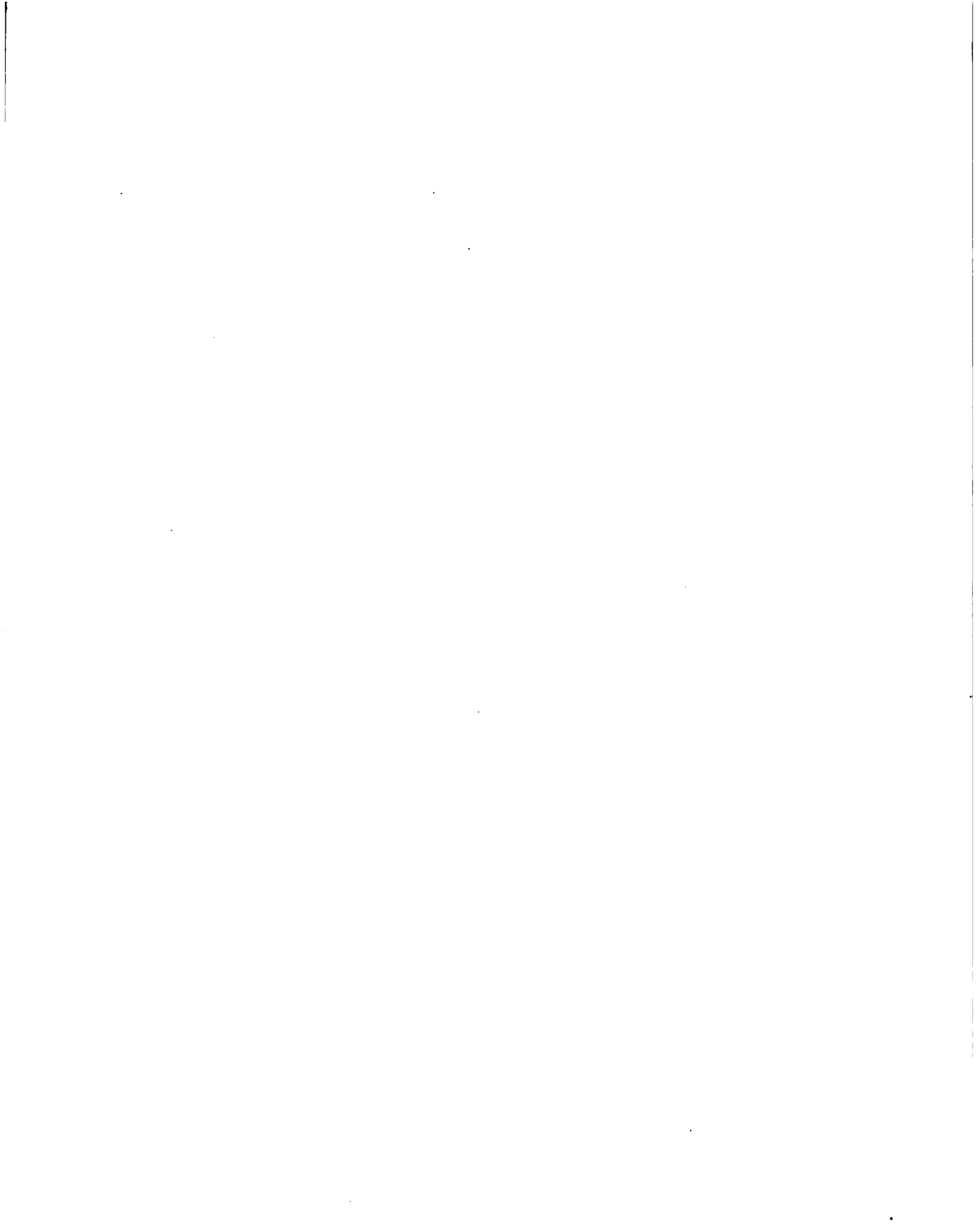
nesi ; 29.

LINGUALS.

re, le ; 73 (No. 68), 251 (No. 69), 252, 239 (No. 70), 15 (No. 71), 162, 163 (No. 73), 133 (No. 74), 134, 52 (No. 75), 53, 95 (No. 76), 94, 96, 144, 145, 146, 147, 148, 164.

rebe, [great]; 39 (No. 77).





SIBILANTS.

se, she; 69 (No. 78), 70, 11 (No. 79), 77 (No. 80), 114 (No. 81), 106, 107, 108, 109, 110, 173, 214 (No. 82) [this may, perhaps, be a combination = 4, 90, *as* or *wes*]; 215, 199, 200 (No. 83), 90 (No. 84), 85, 86, 87, 89, 184; 45 (No. 85).*

sa, sha; 5 (Nos. 86, 89); *cha?* (or if not, = 5) 205 (No. 90).

su; 48 (No. 91), 124, 181.

si; 125, 126 (No. 92), 32 (No. 93), 226, 227; *char, chal*, 231, 296.

Here are 199 characters valued. Besides these, I have ascertained that 3 is a numeral representing "three;" in like manner, 2 always represents "two," or "both," in the great inscription, though it is used for *bi* in the name of Babylon on a gem. It is probable that 6, 7, 8, 19, and 20, represent numerals also; but I have not been as yet able to interpret the passages where they occur. I conclude with transcriptions of proper names which occur in the inscription. I first give Persepolitan ones, numbered as in the corrected alphabet. Characters to which † is prefixed are liable to be omitted. The representatives of characters so marked are within parentheses.

54, 1, 7, 69 (or 70), 19, 82, 53, 36,

Or 54, 6, 70, 19, 82, 53,

22, 32, 76, 85,

22, 53, †1, 68, 35, †1, 78,

22, 31, 93, 36, 23, 93, (or 86, 36),

22, 23, 50, 36, 78, 86, 80, 92,

22, 41, 50, 82, 18,

22, 1, 39 (or 40), 19, †54, 65 (or 64), †84, 93, 36,

20, 10, 3, 73,

20, 24 (or 25), 92 (or 86, 94),

20, 24, 45, 6,

20, 19, 53, 94,

20, 81, 19, 32,

20, 88, 24, 53,

* *A.u.r'.ba.s'.da.y'.* (i.e. *dé*).

* *U.r'.ba.s'.da.*

* *Ge.r'.as.*

* *Da.(w).r'.ya.(w)'.s'.*

* *Khe.si.ya.ar.si* (or *sa.y'i.e.sé*).

* *Ar.ta.g'.s'.sa.s'.si.*

* *Is.ta.s'.be.*

* *A.kha.ba.(n').ni.(s').si.ya.*

Ba.b'.be.le.

* *Bar.si* (or *sa.ye*) (Persia).

* *Bar.te.w'* (i.e. *tú*) (Parthia).

* *Ba.da.ye* (Media).

* *Se.w'* (i.e. *Su*).*ge* (Susa).

* *Sa.bar.da.*

* Since the above was written I have satisfied myself that this last character had the value *as*. I have, accordingly, given it this value in the transcriptions which follow.

In the next three words some letters are deficient; but I have restored them within brackets in a manner that appears to me certain. Parts of the characters remain.

20, 7, 19, 68 [85], 19, 36,	* <i>U.ba.r'.as.ba.ya.</i>
[20, 35], 19, 62,	* <i>Ya.ba.nu.</i>
20, 1 [70, 12], 19 [43], 36,	* <i>A.re.be.wa.(i.e.bú).te.ya.(i.e.tí).</i>

In the inscription on the portal, D, line 11, the Persian word *wisadahyush* is transcribed as follows, the termination being altered a little :

6, 36, 87, 53, 1, 36, 27, 83, 28,	<i>we.ya.(i.e.wi).sa.da.w'.ya.y'.se.y'.</i>
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The following are numbered as in the enumeration of lapidary characters.

172, 26, 76, 163,	<i>Ba.b'.be.le.</i>
183, 287, 94, 160,	<i>Ba.bille.</i> See "NASALS" above.

The name of Nebuchadnezzar is written in the following manners, among others :

287, 40, 113, 120, 73, 46, 205, 239,	<i>N'nebe.g'.ge.w'.re.w'.cha.r'.</i>
287, 140, 225, 143, 263, 46, 205, 209,	<i>N'.ne.bè.ge.bare.w'.cha.r'.</i>
287, 40, 263, 46, 205, 239,	<i>N'nebe.ge.bare.w'.cha.r'.</i>

The correct pronunciation of the name appears to be *Nebekûlûchar*. On the bricks there is a peculiar character, which I have called 296, used for the final syllable. Sometimes, also, a *d*, 260, is introduced into the word.

263 is I have adr.

29 卍
30 卍
31 卍
32 卍
33 卍
34 卍
35 卍
36 卍
37 卍
38 卍
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55 卍
56 卍

卍 III.30
卍 III.40
卍 III.42
卍 III.32
卍 III.44
卍 III.39
卍 III.48
卍 III.47
卍 III.60
卍 III.36
卍 III.44
卍 III.39
卍 III.48
卍 III.47
卍 III.60
卍 III.36

卍 ix.7
卍 ix.1
卍 ix.19 xiii.11
卍 xiii.1
卍 xiii.5
卍 xiii.13
卍 ix.13 xiii.14
卍 ix.31
卍 xiii.17
卍 xxi.10 (cf I.41) xlii.6
卍 ix.1; xxviii.9
卍 xxiv.8

<Y-C5D4
<Y-C11
卍 D.1
卍 Art.
卍 B.4
卍 M.
卍 H. D. 15
卍 C. 21, 23
卍 B. <Y D. 5
卍 D.1
卍 NR.18
卍 NR.14

(29 mm found without 170 which is being joined to it)
= 140.207 by No. III.47.61.
see VII.23 ~~...~~ by 16 3
= 11.56 IV.1
"U" in "U" ... (V.56)
see VI.3; V.35; IX.33
R. 34 w V.3
= 296.42 150 w. 5; = 290 hammer $\frac{296}{150} = 1.973$ = 290 from (cf)
w. xv.24) = 290 (cf C. 6. E. 4) 5.34 = 31 (Jan 290)
see VII.35
see IV.30
= 225.0; VII.8.4; ... 225 III.33 2 by 59
= 11.49. 3
see II.1
= 35. ... 59. ... C. 1. 11 w D. 1. 8; ... 39 46'
37 rot. rot. ... R. 4. ...
R. 32 w V. 3. 62; = 143 (R. 1 w I. 1) ...
570 ...
see V. ...
= 41.0; IV.51 w III.36
R. 1. ... VII.44. (V. pa.) D
= 11 = 90 (see II.) DN y WN.
R. 1 w I. 1, ...
...
10. D ...
see II. 46
= 42.22 ...
= 73 An. ... DI C. 1. 7
...
The ... is ...
...
R. 4 w I. 19; ... = ...
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100

VI.61

III.39:111

for III.47 of X.3 III.10

R.22 III.24

R.13

(1/2 of 13)

xiii.5

III.44

VI.57

=1

<VI>

III.46 ? of 100

see for I.27.32

III.36 XIII.15
f.53

xiii.6

III.33 IX.3 XV.4
VI.44

C.14 R.10 I.1; R.10 I.22 (same L & also of D4 & K.4.12 = 11)

NR.11 = 106.0 of VIII.16 < 24 U = 10

= 59 of 10.56 < 65; 10.72 < 6.2

H.9

see III.11 as follows; cf. I.39: 7 or 7

found below 44 & 163 in tunnel III.63; found III.225
both in tunnel A.54 on the birds; in Ullai H.9 with
via 4.71-222.119.205 N.7.7.3.3. 7 or 7
the 96

the I.1 & birds for 7 or 7 as follows;
you get in for III.50 & it appears to 110.50 = III.64 by 109

see H.9; see for follows; both combined with 32
from 289 which see; this is last and alone

see 119. = 119. of V.45 & H.7 7 or 7; see 289

see I.61. in tunnel with 32. see 289.
at 17.21

NR.12a H. R.32 w VI.42
written 48

see 12.6. see H.9; see for follows

H.6.15 R.25 w V.39. 30 in Paris. 105.126 in Cuba
see in case.

120 of 10.56 & 10.72

see H.9? 1000 in 720 in

= 170 of III.46 & III.28 also 100 of III.28

limited by 5.291. 10 = 12.53

H.9

R.21 & III.45; cf. H.9. w XIII.15 = 163 of VIII.43, 45 & III.
must be 5. 4.163 5N a man? at birds? See = 5
cf. 8. of III.36

see H.9; see for follows;
see IV.16

C.21

R.20 w VIII.41 H.9 from first part of route (V.4)

H.3
see 135

26.185 is a bird in L. (see 297)
see H.9; see for follows

II.50.1

see 160 not distinguished for follows

C.8

R.29 w V.40 2

IX.1.6 XIII.4

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$\overline{\text{III}}$
 116.

III 18
 III 35 $\overline{\text{III}}$ ix.1
 III 46 $\overline{\text{III}}$ ix.2 $\overline{\text{IV}}$ xxiii.5

III 55
 III 45 $\overline{\text{IV}}$ xxvi.9
 III 44-47
 cf. 1961 $\overline{\text{III}}$ xiii.14 $\overline{\text{IV}}$ ix.31
 $\overline{\text{III}}$ xv.10 = 27-103.
 III 7.

= 225.90 bis in hich. cf. III.46 u III.66.

= f. 111. cf. VIII.44 u IV.73.

$\overline{\text{III}}$ 2 Box in Babylon.

= 107 ~~...~~ $\overline{\text{III}}$ $\overline{\text{IV}}$ $\overline{\text{D}}$ ik

Dec. V.47.54 in same name

$\overline{\text{IV}}$ NR 25, 35 on the hich "Son;" as 273 u 4. | at "Son;" "man"

$\overline{\text{IV}}$ E 2.3 ~~...~~ = f. 111. cf. I.45 u IV.19. ^{in hich 9 same} ~~...~~ ^{...} 113
 NK

= 59.259 of V.15 = 45; = 20873 of V.3 = 29 72

= 119. cf. VIII.3 u IX.8 7 = 5

Trans. 119 = III.64. (cf. 6.) de. ~~...~~
 = 119. cf. VIII.22 x 35 7 = 5

$\overline{\text{IV}}$ NR 6, 16? m. II.27, III.34, IV.40, 46 (cf. 31, 36 ix) V.47, 54, VI.41, VIII.2, 60, 65, IX.44
 y it in 8 as ... ~~...~~

see 82 = 82 cf. IV.51 = IV.59. $\overline{\text{D}}$ $\overline{\text{II}}$ = $\overline{\text{II}}$

see 183 = 83 cf. I.2 u 15 2

see 90 = 87 or 90. y III.25 u III.2

see II.42

see IV.15 (2.3)

see IX.25

= f. 111. cf. III.56 u V.53; 234 u V.53

= f. 111. cf. III.64 u II.49; V.3 u V.29 ni.

~~...~~
 $\overline{\text{IV}}$

Dec. VIII.10 - f. 111.43 = f. 111.43.

f. 111.43 (cf. 111.43) for hich ~~...~~ will ... ~~...~~
 u f. 111.43 u 245, 275, etc. in V.47 ~~...~~ f. 111.43 is in
 f. 111.43 u V.44 ~~...~~

= 24 $\overline{\text{II}}$ of VII.14 u

= 34 $\overline{\text{II}}$ cf. VII.49 u 2 de. ~~...~~

196 𠄎 III.27
 197 𠄎
 200 𠄎 III.49
 201 𠄎
 202 𠄎 R16 III.44
 204 𠄎
 205 𠄎 VI.63 𠄎 ix.6 *chü ju*
 206 𠄎 VII.11. 𠄎 ix.4 𠄎 xiv.4
 207 𠄎
 208 𠄎 VI.61
 209 𠄎
 210 𠄎 cf. fr- 7 477
 211 𠄎
 212 𠄎
 213 𠄎
 214 𠄎 10.62 𠄎
 215 𠄎
 216 𠄎
 217 𠄎
 218 𠄎
 219 𠄎
 220 𠄎
 221 𠄎
 222 𠄎 VII.9
 223 𠄎
 224 𠄎
 225 𠄎 III.30 𠄎 IX.14
 226 𠄎 III.30

𠄎 ? = 26 a variant of III.27. a ~~223~~ 51
 the frequency of the character is very small in the bronze inscriptions.
 in IV.35.36
 𠄎 D.11, cf. ...
 𠄎 D8 "Jen" 28. A ...
 𠄎 C16 ...
 see 203 ...
 𠄎 H19 R4 a I.21. = 𠄎 = chü ju ...
 𠄎 B2. R1 a I.2. Nü "kai"
 𠄎 K.22 = 278 of VIII.9 a VI.10 2 12
 see 208 = fr- 7 of VIII.50 a IV.12 a IX.14 a VIII.7 2
 𠄎 212 via 34 of VI.16 a Cfr 1.45
 = fr- 7 of VIII.10 a II.30
 = fr- 7 of VI.39 a 52. Put in 52 in 12 and 219. The variant
 is used. 218 is always 𠄎 in the bronze inscriptions. 216 is used
 𠄎 D.1 DN ...
 = 216 cf. VI.5 a 17
 𠄎 H.9 R14 a VII.9. ...
 2 of IV.71 a VI.25 a I.27.
 = fr- 7 of VI.39 a VIII.42
 𠄎 D10 R11 a VII.43 2 12
 = fr- 7 of I.6 a I.34. 16. fr- 7 25

III.40 ix.14

III.37

III.35 ix.2

xv.12 xiii.6

ix.5

ix.6 ix.4.9 xiii.3

VII.9

V.35 ix.8

R.6 III.32

xiii.1

? *kein in Skelen.*

III.42 xiii.9; ix.15

?

VII.11

ix.24 xiii.14

267.265 of

C.1. R.25 u V.39

H7 R.27 u V.38

C.2 R.7 u I.19. 7 ad

C.10 R.14 u VII.29 51

C.5 ~~R.7 u I.19. 7 ad~~

D.13 52 = 42 as name for Thamus. ?

G4. 4.

rec. VI.50; for 44 of VII.32.

C.10 R.25 u V.39

78 in hierog.

NR 15 see II.20 VI.13. and (John's content. comment & note "Ma")

see I.31. same = 290. 51

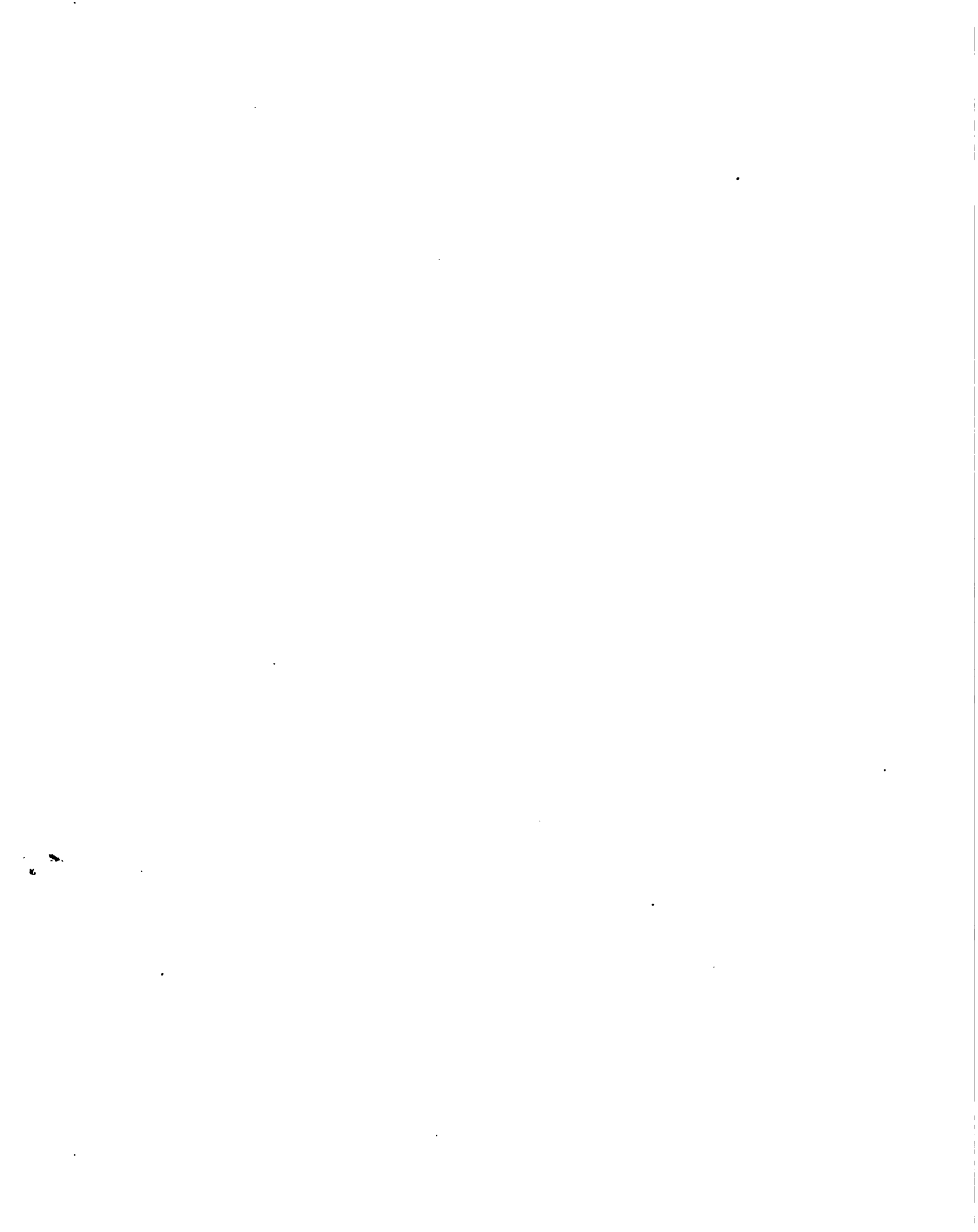
see I.61 & as a word "Ma" "m-14?"

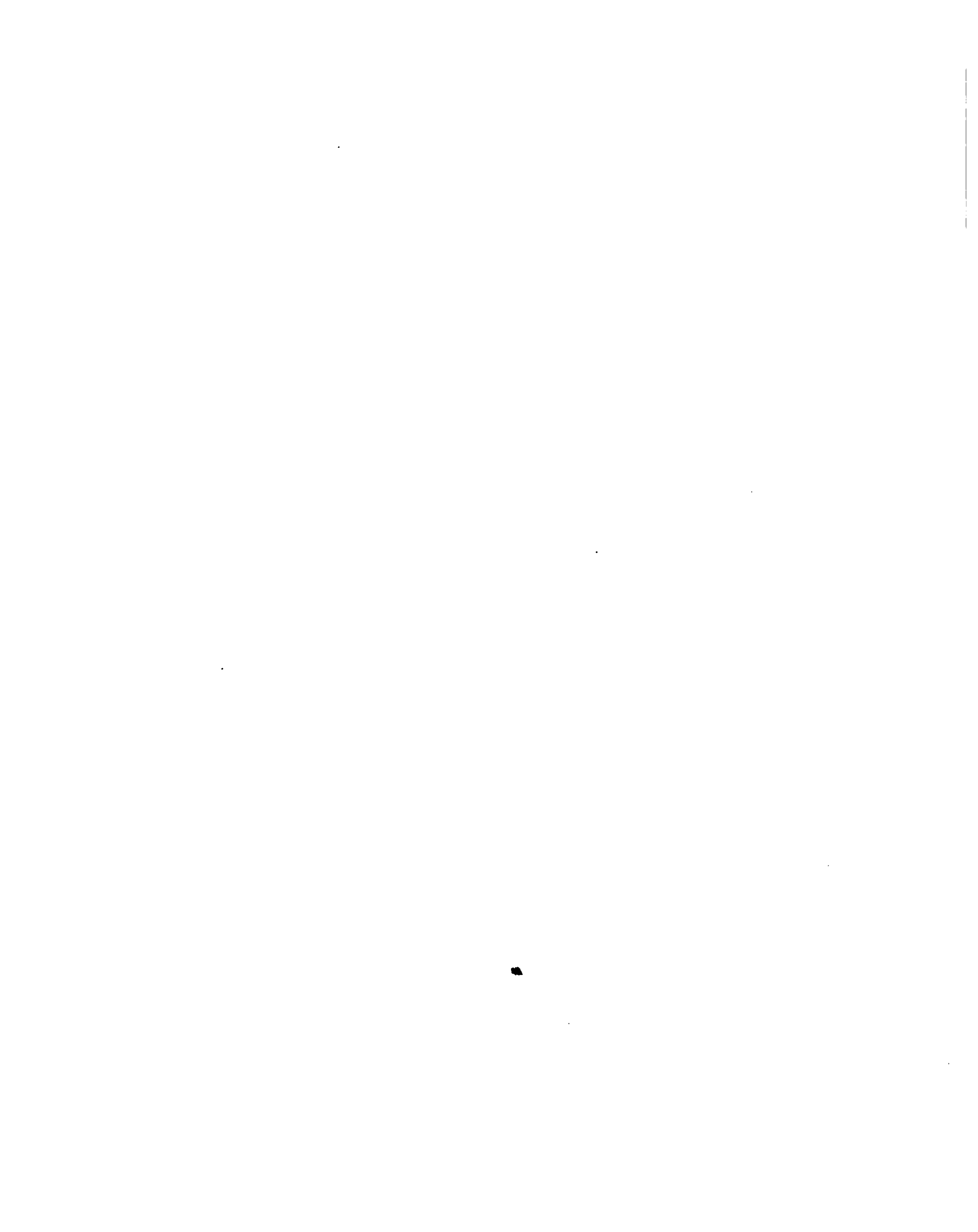
see II.57; III.37 ~~as hierog. for 75~~
 = 208 as hierog.

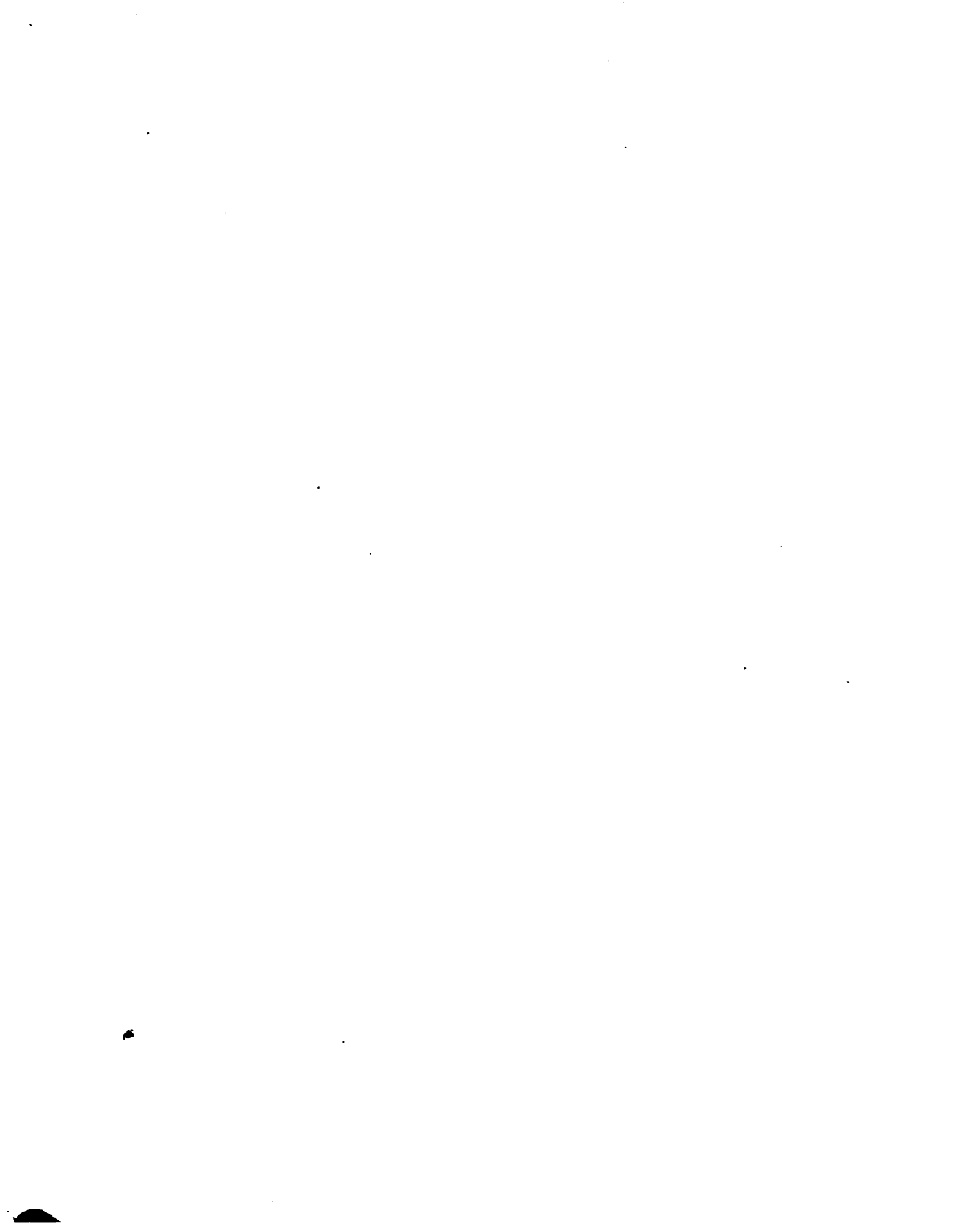
= 297 "2" in "Ma" *Warre hierog.*

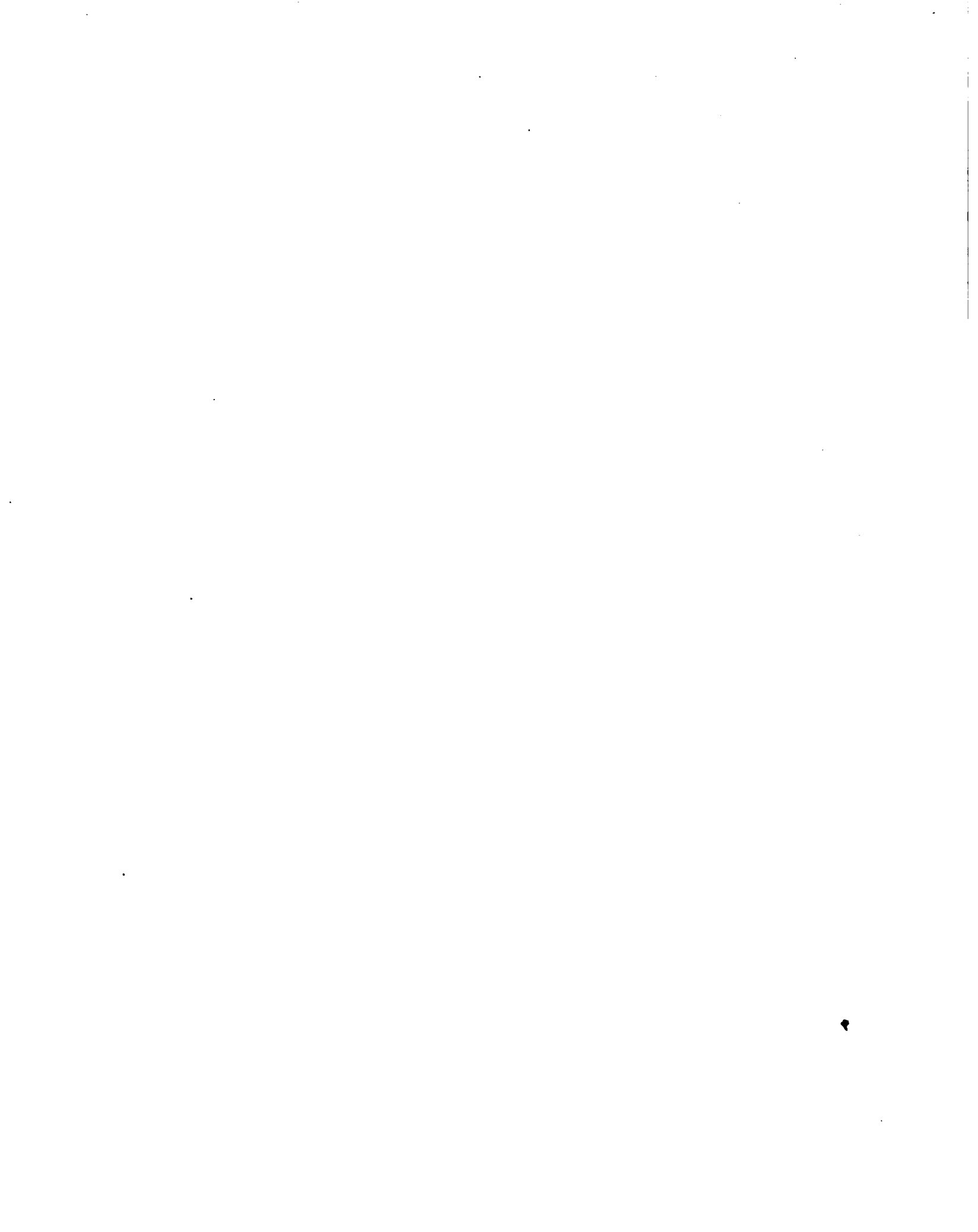
see Br. br 5.

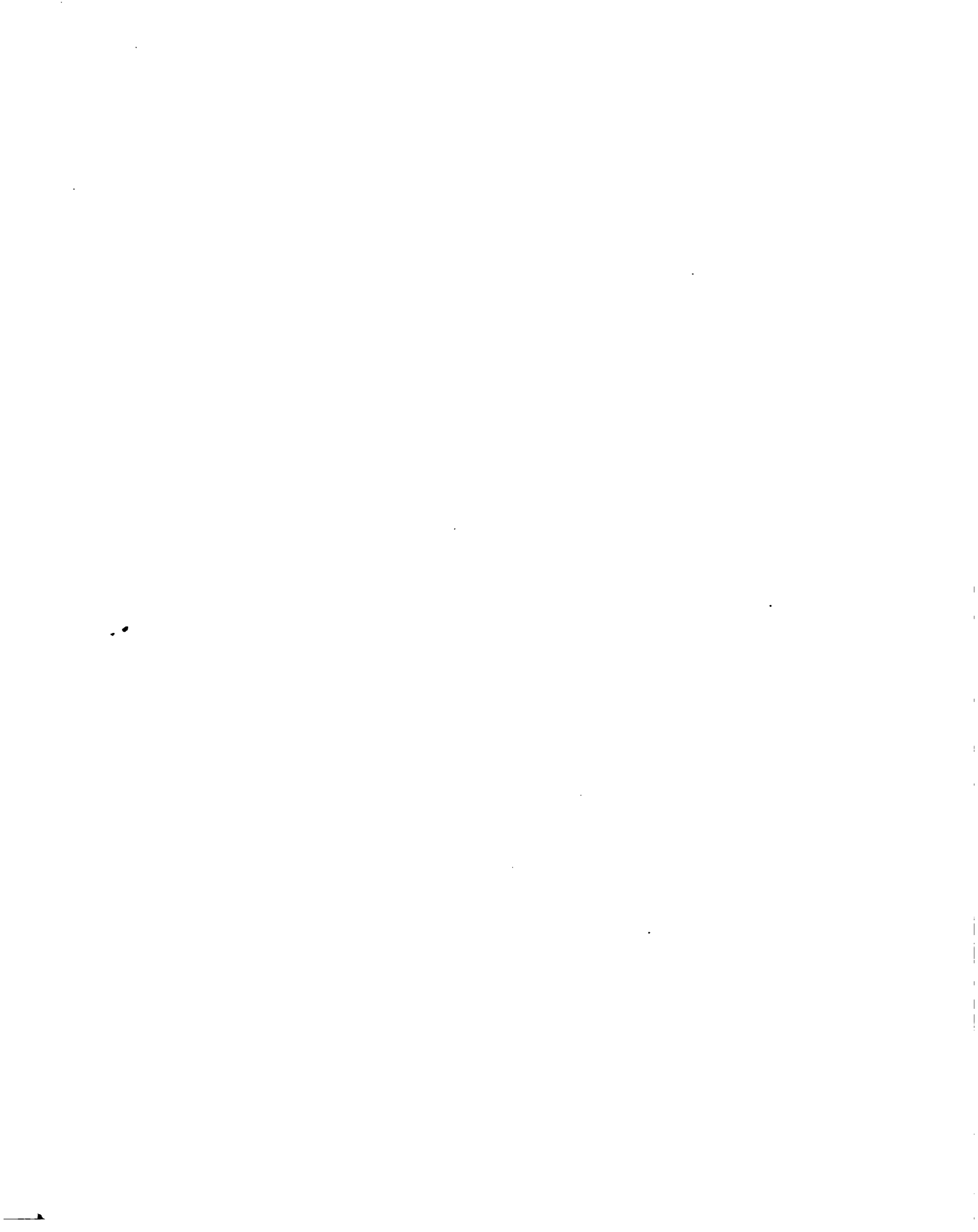
see V.30. of V.50 same = 278.



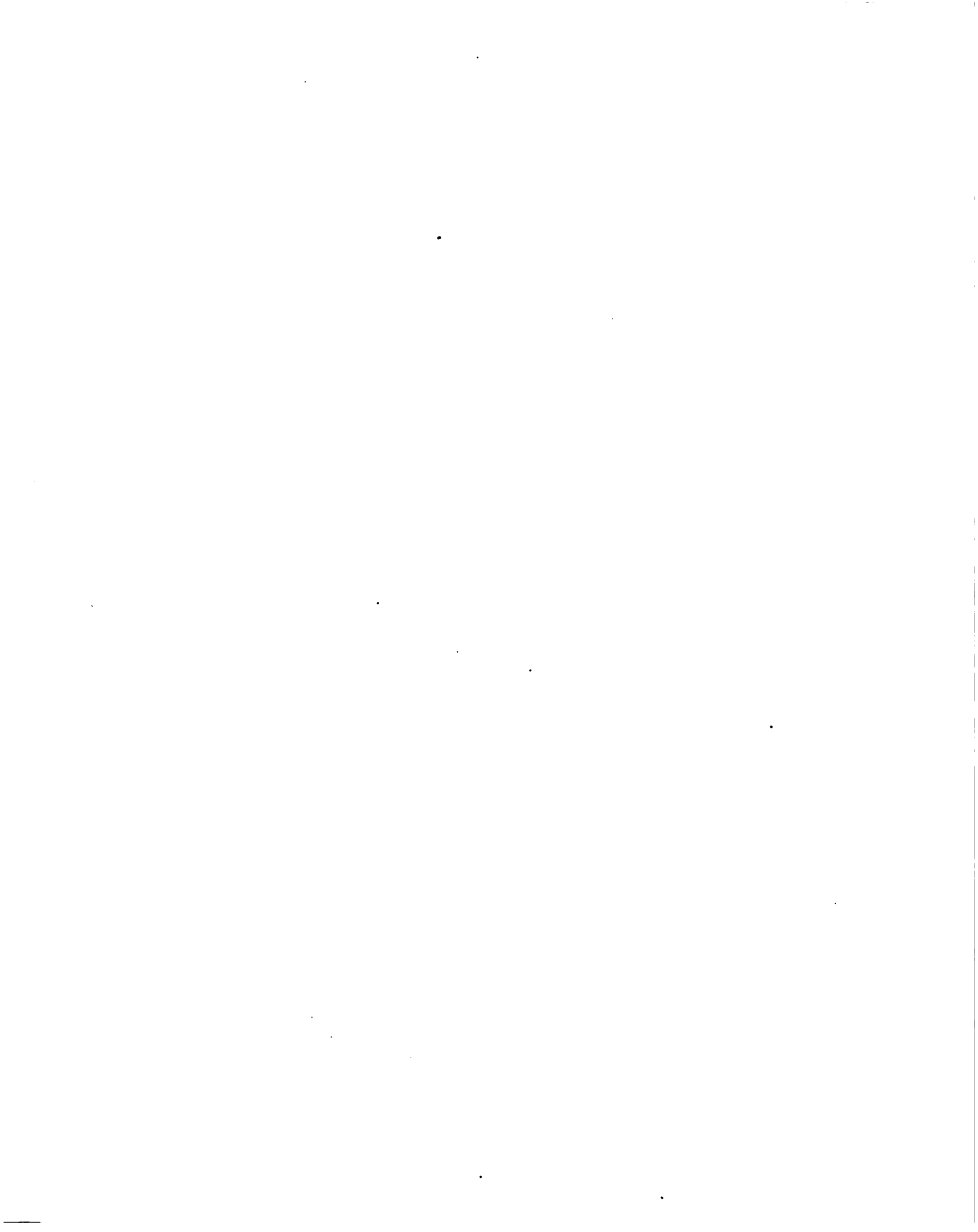


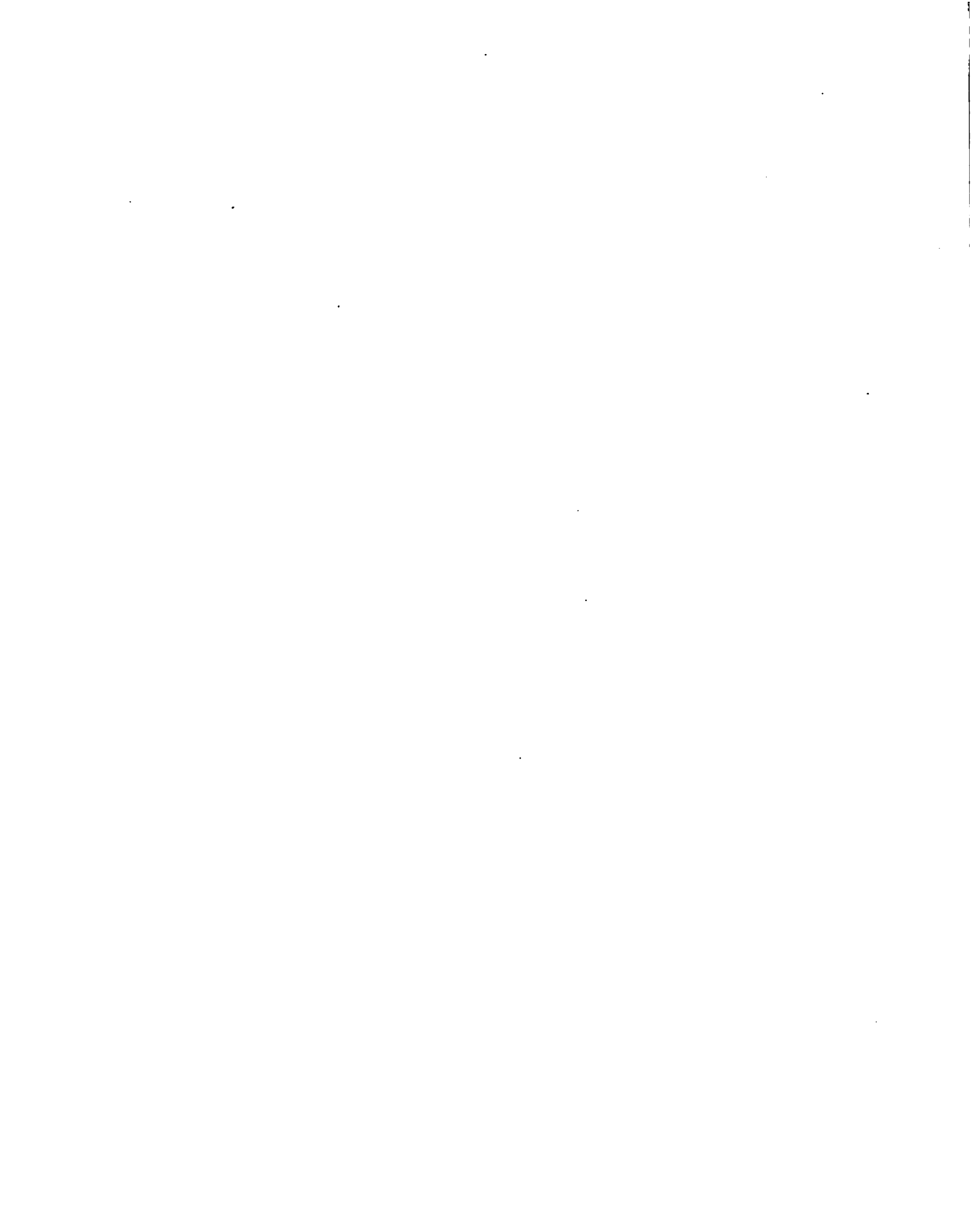














In respect to the Semitic characters, the following are being classified into the following groups:

𐤀 = k° 64 sec. ix. 1, 2, 3 & some. sometimes called king

𐤁 = k° 67. sec. xiii. 1 (in some copies as 𐤁); also 3; ix. 4; xv. 1, 2 etc. always means king

𐤂 = k° 5. sec. ix. 3; xii; xv. 5 means and with 𐤃 xiii. 2, 10, 29; xv. 16

𐤃 = k° 20. sec. ix. 2, 3; xii. xv. 2 & some. sometimes called pondus initials of some of contents.

𐤄 = k° 75 sec. ix. 1

𐤅 = k° 63 sec. ix. 1, 4

𐤆 = k° 14 sec. ix. 5 in Katan.

𐤇 = k° 54 sec. ix. 2, 5

𐤈 = k° 60 sec. ix. 5, 6, xii

𐤉 = k° 35 sec. ix. 6 (written as 𐤉 in xv. 6 ^{xv. 23} ~~𐤉~~ xiii. 14, 14)

𐤊 = k° 55 sec. xiii. 7; xxiii. 2, 5; xxviii. 8, 11

𐤋 = k° 66 sec. xiii. 7; xxiii. 2, 5; xxviii. 8, 11 ^{𐤋 xvi. 10} in some 55. 66. 70. 63 (Lap. 27. 103. 51. 34) means hand in some of contents

𐤌 = k° 45 sec. xiii. 3, 4, 6; ix. 6 𐤌 xiii. 7, 9

𐤍 = k° 27. sec. xiii. 3, 16, 19

𐤎 = k° 1. sec. xiii. 9, 10, 11

𐤏 = k° 14. sec. xiii. 9, 20; xv. 14

𐤐 = k° 6 sec. xv. 1.

𐤑 = k° 70 sec. xxviii. 8, 11

𐤒 = k° 78 sec. ix. 9

𐤓 = k° 54 sec. ix. 6; xiii. 4

𐤔 = k° 51. sec. ix. 22

𐤕 = k° 70 sec. ix. 2. xiii. 2 𐤕 sec. xii. ix. 2; xiii. 2

60 ia in sec. XIII-3; xxiii-11; xiv-4, 5, 11; xxv-2, 3, 7, 7, 10-10; xxviii-3; xxix-4, 9; xxxiv-3, 4, 7, 9, 10; xlv-2, 4, 7, 8; xlvii-4, 9

7. 64-60-94 Ninaya sec. xxiii-3, 5; xxiv-10, 11, 13; xlv-6, 7

5. 66-70-43 [L.J. I. 24, 64; II. 1; VII. 39; VIII. 22, 24, 35; IX. 24, 50]. xxiii-2, 8; xxxiii-6, 11

5. 66-70-43. 35 [L.J. I. 41; VIII. 19, 55] xxvi-10

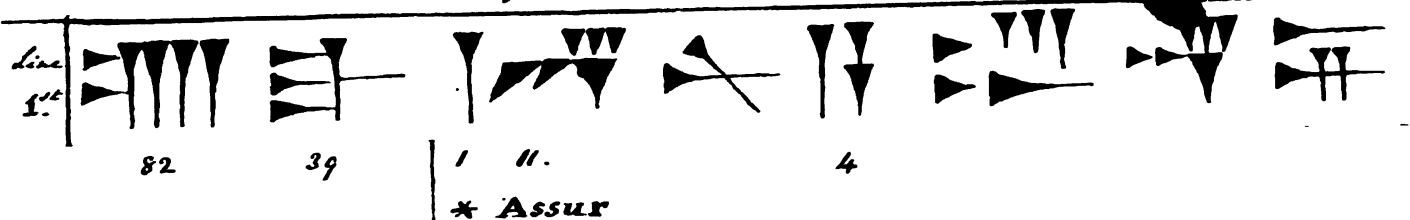
6. 45 [L.J. vii. 26, 42, 45; x. 15; v. 15; Rec. R. 24] ix-6; xiii-4

74 . 76-62. 35-9, 10, 17, 18; ix-25; xiii-15 [xv-24. km 1. 43 fm 42; ix-xiii. Jan 6 km 22 km fm 45; NR. 17 km 32 (f-72?) km 76]

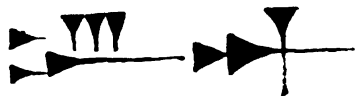
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The Inscription from Nimrud.



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182 53 268 (1.13, 19; 2.52, 3.38; 4.64; 7.5) 6 lines

50. 27 192. 140 4. 34 || 1.12; 2.41.

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50. 160 || 1.49, 57; 7.15

3.36, 65; 4.51, 56, 59; 6.58; 7.22 (7 lines)

51. 52 44. 150 || 1.16

52 260. 164 || 1.37

52 40 | 6.22

57. 52 || 1.4

3 50. 162 7 15

243 52 144. 260 || 1.61

210. 257. 272. 167. 50 | 8.42; 9.40 | 7 lines

52. 17. || 1.68

~~220. 257. 272. 167. 52 | 9.40~~

188 238. 52. 73. || 2.24

190. 52 || 2.30, 3.6, 9, 29, 31, 40, 45; 8.10

| 8 lines

12. 52. 181 4. 48 147 7 71 | 2.37

52. 50. 111 34. 182 || 4.54

912. 50 77 || 6.18

160 238 52. 285 90 342 | 6.42

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f 40

ra 13

ma 67

la 51

ra 13

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la 51

cha 52

ra 13

m 37

wi 79

sa 75

da 51

ka 72

ya 22

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125.211 208 278 | I 26

278 278 148.51 262 67 || 45

46.973 278 111.50 116.01 || 53 1117.29.45 67, IV.5

52 278 111.50 26.272.42 113.68 I 61

43 278 278.159.4 || 24

272 278 189.40.34 || 54 V. 53

278 278 278 185 || 64 VI 21 IX. 22

247 278 283 203.17 || 20, VIII 22

278 278 96.26 V. 20

278 278 278 278 IX. 16

278 278 278 278 V. 20, VI. 30

30 8 278 278 V. 42

278 278 278 278 VIII 47

157 278 278 278 VIII 59

8 278 278 278 X. 10

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