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THE SUMERIAN PREFIX FORMS BE- AND BI-
IN THE TIME OF
THE EARLIER PRINCES OF LAGAŠ

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By

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LIST OF ABBREVIATIONS

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

AO   Paris. Musée national du Louvre. Antiquités orientales. Followed by catalogue number.

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

AS   Chicago. University. Oriental Institute. Assyriological studies (Chicago, 1931——).

AS No. 2   Poebel, Arno. The Sumerian prefix forms -e and -i in the time of the earlier princes of Lagaš (1931).

AWLU   Förtsch, Wilhelm. Altbabylonische Wirtschaftstexte aus der Zeit Lugalanda's und Urukagina's (Berlin. Staatliche Museen. Vorderasiatische Abteilung. Vorderasiatische Schriftdenkmäler, Heft 14; Leipzig, 1916——).

BE   Pennsylvania. University. The Babylonian expedition of the University of Pennsylvania. Series A: Cuneiform texts, edited by H. V. Hilprecht (1893–1914).

CT   British Museum. Cuneiform texts from Babylonian tablets, &c., in the British Museum (London, 1896——).

DC   Sarzec, Ernest de. Découvertes en Chaldée, publiées par les soins de Léon Heuzey... (Paris, 1889–1912).

DPr   Allotte de la Fuÿe, M. F. Documents présargoniques (Paris, 1908–20).

Eann.   Eannatum.

Ent.   Entemena.

GSG   Poebel, Arno. Grundzüge der sumerischen Grammatik (Rostock, 1923).

HGT   Poebel, Arno. Historical and grammatical texts (UPUM V; Philadelphia, 1914).

LAKF   Deimel, Anton. Liste der archaischen Keilschriftzeichen von Fara (40. Wissenschaftliche Veröffentlichung der Deutschen Orient-Gesellschaft; Leipzig, 1922).

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

NFT   Cros, Gaston. Nouvelles fouilles de Tello (Paris, 1910).

Nik.   Nikol'skiĭ, M. V. Dokumenty khoziaĭstvennoĭ otchetnosti dreonĕĭsheĭ epokhi Khaldei iz sobraniia N. P. Likhacheva. Part 1 (Drevnosti vostochnyia. Trudy vostochnoĭ kommissĭi imperatorskago Moskovskago arkheologicheskago obshchestva, Vol. III, Part 2 [St. Petersburg, 1908].)

Nik., Part 2 *Ibid*. Vol. V [Moskva, 1915]).

obv.   obverse.

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

Or.   Orientalia (Roma, 1920——).

Ov. Pl.   Oval Plaque of Urukagina(?).

RA   Revue d'assyriologie et d'archéologie orientale (Paris, 1884——).

rev.   reverse.

RTC   Thureau-Dangin, François. Recueil de tablettes chaldéennes (Paris, 1903).

SRT   Chiera, Edward. Sumerian religious texts (Upland, Pa., 1924).

TMH   Texte und Materialien der Frau Prof. Hilprecht Collection of Babylonian Antiquities im Eigentum der Universität Jena. . ., hrsg. von Julius Lewy (Leipzig, 1932——).

TSA   Genouillac, Henri de. Tablettes sumériennes archaïques (Paris, 1909).

U   Joint Expedition of the British Museum and of the Museum of the University of Pennsylvania to Mesopotamia. Ur collection.

UET I   Joint Expedition of the British Museum and of the Museum of the University of Pennsylvania to Mesopotamia. Ur excavations. Texts. I. Royal inscriptions, by C. J. Gadd and L. Legrain (London, 1928).

UPUM   Pennsylvania. University. University Museum. Publications of the Babylonian section (Philadelphia, 1911——).

Uruk.   Urukagina.

VAS   Berlin. Staatliche Museen. Vorderasiatische Abteilung. Vorderasiatische Schriftdenkmäler (Leipzig, 1907——).

VAT   Berlin. Staatliche Museen. Vorderasiatische Abteilung. Followed by catalogue number.

THE SUMERIAN PREFIX FORMS BE- AND BI- IN THE TIME OF THE EARLIER PRINCES OF LAGAŠ

INTRODUCTION

As a result of Poebel's recent study in Sumerian phonetics,[1] it is now known that classical[2] Sumerian made use of at least six vowels instead of four as has been hitherto assumed by Sumerologists. These six vowels fall into two parallel groups: (1) the open vowels a, $\check{e}$, and $\check{o}$;[3] (2) the corresponding close vowels $\bar{e}$, i, and u. From the same study we learn that the pronunciation of the simple verbal prefix, i. e. the prefix whose function it is to denote the finite verbal form, was governed by the principle of retrogressive vowel harmony: it was pronounced as an open vowel $\check{e}$ (written with the sign E) if followed immediately by a verbal root containing one of the open vowels a, $\check{e}$, or $\check{o}$; it was pronounced as a close vowel i (written with NI) when followed immediately by a verbal root containing one of the close vowels $\bar{e}$, i, or u. Moreover, in those cases where the simple prefix is not followed immediately by the verbal root but is separated from the latter by an infix, the principle of retrogressive vowel harmony remains in full force, except that it becomes more complex in operation, as follows:

1. If the infix which separates the simple prefix from the verbal root contains the vowel a (as do -na-, -da-, -ta-, -ma-, and -ga-), the latter is pronounced $\check{e}$ even in those cases where the vowel of the verbal root is one of the close vowels $\bar{e}$, i, or u. In other words, it is the open vowel a of the infix which controls the pronunciation of the preceding prefix.

2. Similarly, if the infix which separates the simple prefix from the verbal root contains the long open vowel $\check{e}$ (as do -n$\check{e}$-, "to them," "on them," and probably -b$\check{e}$- [written with PI], "with them"), the simple prefix is pronounced $\check{e}$ even in those cases where the vowel of the verbal root is one of the close vowels $\bar{e}$, i, or u. That is, it is the broad open $\check{e}$ of the infix which controls the pronunciation of the preceding prefix.

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3. If, however, the infix which separates the simple prefix from the verbal root contains the short vowel ɪ[4] (as do -ši-, -mɪ-, and -nɪ-), the pronunciation of the vowel of the preceding simple prefix *as well as that of the infix* is governed by the character of the vowel contained in the root. If the latter was one of the open vowels *a, ĕ,* or *ŏ,* therefore, not only was the simple prefix pronounced ĕ, but the infixes -ši-, -mɪ-, or -nɪ- which followed it were pronounced šĕ (written with šÈ), mĕ (written with ME), or nĕ (written with NI). If, on the other hand, the vowel of the verbal root was one of the close vowels *ē, i,* or *u,* not only was the simple prefix pronounced i, but the infixes -ši-, -mɪ-, or -nɪ- which followed it were pronounced ši (written with IGI), mi (written with MI), or ni (written with NI),

The prefix bɪ-,[4] whose function it is not merely to introduce the finite verbal form but to express in addition a dimensional relationship such as "at" or "on,"[5] is not treated in AS No. 2; this latter confines its phonetic study to the simple prefix i- or ĕ-. Since, however, the prefix bɪ- is composed of the dimensional complex b-ɪ (i.e., the pronominal element b and the locative element ɪ) and the simple prefix ɪ- (i.e., etymological b-ɪ-ɪ- is combined in the actual pronunciation into bɪ-), there is no reason why its vowel ɪ should not be subject to the same law of retrogressive vowel harmony as that which governs the simple prefix ɪ- or both the simple prefix *and* the vowel ɪ of the dimensional infixes -ši-, -mɪ-, or -nɪ- when the latter separate the simple prefix from the verbal root. In other words, *a priori* it seemed reasonable to the present writer that the vowel ɪ contained in the prefix bɪ- was pronounced ĕ when followed by a verbal root containing one of the open vowels *a, ĕ,* or *ŏ,* and that, on the other hand, when followed by a verbal root containing one of the close vowels *ē, i,* or *u,* it was pronounced i.[6]

WRITINGS OF THE PREFIX bɪ- WITH BI AND Bí

An investigation of the classical Sumerian texts discloses the fact that the prefix bɪ- is written in two ways: (*a*) with BI, (*b*) with Bí. In examining all the extant classical material the prefix bɪ-

was found written with BI immediately before the following roots (the numeral in parentheses following each root indicates the number of times this combination occurs); ak (10),[7] gar (8),[8] lá (1),[9] ra (15),[10] sá (3),[11] tag (30),[12] x (= LAKF 159) (5),[13] and with the sign Bí immediately before the following roots: dù (10),[14] du₈ (1),[15] dub (1),[16] dug₄ (2),[17] gi₄ (91),[18] kú (1),[19] ri (22;[20] once BI is found), rú (6),[21] sì (1),[22] šuš (27),[23] tuku (1),[24] us (1).[25] If we examine the first group[26] we note that in 72 cases, without a single exception, the prefix bi- is written with BI before seven different verbal roots, each of which contains an open vowel, and before which the simple prefix, when immediately preceding, is regularly written with the sign E (not ì; for citations see AS No. 2, pp. 26 ff.). In the second group we find that of 165 cases where the prefix bi- precedes twelve different verbal roots, each of which contains a close vowel and before which the simple prefix, if immediately preceding, appears as i- (not as ĕ-), it is written with Bí 164 times and only once with BI. The following twofold conclusion, therefore, is as unequivocal as it is obvious: (*a*) The vowel I of the prefix bi- (as is the case with the simple prefix) was pronounced ĕ in classical Sumerian when it preceded a verbal root containing an open vowel; it was pronounced i before a verbal root containing a close vowel. (*b*) The sign BI in classical Sumerian had the value bĕ; the sign Bí, on the other hand, had the value bi.[27]

THE READING BI = bĕ

That the value of the sign BI in classical Sumerian was bĕ (not bi) can, fortunately, also be deduced from criteria altogether outside the use of this sign in writing the prefix bi-. Thus classical Sumerian reveals the following facts:

1. The subject element placed at the end of a substantive complex which is the subject of a transitive verbal form was pronounced and written ĕ and never appears as i; compare šu-ḫa-e,[28] "the fisherman," munus-e,[29] "the Lady," gala-e,[30] "the *kalû* priest," ga-eš₈-e,[31] "the *kaiššu*," ga-eš₈-maḫ-e,[32] "the head *kaiššu*," sukkal-maḫ-e,[33] "the head representative," engar-maḫ-e,[34] "the head husbandman," é-an-na-tum-e,[35] "Ean-

natum," me-silim-e,[36] "Mesilim," nin-izkim-ti-e,[37] "Nin-
izkimti" (wife of the *išakku* of Adab), x(= LAKF 535)-e,[38] "the
slaughterer(?)." Moreover, in those cases where the subject element
-e is combined in the orthography with the final consonant
of the word to which it is attached, the sign used to write the
combination contains the vowel *ĕ* (not *i*), as shown unequivocally
by the writings sipa(d)-dè,[39] "the shepherd" (never sipa(d)-di),
and é-an-na-tù(m)-me[40] (alongside of é-an-na-tum-e; cf.
above [never e-an-na-tù(m)-mi]).

2. Similarly, the locative element was pronounced and written ĕ
(never i); compare a-e[41] and giš-UR-UR-e.[42]

3. The first vowel of the plural ending -ene was ĕ (never i);
compare šu-ḫa-e-ne,[43] "the fishermen," lú-didli-e-ne,[44] "to
each (of) the individuals," gala-e-ne,[45] "the *kalû* priests,"
sipa(d)-dè-ne,[46] "the shepherds" (not sipa(d)-di-ne).

4. The ending which characterizes the 3d person singular of the
present-future is -ĕ, never -i; compare e-né-ba-e,[47] "he will
present to her," e-da-kú-e,[48] "he shall eat with him," šu-ì-
bal-e,[49] "he will break (the oath)," ḫa-mu-ak-e,[50] ḫa-ni-
gaz-e,[51] "may he smite therein," mu-ni-pàd-dè,[52] "he swears
by it" (not mu-ni-pàd-di), ḫe-ko₆-lam-me,[53] "may he
destroy" (not ḫe-ko₆-lam-mi).

If now we utilize the data listed above as criteria for the reading
of BI, we note that whenever (*a*) the -ĕ which is the subject element
or (*b*) the first ĕ of the plural ending -ĕne or (*c*) the -ĕ which is the
ending for the 3d person singular present-future is added to a
word ending in *b* and is combined with the latter in the orthog-
raphy, the sign used to write the resulting syllable is BI, never BÍ.
Thus we find ašgab-bé,[54] "the leather-worker," ašgab-bé-ne,[55]
"the leather-workers," na-dib-bé,[56] "let him not seize(?),"
ḫe-šub-bé.[57]

THE POSSESSIVE PRONOUNS -bĕ AND -nĕ

As is obvious from the fact that in classical Sumerian the
possessive pronoun -bɪ, "its," "their" (collective), is never written
with BÍ but always with BI, its pronunciation was bĕ, not bi as
seems to be almost universally but erroneously assumed. Moreover,

since the vowel of the syllable -nɪ of the 3d person singular possessive pronoun -(a)nɪ, which is always written with nɪ, is undoubtedly the same vowel which appears in the pronoun -bɪ, it too should be read ĕ, not *i*. The sign nɪ, then, which in classical Sumerian could be read either ni or nĕ (cf. AS No. 2, p. 15), was read nĕ when used to represent the 3d person singular possessive pronoun.[58]

DISTINCTIONS IN USE OF VARIOUS SIGNS INVOLVING THE VOWELS *e* AND *i*

NE AND NI

The fact that the vowel ĕ of the syllable nĕ which is written with NE is a long vowel, while that of the syllable nĕ which is written with NI is a short vowel,[59] has already been noted by Poebel in his discussion of the infix -nɪ- (AS No. 2, pp. 15f.). We are now in a position to corroborate this fact by utilizing part of the data outlined on pp. 3f. Thus in those cases where the subject element -ĕ or the first ĕ of the plural ending -ĕne follows a word ending with *n* and is combined with the latter to form the short syllable nĕ,[60] the latter is written not with NE but with NI; compare gin-né,[61] en-en-né-ne.[62]

GI AND GI₄

Both GI and GI₄ are usually transliterated by Sumerologists as gi; i.e., the values represented by the two signs are considered homophonous. We are now in a position to conclude that, in the classical period, only GI₄ had the value gi; the sign GI, on the other hand, had the value gĕ. For whenever (*a*) the -ĕ which is the subject element, (*b*) the -ĕ which is the locative element, (*c*) the first ĕ of the plural ending -ĕne, or (*d*) the -ĕ which is the ending for the 3d person singular present-future is added to a word ending in *g* and is combined with the latter in the orthography, the sign used to represent the resulting syllable gĕ is GI, never GI₄. Thus we find (*a*) the subject complexes agrig-ge,[63] "the *aba-rakku*," dùg-dùg-ge,[64] "the unceasing planner," šag₅-šag₅-ge,[65] "Šagšag," (*b*) the locative complexes pa₅-kug-ge,[66] "(adja-

cent) to the holy canal," šà-kug-ge,[67] "in the holy heart,"
zag-ge,[68] (c) the plural form gutug-ge-ne,[69] "the *pâšišu's*,"
(d) the verbal form na-an-tag-ge,[70] "he shall not force (consent
to it) upon him (through blows)." On the other hand, only GI₄
is used to write the Sumerian verb for "to return." That this was
pronounced gi and not gĕ is proved conclusively by the facts that
(a) whenever the simple prefix appears immediately before it or
is separated from it by the locative infix -nɪ, the former is always
written as ì-[71] (not e-), and (b) whenever the prefix bɪ- appears
before it, it is written as bí-[72] (not bé-).[73]

<p align="center">RI AND Rí</p>

Both RI and Rí are usually transliterated by Sumerologists (who
follow the Assyriologists in this respect) as ri; i.e., just as in the
case of GI and GI₄, the values represented by the two signs are
considered to be homophonous. We are now in a position to
conclude, however, that in the classical period only RI had the
value ri; Rí, on the other hand, had the value rĕ. For whenever
(a) the -ĕ which is the subject element, (b) the first ĕ of the plural
ending -ĕne, (c) the -ĕ which is the ending for the 3d person
singular present-future, or (d) the ĕ of the pronominal element
-ĕš is added to a word ending in r and is combined with the latter
in the orthography, the sign used to represent the resulting syllable
-rĕ is Rí, not RI. Thus we find (a) the subject complexes dup-
sar-ré,[74] "the scribe," engar-ré,[75] "the husbandman," nagar-
ré,[76] "the woodworker," nimgir-ré,[77] "the supervisor," kur-
kur-ré,[78] "all the foreign lands," (b) the plural forms dingir-
ré-ne,[79] "the gods," engar-ré-ne,[80] "the husbandmen," nagar-
ré-ne,[81] "the woodworkers," usar-ré-ne,[82] (c) the present-
future verbal forms ba-da-kar-ré,[83] "he takes away from him,"
nu-ba-da-kar-ré,[84] "he does not take away from him," ḫe-da-
kar-ré,[85] "may she snatch away (the foot of the Ummaite) from
it (the earth)," and (d) the 3d person singular preterite with the
3d person plural pronominal accusative suffix, bé-gar-ré-éš,[86]
"he caused them to pay in addition to it." On the other hand,
only RI is used to represent the Sumerian verb for "to remove,"
whose root was pronounced ri(g) and not rĕ(g), as is proved

conclusively by the following facts: (*a*) whenever the simple prefix appears immediately before it, the former is written ì- (not e-);[87] (*b*) whenever the simple prefix is separated from it by the infix -mɪ-, not only is the simple prefix written ì- (not e-), but the infix is written -mi- (not -me-);[88] (*c*) whenever the prefix bɪ- appears before it, the former is written as bí[89] (not bé-).[90]

ḪI, KIT, LI, SI, TI, AND ZI

As the following table shows, we are now in a position to state that in classical Sumerian, just as the orthography distinguishes between the vowel *i* and the vowel *ĕ*, so does it usually distinguish between a syllable which consists of a consonant and a following *i* and one which consists of the same consonant and a following *ĕ*.

Syllable	Sign	Syllable	Sign
i	𒑐	ĕ	𒂊
bi	𒁉	bĕ	𒊺
di	𒁲	dĕ	𒁲
gi	𒄄	gĕ	𒄀
mi	𒈨	mĕ	𒈨
ri	𒊑	rĕ	𒊑
ši	𒅆	šĕ	𒇺

In none of the above tabulated pairs of signs are the signs interchangeable in the system of orthography used in classical Sumerian.[91] That is, not only is it true, for example, that the sign DI is never written for the syllable dĕ (nor, vice versa, the sign DÈ for the syllable di), a fact which the majority of Sumerologists accept more or less readily, but (and this is what most Sumerologists have hitherto failed to note) it is just as true that the sign BÍ is never used for the syllable bĕ (nor, vice versa, BÉ for bi); GI₄ is not used for gĕ (nor GE for gi); RI is never used for rĕ (nor RÉ for ri). Moreover, to date, the sign NI, which, as has been shown by Poebel,[92] was used to write the infix -nɪ- when the latter was pronounced ni as well as when it was pronounced nĕ, is the only sign that can be said with certainty to have been used both for a

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syllable consisting of a consonant followed by i and for a syllable consisting of the same consonant but followed by $\breve{e}$.

If we now continue to examine the orthography of the classical period in order to learn whether in syllables other than those listed in the preceding table it distinguishes between those which consist of a consonant followed by the close vowel i and those consisting of the same consonant followed by the open vowel $\breve{e}$, we note the following:

1. ḪI is used to represent the syllable ḫĕ; compare the verbal form e-la-laḫ-ḫe[93] (gram.: perhaps e(-b)-la(ḫ)-laḫ-e(š)), "they had them drive (the sheep listed)," where the last syllable probably results from the combination of the final $\dot{h}$ of the root with the vowel $\breve{e}$ of the syllable -ĕ(š) which is the accusative pronominal element of the 3d person plural. As yet the texts of the classical period do not furnish us with criteria which might enable us to decide whether ḪI is restricted to the value ḫĕ or, analogously to NI, which is used to represent the syllable ni as well as the syllable nĕ, is used also with the value ḫi.[94]

2. KIT is used to represent the syllable kĕ; compare the innumerable instances in which this sign is used to represent the syllable resulting from combination of the k of the genitive particle with a following $\breve{e}$ which is either the subject element or the locative element.[95] Note too the verbal form ba-ra-ak-ke₄[96] (gram.: bara-(i-)ak-e(n)), "I shall not commit," where KIT represents the syllable kĕ resulting from combination of the final k of the verb ak[97] with the vowel $\breve{e}$ of the syllable ĕ(n) which is the ending for the 1st person singular present-future of the transitive verbal form. Whether in classical Sumerian this sign could have been used to represent the syllable ki also, it is as yet impossible to say.

3. LI is used to represent the syllable lĕ; compare the following subject complexes: abkal-le,[98] "the *abkallu*," ᵈen-líl-le,[99] "Enlil," il-le,[100] "Il (the *išakku* of Umma)," sukkal-le,[101] "the *sukallu*," ú-du-le,[102] "the shepherd." In all these complexes the sign LI represents the syllable lĕ which results from combination of the final l of the root with the following $\breve{e}$, which is the subject element. Note too the verbal form mu-da-zal-zal-le,[103] "it (Uruk) spends (all its days)," where LI represents the syllable lĕ

resulting from combination of the final *l* of the verb z a l̀ with the ĕ
of the ending for the 3 d person singular present-future. Whether
LI represents the syllable li also or the latter is represented by
some other sign, e.g. NI, it is still impossible to say.[104]

4. SI, TI, and ZI are used for the syllables s i, t i, and z i respective-
ly; note that these three signs represent respectively the verbal
roots si(g), "to heap up," ti(l), "to live," and zi(g), "to stand up."
That all three of these contain the vowel *i* and not the vowel ĕ
is proved conclusively by the fact that the simple prefix when it
appears immediately before any of these roots is written as ì-
(not ĕ-).[105] Whether the syllables s ĕ, t ĕ, and z ĕ also were repre-
sented by the signs SI, TI, and ZI respectively or by some other
signs, it is as yet impossible to say.[106]

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NOTES

[1] AS No. 2.

[2] The term "classical" Sumerian is here used to denote the Sumerian dialect known to us from the texts excavated at Tello and in its vicinity, which date from the period between Eannatum and Urukagina inclusive. The restriction of the term "classical" to this dialect is more or less arbitrary, though useful. The reader must bear in mind that none of the connotations which usually accompany the word "classical," such as "most correct," "purest," "more original," etc., are at all implied in this definition. It is, however, at least partly justified by the fact that as yet this is the only Sumerian dialect represented by a relatively large group of texts dating from a period when Sumerian was a living language and showing a marked linguistic homogeneity.

[3] The diacritical marks have no reference whatever to the *length* of the vowel; they are merely used to indicate the color of the vowel (i.e., whether close or open) in those cases where the representation of the pronunciation by the Latin character alone is ambiguous; thus $\bar{e}$ represents the close *e*-sound, while $\breve{e}$ represents the open *e*-sound.

[4] In order to avoid the continuous use of the phrases "i or ĕ," "bi or bĕ," "ši or šĕ," etc., the vowel concerned will be indicated in all these cases with a capital ı; thus ı is used instead of the phrase "i or ĕ," bı instead of "bi or bĕ," šı instead of "ši or šĕ," etc. The capital ı is chosen instead of ᴇ, not because in any of these cases the sound *i* was the more original or common, but only because hitherto Sumerologists have been in the habit of transcribing the vowel in such particles as *i* rather than as *e*, quite without any real justification for the preference. Indeed, in the case of the locative element ı which appears in the locative infixes -nı- and -mı-, the evidence points conclusively to the fact that ĕ rather than *i* is the more original pronunciation, since the locative *postposition*, which obviously is the same element but which, not being part of the verbal complex, was never influenced in its pronunciation by the character of the vowel contained in the verbal root, was always written and pronounced ĕ (never *i*) in classical Sumerian. Indeed, even in post-classical Sumerian this locative postposition is written as ĕ, though it is not impossible that this represents the historical spelling rather than the actual pronunciation; cf. n. 90.

[5] Cf. GSG § 585.

[6] Since the prefix bı- cannot be followed by an infix (GSG § 588), obviously there would be no opportunity for the more complex developments in the operation of the principle of retrogressive assimilation described above in connection with the simple prefix.

[7] Lummatur Stone Tablet i 21, ii 22, iii 31; DPr 31*b* vi 16, 234 viii 6, 243 iii 4, 251 ii 5; Nik. 317 iv 5f., 318 iv 1; RTC 17 viii 7. In all cases except DPr 234, 243, and 251 the sentence reads: N. (i.e., a proper name) nimgir-ré (title omitted in the Lummatur Stone Tablet) gag-bé é-gar$_8$-ra bí-dù NI-bé zag-ge bé-ak, "N., the supervisor, nailed its (i.e., the transaction's ?) cone in the wall and performed its (i.e., the transaction's ?) NI upon the......" Since both the reading and the meaning of NI in this phrase are as yet unknown, a more satisfactory translation is at present impossible; the grammatical construction of the sentence, however, as indicated by the grammatical transliteration N. nimgir-e gag-be é-gar$_8$-a bi(-n)-d ù NI-be zag-e be(-n)-ak, is perfectly clear. The -e after nimgir is the subject element (it is omitted in DPr 31*b* and Nik. 317, but the correct writing is to be found in RTC 17; cf. also DPr 32*b* vii 8); the locative -a in the complex é-gar$_8$-a is taken up again by the dimensional element in the prefix bɪ- (GSG § 587), pronounced bi before the verbal root dù; similarly, the locative -e in the complex zag-e is taken up again by the prefix bɪ-, which is pronounced be before the verbal root ak. For the reading of the verbal root as ak rather than ag, cf. n. 97; for the reading of the possessive pronoun as bé rather than bi, cf. p. 4. The writing of the prefix bɪ- in this sentence is most illuminating. The two components of the sentence parallel each other almost perfectly in grammatical construction; nevertheless, the prefix bɪ- in the two parallel verbal forms is written with Bí in one case and with Bɪ in the other, a fact which hitherto has remained an anomalous and inexplicable puzzle. With the realization, however, that the prefix bɪ- was subject to the same law of retrogressive assimilation as the simple prefix (i.e., that it was pronounced bi before verbal roots containing a close vowel, but bĕ before those containing an open vowel), the reason for the differentiation in the orthography becomes perfectly clear. The prefix is written with Bí (which in this period has the value bi) before the verbal root dù, since the latter contains the close vowel *u*; it is written with Bɪ (which in this period has the value bĕ) before the verbal root ak, since the latter contains the open vowel *a*.

In DPr 234 and 243 NI Bɪ-ak is not to be read as one might at first glance suppose, ì-Bɪ-ak, i.e., as a verbal form beginning with the simple prefix. The law of retrogressive assimilation formulated by Poebel shows at once that this is impossible, since the simple prefix would at this period be pronounced ĕ and would be written with the sign E before the verb ak. The group is therefore to be read NI bé-ak. The word represented by NI is the same as that in the expression NI-bé zag-ge bé-ak discussed above; it is the object of the verbal form bé-ak. The prefix bé- is used in both texts probably because the compound verb NI—ak is construed with a dimensional rather than with a direct object; cf. the expression NI-bé zag-ge bé-ak just cited. The literal translation of NI bé-ak is, therefore, "he performed NI upon them (i.e., upon the animals listed)." In DPr

251 the line reads NI bé-ak-a-a. Here the substantivized form of the
verb is used, since it is part of a relative clause, the entire sentence
reading thus: en-ig-gal-nu-banda-ANŠU-GIŠ-ke₄-é-zag-uru-ka-ka-
NI-bé-ak-a-a šu-a bí-gi₄, "When Eniggal, the *laputtu,* had performed NI
upon the . . . . donkeys in the Ezaguru, he handed over (the skins listed
in the first part of the tablet)." Note that ANŠU-GIŠ-ke₄ is grammatically
probably ANŠU-GIŠ-k-e, i.e., a locative complex which is the dimensional
object of the verbal form NI bé-ak-a-a, and that the latter is the sub-
stantivized verbal form followed by the dimensional postposition -a;
cf. the comment on si-bé-s á-a in first par. of n. 11.

⁸ Uruk., Cones B and C iv 1 and 8; DPr 346 ii 5, 441 iii 3, 442 iii 4,
460 ii 2. In all except the last two cases the grammatical formula is P.-a
N.-e bé-gar, "N. placed (the objects listed in the first part of the tablet)
in P.," in which P. designates a place and N. represents the name of an
official. Here again, therefore, the prefix bé-, quite as expected, is used
to recapitulate the locative -a of a preceding dimensional complex. In the
two citations from Uruk., Cones, the verbal form is bé-gar-ré-éš, "he
(i.e., the *maškim)* forced them to pay in addition to it"; the verbal form
is discussed in detail by Poebel in his study. "The Tenses of the Intransitive
Verbs," AJSL L 157.

⁹ Eann., Vulture Stela, obv. vii 22. The line reads GIR (the *gunu* form
of GIR)-ḫe-bé-lá; the passages preceding and following are badly broken,
and it is difficult to get at the grammatical construction and meaning of
the verbal form.

¹⁰ Ent., Cones A and B i 11; AWLU 10 iii 2, 16 vii 10, 99 v 3; DPR 39
iii 4, 559 x 6, 564 iv 2; Nik. 39 vi 6, 45 v 4, 97 v 4; RTC 57 iii 4, 71 xiii 7,
72 iii 4; TSA 21 vi 4. In all cases except the last the formula is N.-e giš-
bé-ra, "N. (the official in charge) measured out(?) (the quantities of grain
listed in the first part of the tablet)." While the meaning "to measure out"
of the compound verb giš—ra seems to fit the context in all cases and
may therefore prove to be at least approximately correct, the grammatical
construction is quite uncertain. Thus if we assume that the word giš is
the direct object of the verbal root ra, "to throw," the literal meaning
of the verbal form giš-bé-ra approximates "he threw the *giš* (a measuring
container ?) upon it (i.e., the grain)," hence "he measured." Similarly, the
compound verbal form sag-giš—ra, "to kill," may perhaps be rendered
more literally as "to hurl the *giš* (a weapon ?) upon the head (of the victim),"
i.e., grammatically, sag-e giš—ra. Perhaps, too, the compound verb
giš—tag, "to sacrifice," with which the prefix bé- is frequently found,
also has a more original meaning, "to thrust(?) the *giš* (at the victim),"
and at first may have been used only in speaking of living things, although
in our texts we find it used of inanimate objects as well. Or it may be that
in the three compound verbs just discussed the sign GIŠ represents an
original dimensional complex k i -š e, "to the ground"; in that case the more

original meanings of giš—ra, sag-giš—ra, and giš—tag respectively may have been "to throw (the grain) to the ground," "to throw the head(?) (of the victim) to the ground," and "to hurl (the victim) to the ground." Cf. also Poebel in AOF IX 256.

In Ent., Cones A and B, the verbal form is found in the sentence me-silim lugal-kiši^(kl) KA-^(d)sataran-na-ta ÉŠ.GANA bé-ra, "Mesilim, the king of Kish, at the command of Sataran threw the measuring cord(?) upon it (the boundary which had been marked off for Lagash and Umma)."

[11] DPr 50 vii 5, 220 xi 7, 338 vi 5. In the first case the wording of the sentence is as follows: lugal-an-da-ensí-lagašu^(kl)-ke_4-ni_6-na^(kl)-KA-KA-KA-na-si-bé-sá-a bara-nam-tar-ra [giš-bé-ta]g, "When Lugalanda, the *išakku* of Lagash, in(?) Nina by his .... had made straight..., Baranamtarra sacrificed (the objects, animate and inanimate, listed in the first part of the tablet to the respective deities there named as recipients)." In DPr 220 the wording of the sentence is identical with that of DPr 50 except that the last verbal form, instead of [giš-bé-ta]g, reads e-ne-ba: "she allotted (the objects mentioned in the first part of the tablet) to them (the respective officials who received them)." As the translation of the sentence indicates, the grammatical transliteration of the sentence reads: Lugalanda-ensí(k)-Lagašu^(kl)-k-e-Nina^(kl)(-a?)-KA-KA-KA-n(e)-a(k)-si-bé(-b-n)-sá-a Baranamta(r)ra(-e) giš-be(-n)-tag (or e-ne(-n)-ba). In other words, the entire complex beginning with Lugalanda and ending with the verbal form si-bé-sá-a is a relative (or rather substantivized) clause followed by the postposition (-a), which relates it temporally as well as causally to the main verbal form giš-bé-tag (or e-ne-ba). The postposition is omitted in our case in the orthography, since -a-a-a (i.e., final vowel of the verbal root + substantivizing element + dimensional postposition) was reduced to -a-a in the pronunciation.

The sentence just analyzed is by no means the only example of this construction; thus in DPr 218 vi 6ff. we read: Baranamta(r)ra-dam-Lugalanda-ensí(k)-Lagašu^(kl)-k-e dumu-SAL-i-tud-a-a ba(-b-n)-kú, "When Baranamtarra, the wife of Lugalanda the *išakku* of Lagash, had given birth to a daughter, she caused to be eaten in her behalf (the animals listed)." Cf. also TSA 45 iv 3ff.: munus-e dumu-i-tud-a-a é-gal-a ba(-b-n)-du(r), "When the Lady had given birth to a child, she caused (the grain) to be brought in her behalf into the palace." Another illuminating example is the following (DPr 219 i 1ff.): 1-udu-nita bara-ir-nun-dam-al-la-TÚG-DU_8-a-ke_4-dumu-ì-tu-da-a itu-ezen-^(d)lugal-urú^(kl)-ka-til-la-ba ba-na(-b-n)-šag_5, "When Barairnun, the wife of Alla the ...., had given birth to a child, she caused one male sheep to be slaughtered in her behalf at the end of the month of the feast of Lugaluru to him (i.e., to Lugaluru)." (Note that, as the verbal forms ba-na-šag_5 [DPr 219 ii 2] and ba-na-du [DPr 164 v 11], both from the classical period, show, the conclusion that the prefix ba- cannot be followed by the dative

infix [-na-, for example; cf. Falkenstein in OLZ XXXVI 304 and Scholtz
in MVAG XXXIX, Heft 2, p. vi] is quite unfounded.) Similarly, the last
two vowels of the verbal form e-gen-na-a (occurrences listed in AS No. 2,
p. 34) represent the relative postposition -a and the dimensional post-
position -a respectively. The following example (DPr 218 i 7ff.) is typical of
the group: 1-udu-gur-ra ensí-é-munus-šè-e-gen-na-a é-MU-ma
ba-šag₅, "One .... sheep, when the *išakku* had gone to the house of the
Lady, he had slaughtered in his behalf in the é-MU." Cf. also DPr 61 i 1ff.:
1-udu-gur-ra-abzu-gú-ka-kam ensí-nig-ᵈama-GAN.ŠA-dar-šè-e-
gen-na-a bara-nam-tar-ra giš-bé-tag, "One .... sheep, belonging
to the ...., when the *išakku* had gone to .... Baranamtarra sacrificed."

In DPr 338 the sentence probably reads: [nig-giš-tag-ga-ᵈlugal]-
an-d[a]-ensí-lagašuᵏ¹-ke₄-še-á-a-KA-KA-na-si-bé-sá-a-kam,
"(The animals listed) are the sacrifices of Lugalanda, the *išakku* of Lagash,
who by his .... had made straight ....." Note that the entire expression
is a genitive construction consisting of the governing complex nig-giš-
tag-ga and the governed complex, which is a substantivized clause,
lugal-an-da-....-si-bé-sá—a. Moreover, as the writing -kam shows,
the genitive particle is preserved in our case, since it is followed by the 3d
person enclitic -am, "it is," which begins with a vowel. For an exactly
parallel construction cf. DPr 44 ix 2ff.: nig-giš-tag-ga-bara-nam-tar-
ra-dam-lugal-an-da-ensí-lagašuᵏ¹-ka-itu-še-guₓ-tar-rá-é-u₄-
sar-uru-kug-ga-še-e-gen-na-kam, "the sacrifice of Baranamtarra, the
wife of Lugalanda the *išakku* of Lagash, who in the month of Šegutar had
gone to the house of the new moon."

[12] AWLU 5 i 6 and xiii 10, 46 iii 3, 74 xii 7; 91 iv 3, 128 i 4; DPr 46
viii 6, 53 xx 7, 61 ii 3, 62 vi(!) 4, 64 iii 1, 196 ix(!) 3, 197 xvi(!) 1, 199 ii 2,
200 iii 2, 203 vii(!) 6, 217 iii 1; Nik. 23 xiii 7 and xv 7, 25 xi 2, 28 vi 2,
148 v 1, 149 iv 2; 150 ii 3, 151 iv 2, 152 v 2, 153 iv 4; RTC 46 vii 2, 47 x 6;
TSA 1 xiv 3. In all these cases, without exception, the verbal form is
giš-bé-tag, "he (she) sacrificed." For a possible analysis of the verbal
form, cf. the comment on giš-bé-ra in n. 10. Note, however, that the
verbal form giš-e-tag is used almost as frequently (for list of occurrences
see AS No. 2, p. 42) and that even the present form, giš-e-tag-ge, is
found in several instances. Now it is a fact that in all cases except one
(DPr 60 vi 2) where giš-e-tag (or giš-e-tag-ge) is found in the extant
Urukagina texts it is a passive verbal form and is to be translated "was
(were) sacrificed" or "is (are) sacrificed"; on the other hand, in all the cases
where giš-bé-tag is found in our texts it is an active verbal form. Never-
theless, since the thematic prefix bɪ- may introduce a passive as well as an
active verbal form, the reasons for the scribe's preference remain obscure.

[13] Nik. 162 iii 4, 179 iii 1, 236 v 6, 238 iii 1; VAT 4856 (Or. No. 16,
pp. 39ff.) vii. The meaning and reading of the verbal root, which in all the
listed cases papears in the verbal form igi bé-x, are still unknown. That,

however, the root contains one of the open vowels *a*, *ĕ*, or *ŏ* is shown by the fact that the simple prefix as well as the vowel of the locative infix -mi- following the simple prefix was pronounced and written *ĕ* before it; cf. AS No. 2, pp. 13f. and 45.

[14] Ent., Cones A ii 18 and B iii 2; Lummatur Stone Tablet i 20, ii 22, iii 31; DPr 31*b* vi 16, 32*b* vii 10 (the sign to be restored is undoubtedly D ù), 648 iii 3; Nik. 317 iv 6 (the sign to be restored is undoubtedly D ù); RTC 17 viii 7. In all cases except those in the Ent. cones and DPr 648 the verbal form bí-dù is coupled with bé-ak; cf. the comment on the latter in n. 7. In the Ent. cones the phrase reads: e-ba .... bí-dù, "at that (boundary) ditch he built (the buildings enumerated)"; the dimensional prefix bí- recapitulates the locative element -a in the complex e-b(e-)a. In DPr 648 the verbal form reads al-bí-dù, with a meaning approximating "he caused to be dug"; however, since the exact meaning of al and dù in the compound verb al—dù is still obscure, it is as yet impossible to deduce the nature of the dimensional relationship recapitulated by the prefix bí- in our text or, e.g., by the similarly used prefix ì-mi- in al-ì-mi-dù-a-a, "at (the canal ....) which he had caused to be dug(?)" (DPr 480 ii 2).

[15] DPr 344 iii 1: en-ig-gal nu-banda bí-du₈, "Eniggal, the *laputtu*, smeared (the asphalt) upon them (i.e., the boats)."

[16] Eann., Vulture Stela, obv. xi 15: SAHAR-DUL-KÍD-bé 20 bí-dub, "he (Eannatum) heaped up their (the Ummaites') 20 funeral piles." The immediately preceding lines, except for the numeral 20, are almost completely broken; they must, however, have contained a dimensional complex which the dimensional prefix bí- recapitulated; cf. SAHAR-DUL-KÍD-bé ki-5-a i-mi-dub (Ent., Cones A and B iii 24ff.), where the prefix i-mi-, which, like the prefix bí-, expresses a dimensional relationship, takes up the locative element -a of the complex ki-5-a.

[17] Ov. Pl. iv 9; DPr 472 iv 3. In the second instance the phrase reads: en-ig-gal nu-banda ganun ....-ka ki-GAR bí-dug₄, "Eniggal, the *laputtu*, placed(?) (the wood brought from the house of the *išakku*) in the storehouse of ....." In this example ki-GAR, whatever its meaning, is probably the direct object of bí-dug₄, while the prefix bí- takes up again the locative -a of the complex ganun ....-k-a. In the Oval Plaque the phrase reads: ur-lum-ma-ke₄ .... an-ta-sur-ra-mà-kam ki-sur-ra mu bí-dug₄, "Thereupon (i.e., in answer to the demands made by Eannatum's messengers) Urlumma said; 'The Antasurra belongs to me; it is my boundary'"; the word "thereupon" renders the dimensional meaning of the prefix bí-. Note that in Ent., Cones A and B iv 29 and 33, where the context is the same as in our case, the verbal form is ì-mi-dug₄; the reasons for the preference of ì-mi- to bí- in any given text, though they are presumably phonetic in character, are as yet unknown (GSG § 591).

[18] Eann., Stone A vi 8 and 11: kur-ra-na bí-gi₄, "he (Eannatum) turned back (the Elamite, in the first example; the king of Upi, in the

second) to his land"; the prefix bí- takes up the locative -a of the complex kur-ra-na (gram.: kur-an(e)-a).

Eann., Stone F v 10; Ent., Cones A and B ii 8: ki-bé bí-gi₄, "he (Eannatum) returned (the stele of Mesilim) to its place"; the prefix bí- takes up the locative element of the complex ki-bé, which is grammatically either ki-be(-e) or ki-be(-šè).

AWLU 18 iv 4, 22 iii 4, 45 ii 3, 54 iv 5, 71 iii 3, 82 ii 1, 107 v 4, 109 ii 1, 110 iii 1, 111 ii 4, 117 iii 1, 126 iii 2, 128 ii 4, 132 v 5, 155 vii 1, 166 iii 3, 178 v 5, 185 ii 2, 193 ii 2; DPr 96 iv 1, 107 vii(!) 1, 250 ii 2, 251 iii 1, 252 iv 4, 254 iii 3, 255 iv 4, 256 ii 4, 259 iii 1, 261 iv(!) 3, 262 iii 2, 264 ii 1, 267 i 4, 268 ii 1, 269 ii 2, 292 ii 1, 298 iv 2, 306 iii 2, 311 iii 5, 324 iv 1, 439 iv 2, 461 v 6, 551 ii 5, 566 ii 3, 569 vi (!) 4; Nik. 79 viii 5, 80 ii 3, 81 ii 1, 82 ii 2, 83 v 3, 96 ii 3, 144 iv 6, 145 vi 2, 169 iii 4, 178 ii 5, 179 ii 3, 234 iii 5, 236 v 2, 238 ii 2, 239 ii 3, 244 ii 4, 245 iii 5, 246 iii 1, 247 iii 1 and iv 3; 248 ii 4, 250 iii 3, 251 ii 3, 252 iii 5, 253 iv 5, 263 i 4, 265 v 6, 277 vi 4, 287 iv 2, 312 iii 6; RTC 69 i 4 and ii 4; TSA 28 vi 4, 43 v 2, 46 ii 3; VAT 4613 (Or. No. 16, p. 47) vi; VAT 4825 (Or. No. 20, p. 31) iii, VAT 4865 (Or. No. 9, p. 326) ii. In all these instances the verbal form is šu-a bí-gi₄, "he (the subject is named in the immediately preceding lines) handed over (the objects listed)"; the prefix bí- recapitulates the locative element -a in the complex šu-a.

AWLU 51 ii 5; Nik. 220 rev. iii 3: šu-a bí-gi₄-a, "(the išakku) who turned over (the oxen)."

AWLU 113 ii 4: nu-kiri₆-ke₄-ne šu-a bí-gi₄-àm, "it (the quantity of fruit listed in the first column) is that which the gardeners have turned over."

Nik. 93 iii 6, with the verbal form šu bí-gi₄-a-a. From this one example it is impossible to decide whether it is a miswriting for šu-a bí-gi₄-a-a or, as is rather unlikely, a verbal compound šu—gi₄ is intended. For an analysis of the verbal form cf. the comment on si-bé-sá-a in n. 11.

[19] DPr 159 vii 12: šag₅-šag₅-dam-uru-ka-ge-na-lugal-lagašu^{ki}-ka-ke₄ é-munus-a bí-kú, "Šagšag, the wife of Urukagina the king of Lagash, caused them to eat (the foods enumerated) in the house of the Lady"; the prefix bí- takes up the locative -a of the complex é-munus-a.

[20] DPr 409 vi 5, 410 viii 6, 411 iii 2, 413 vii 5, 414 v 5, 420 iii 3, 421 ii 4, 431 viii 3, 432 x i, 433 viii 2, 436 x 6, 437 x 4, 450 vii 8, 453 i 3, ii 3 and 6, and iii 1, 470 iii 4; TSA 26 vii 9; VAT 4734 (Or. No. 16, pp. 38ff.) viii; VAT 4778 (Or. No. 16, p. 3) v; VAT 4831 (Or. No. 16, pp. 38f.) vi. In all these 22 cases the verbal form is na-bí-ri (in only one instance [DPr 429 iii 6] is it written na-bé-ri), "he removed(?) (the wood)." The meaning of the compound verb na—ri(g) is doubtful, since the meaning of its first component, the word na, is altogether unknown. Nevertheless, the fact that the verbal form usually takes the dimensional thematic particle bí- (or imi- [for a list of occurrences see AS No. 2, p. 38], which in all probabil-

ity is merely a phonetic variant for bí-) indicates that the verbal root ri(g) was related dimensionally either to the preceding na (the latter being therefore grammatically na(-a) or na(-e)) or, if n a is the direct object of ri(g), to the preceding giš-complexes. Note that in the three cases where we find the simple prefix used with the verb na —ri (i.e., n a-ì-ri; cf. AS No. 2, p. 38), the latter is a passive verbal form; cf. the comment on giš-bé-tag in n. 12.

²¹ Ent., Cones A and B i 11: ki-ba na-bí-rú, "in that place he (Mesilim) erected a stele"; the prefix bí- takes up again the locative element -a of ki-ba (gram.: ki-b(e-)a).

Eann., Stone E i 7, iv 19; Stone F v 6; AO 4442 (NFT, p. 216) ii 6. In all these examples the verbal form is na-bí-rú-a. If we examine the text of Stone F first, we find that the passage reads: na-me-silim-e-na-bí-rú-a e-an-na-tu[m-e] nu-bí-DIB na-rú-a-bé ki-bé bí-gi₄, "The stele which Mesilim had erected there Eannatum did not break up(?) (there); this stele he returned to its place." It is very probable that in Stone E, which ends with the relative clause na-me-silim-e-na-bí-rú-a (iv 18f.), the sentence should be continued as in Stone F; it ends where it does only because the scribe had no more room. Similarly, the passage in AO 4442, whose extant text reads [n[a(!)-me-silim-e-[n]a-bí-rú-a [e]-an-[na]-tum-me . . . . (the remainder of the column is broken) is probably to be restored according to the text of F. For the verbal form bí-DIB cf. n. 26:1; for the pronunciation of the vowel in our verbal root rú as compared with that of the root usually transcribed ru in the compound a —ru, "to dedicate," cf. the comment on a-bé-ro in n. 26:2.

²² DPr 57 vi 9: é-a giš-bí-sì (meaning and construction uncertain); cf. with é-a ì-sì (DPr 223 ix 5).

²³ Ent., Cones A and B i 29: ˢᵃšuš-gal bí-šuš, "He (Ningirsu) threw the *šuškal*-net over them (the Ummaites)."

AWLU 55 iii 4, 127 vii 4, 145 iii 2, DPr 212 iii 3, 214 iii 5, 239 iii 4, 240 iii 2, 244 iii 2; Nik. 182 ii 5, 183 ii 5, 184 ii 5, 185 iii 4, 186 iii 2, 187 ii 3, 190 ii 5, 195 iii 2, 196 v 4, 201 ii 4, 202 iii 4, 209 iii 3, 217 ii 5; RTC 39 vi 3, 45 iii 2; VAT 4803 (Or. No. 20, p. 20) iii; 4841 (Or. No. 20, p. 26) ii(?). The verbal form in all these cases is ZAG-bí-šuš; the meaning is still uncertain. As the constant use of the prefix bí- with the compound verb ZAG —šuš indicates (note that in the four cases where the simple prefix is used [i.e., ZAG-ì-šuš; cf. AS No. 2, p. 42], the latter is a passive verbal form; cf. the comment on giš-bé-tag in n. 12), the verbal root šuš was related dimensionally either to the preceding ZAG (the latter therefore being grammatically ZAG(-a) or ZAG(-e)) or, if ZAG is the direct object of šuš, to the preceding complex describing the various animals. Thus, if for purposes of illustration only we read the sign ZAG as zag and take the meanings usually attributed to zag and šuš, i.e., "side" and "throw" respectively, the literal meaning of zag-bí-šuš would be either "he threw

them (the animals listed) on the side" (the sign ZAG, therefore, having here the longer value zaga or zage) or "he threw the side on them (the animals listed)." While the grammatical construction is therefore clear enough, the actual meaning of the verbal form is altogether obscure, since the meaning of each of its components is quite uncertain.

²⁴ AO 4598 (NFT, p. 213): mà-e a-na bí-tuku, "As for me, what (guilt?) have I concerning it?" Note that the phrase "concerning it" approximates the dimensional meaning of the prefix bí-.

²⁵ DPr 135 xv 11: uru-ka-ge-na-lugal-lagašuᵏ¹-ke₄ é-gal-la zag-bí-us, "Urukagina, the king of Lagash, caused (the men listed) to stand side by side in the palace." In this verbal form the prefix bí- probably takes up the locative element of the complex é-gal-la (gram.: é-gal-a).

²⁶ The following verbal forms introduced by the prefix bɪ- have been omitted:

1. nu-bí-DIB (Eann., Stone F v 8). For the passage in which this verbal form is found, cf. the comment on na-bí-rú-a in n. 21. The translation "he did not break up (there)," though far from certain, suits the context; note that the first of the acts which led to a war with Uš, the *išakku* of Umma, consisted of the latter's breaking up the stele which Mesilim had erected to mark the boundary line between Umma and Lagash. The verbal form there used for "he broke up" is í-PAD (for a discussion of the reading and meaning of PAD, cf. AS No. 2, pp. 8ff.); the verbal form bi-LU may therefore have a parallel meaning.

2. a-bé-ro, "he (she) dedicated (the objects listed) then (during and because of the feast named in the lines immediately preceding the subject)" (DPr 69 iv 4, 70 iv 4, 71 iii 7). The verbal root ro has hitherto been written and pronounced as ru by Sumerologists (i.e., it has in no way been differentiated from the root rú whose meaning is "to erect (a stele)." Note, however, that while the prefix bɪ- is always written as bí- (i.e., with BÍ) before the latter, it appears as bé- (i. e., it is written with BI) before the former. The conclusion is clear: the verbal root for "to erect" was pronounced ru, i.e., with the close vowel u; the verbal root for "to dedicate," however, was pronounced rŏ, i.e., with the open vowel ŏ. For other examples of verbal forms for which the syllabaries attest the vowel u, but whose actual pronunciation in classical Sumerian, as proved by the fact that the simple prefix, when immediately preceding them, appears as e- rather than as i-, was really ŏ, cf. AS No. 2, pp. 5f. As in the case of gi₄ and ge, ri and ré (cf. pp. 5—7), our conclusions with regard to ru and rŏ, based on the law of vowel harmony and applied to documents written at a time when, and at a place where, Sumerian was the spoken language, enable us to reduce considerably the number of so-called homophones in Sumerian, at least for the classical period.

3. TUN.KARA-b é-sì (Eann., Vulture Stela, rev. vii 1 and 3, ix 2; Stone A iii 14, 20, and 24, iv 9, 11, and 13, vii 2; Stone B iii 13 and 19, iv 3, 11, 13,

and 15; Brick B [and its four duplicates, CT, Vol. IX, Bricks 85977—80] ii 5, 7, 9, and 11; Mortar B i 2; Clay Inscription [VAS, Heft 1, No. 1] ii 1, 3, 5, and 7; Brick [D. D. Luckenbill, Inscriptions from Adab (Chicago, 1930) 32] ii 4 and 6; AO 4238 [NFT, p. 52; letter to Enetarzi] obv. iii 4) and TUN.KARA - b í - s ì (Eann., Brick A iii 7, iv 3 and 7, v. 3; Clay Inscription [VAS, Heft 1, No. 4] iii 3, iv 4). The verbal form TUN.KARA—s ì means "to vanquish" (lit., "to give(?) [a city, district, etc. or individual(s)] to(?) the TUN.KARA"). Since both bé- and bí- are found as prefixes, the verbal root was evidently pronounced by some scribes as s ì -, i.e., with the close vowel i, by others (to judge from the extant texts, the majority of the scribes) as s ĕ, i.e., with the open vowel ĕ. This conclusion had already been reached by Poebel, who in his study of the simple prefixes had noticed that while in Ent., Cones A and B iii 14, the verbal form i - ni - s ì occurs, the scribes of Šarrukin, who were still guided in their orthography by the principle of vowel harmony, wrote e - né - s ì.

4. b í - š ı d, "he counted (the beams) there (in the house)" (DPr 438 iv 2, 441 iv 1). The Sumerian verbal root for "to count" was pronounced both š i d and š ed in our period (cf. AS No. 2, p. 7); the scribe of DPr 438 and 441, as can be seen from the fact that he used the prefix b í - before it, pronounced it š i d.

5. š u - b é - IDIM, "he made heavy(?) (his) hand there" (Uruk., Clay Tablet i 9 and 11, ii 1, 3, 6, and 13, iii 4 and 12, iv 12, v 5, vi 8, vii 2); preceded in all cases by a dimensional complex ending with the locative element - a, which is recapitulated by the prefix b é -. Note that, while both the meaning and the reading of the verbal form b e - IDIM are still in doubt, at least this is certain: the vowel (or vowels) which it contained was (or were) open in character. Thus, if it should prove that the reading IDIM is correct, the latter in our period was pronounced ĕ d ĕ m, not i d i m.

[27] Outside of classical Sumerian, the facts concerning the bı- prefix are as follows:

1. In the Fara texts (cf. AS No. 2, pp. 24f.) there are no verbal forms beginning with bı-.

2. In the inscriptions of Ur-Nanše (cf. AS No. 2, pp. 23f.) the only verbal form beginning with bı- is bé-p à d, a form in which the use of bé- is quite in agreement with the law of vowel harmony governing it in the classical period, although, obviously enough, no final conclusions are to be drawn from this lone form.

3. In the inscription on the Nippur vases of Lugalzaggisi (of AS No. 2, p. 21) no verbal forms beginning with bı- are found.

4. In the Sumerian inscriptions of Šarrukin of Akkad from Nippur (cf. AS No. 2, p. 20) we find no verbal forms beginning with bé- and only three beginning with bí-; these are bí-gi₄ (HGT 34 iii 36), b í - s ì (in the compound TUN.KARA - bí - s ì [UPUM, Vol. XV, No. 41 v 5]), and bí-kĕš (*ibid.* v 13). In the use of bí- before the roots gi₄ and kĕš this tablet

follows the law of vowel harmony of the classical period; cf. the occurrences of bí-gi₄ listed in n. 18 and those of í-kēš (the root kēš preceded by the prefix bᵻ- has thus far not been found in texts of the classical period) given in AS No. 2, p. 36. For the root sᵻ cf. the comment in n. 26:3; yet, from the fact that the same tablet twice uses the verbal form e-ne-sᵻ, one might have expected the prefix to be written bé-.

5. In the texts from Umma, which date approximately from the time of Šarrukin (Nik., Part 2, Nos. 1–89), the law of vowel harmony still governs the use of the simple prefix. Thus, just as in the classical, so in these later texts the simple prefix appears as ĕ- in the following verbal forms: e-ak-éš (*ibid.* 22:7), e-gen-na (*ibid.* 20 ii 3, 7, and 8, and 49 obv. 6), e-lá (*ibid.* 51:7, 52: 4), e-na-ba (*ibid.* 49:10), e-na-lá (*ibid.* 56:5 and 60 ii 5), e-na-sᵻ (*ibid.* 54:7), e-da-ak (*ibid.* 59:6 and 61:12), e-da-gál (*ibid.* 61:4 and 8); the simple prefix appears as ᵻ- in the verbal form ᵻ-du-du (*ibid.* 53 i 7). That the feeling for vowel harmony may, however, have been weakened to some extent in this period is indicated by the verbal forms ᵻ-ak (*ibid.* 76 iv 9 and 77 iv 5; cf. with e-ak-éš above and with e-ak *passim*, with one exception, in the classical period) and ᵻ-gál (*ibid.* 33:8; cf. with e-gál *passim* in the classical period). Moreover, the fact that the only verbal form beginning with bᵻ- to be found in these texts is written bí-ra (*ibid.* 21:21), instead of the expected bé-ra (cf. the examples of the classical period cited in n. 10), points in the same direction, although obviously our material is too limited for definite conclusions.

6. In the tablets from Tello dated in the reigns of Naram-Sin and Šar-kali-šarri (cf. AS No. 2, p. 22), we find no verbal forms beginning with bᵻ-; undoubtedly, however, the scribes of that period, who, as is attested by the fact that they write the simple prefix as ᵻ- in all cases, had already abandoned the principle of vowel harmony, wrote the prefix bᵻ- as bí-, never as bé-.

7. In the Sumerian inscriptions of the Gudea, Ur III, and post-Sumerian periods (note that unless otherwise specified the term "Sumerian" refers to the eme-ᴋᴜ dialect only) the prefix bᵻ- is, with negligible exceptions, written as bí; the form bé-, like the form ĕ- of the simple prefix, has practically disappeared from use.

²⁸ AWLU 64 v 3, 139 i 4; DPr 553 iii 2; etc.

²⁹ DPr 164 iv 5, 165 iv 2, 166 iii 6; etc.

³⁰ Nik. 297 i 4.

³¹ Uruk., Clay Tablet (DC, Pl. LI) obv. i 3; RTC 20 ii 3.

³² RTC 21 ii 5.

³³ Ov. Pl. ii 20 and 27.

³⁴ Nik. 36 iii 2.

³⁵ Eann., Stone A iii 12; Stone B iii 11; Brick A iii 5.

³⁶ Eann., Stone E i 6 and iv 18; Stone F v 5.

³⁷ RTC 19 iv 1; cf. with the writing nin-izkim-ti (*ibid.* ii 1), in which

the subject element is attached to the following apposition, dam-ensí-adaba^{ki}-ka-ke$_4$ (gram.: dam-ensí-adaba^{ki}-k-ak-e).

[38] Nik. 168 iii 4, 172 iv 2, 173 vi 6, etc.

[39] Nik. 154 ii 5, 174 i 5, 185 iv 1, etc. For the reading sipad-dè (not sib-bí, as is usually erroneously assumed) cf. Poebel in *Studia Orientalia* I (1925) 116–24. Moreover, it is more than likely that the final consonant of the Sumerian words for officials which are written with the signs ŠUL and ÀB.KU was *d*; cf. n. 62.

[40] Eann., Vulture Stela, obv. vi 4, xvi 13, xvii 21, etc. The final syllable me of é-an-na-tum-me in all these cases has nothing to do with the 1st person pronoun, as some translators have erroneously assumed; it is merely a variant orthography for é-an-na-tum-e, with the difference that in the latter orthography the scribe uses DU with its longer value tum (hence only the vowel *e* follows), while in the writing é-an-na-DU-me he attributes the shorter value tù to DU and hence adds the syllable -me.

[41] Ent., Cones A and B iii 35 and iv 10. In both cases the phrase is e-ki-sur-ra .... a-e ì-mi-è, "he emptied the boundary ditch of water" (lit.: "he caused the boundary ditch to go out *at*[or *over*] the water"; note the use of the dimensional prefix imi- to recapitulate the locative -e of a-e).

[42] Eann., Vulture Stela, obv. ix 1. Note that the locative -e in this case corresponds to the locative particle -šè in the complex giš-UR-UR-šè found in Ent., Cones A and B iii 10.

[43] AWLU 156 iv 4.

[44] Nik. 39 vi 7.

[45] Ov. Pl. i 14.

[46] Nik. 234 iii 2, 255 iii 4, 276 v 5, etc.

[47] AWLU 173 i 4; DPr 132 i 3, 133 i 6; TSA vi 6. In all cases the text reads: en-ig-gal-nu-banda dam-šangu-^{d}nanše-ka-ra e-né-ba-e, "Eniggal, the *laputtu*, will give (the substances mentioned) to the wife of the *šangu* of Nanshe." As the postposition clearly indicates, the infix -nĕ- is not to be taken as a locative particle but as a phonetic variant of the dative infix -na-. The change from -na- to -nĕ- took place in the pronunciation of the future form, where, because of the added -e, the stress was most likely on the syllable ba. In the preterite, however, where the infix -na- received whatever stress the Sumerians gave to the word, the form is always e-na-ba (cf. the numerous examples in AS No. 2, pp. 26f.).

[48] Eann., Vulture Stela, obv. vi 15.

[49] Eann., Vulture Stela, obv. xvii 18, rev. ii 9 and v 31.

[50] AO 4153 (NFT, p. 181) i 2; meaning of passage quite uncertain.

[51] Ent., Cone B vi 41.

[52] Eann., Vulture Stela, rev. iii 7.

[53] Ent., Cones A and B vi 20.

[54] Nik. 162 ii 2; RTC 46 v 5.

[55] Nik. 93 iii 3.

[56] Eann., Mortar Inscription A iii 2 and 4, v 6 and 7.

[57] Eann., Vulture Stela, obv. vi 16. The meaning is uncertain; the passage immediately following is almost completely broken away.

[58] Whether in the post-classical Sumerian periods too the possessive pronouns were actually *pronounced* bĕ and nĕ or, under Semitic influence, were pronounced bi and ni, it is as yet impossible to decide. For from the fact that starting with the later part of the Sargonid era the simple prefix became i- and the dimensional prefix bɪ- became bi-, the only certain conclusion which can be drawn is that those particles whose variant pronunciation with ĕ or i depended on the law of vowel harmony became i-when the law, because of Semitic influence, became inoperative. Since, however, the vowel ĕ of the possessive pronouns -bĕ and -nĕ was never subject to the law of vowel harmony which changed the prefix vowel from ĕ to i, it might seem reasonable, at least on the surface, to conclude that it remained unchanged even to the latest of the post-Sumerian periods; cf., however, n. 90, where factors that justify the opposite conclusion are outlined.

Similarly, the vowel ĕ which represents (a) the subject element, (b) the locative element, (c) the first element of the plural ending -ĕne, or (d) the characteristic element of the present-future endings, when not combined with a preceding consonant is written as e in the Sumerian of all periods, never as i. For the possibility that this writing with e is historical and does not represent the actual pronunciation of the vowel in the period following classical Sumerian, cf. n. 90. On the other hand, the infix -nɪ-, which in classical Sumerian was pronounced both ni and nĕ, depending on the character of the vowel of the root (AS No. 2, p. 15), was undoubtedly pronounced ni only in those periods when the simple prefix was no longer pronounced e or i but i only and the prefix bɪ- was no longer pronounced be or bi but bi only.

[59] Note that in classical Sumerian the same relationship which exists between the long syllable nĕ represented by NE and the short syllable nĕ represented by NI in all likelihood exists between the syllable bĕ represented by PI and the syllable bĕ represented by BI; i.e., the e of the former is a *long* open vowel (cf. AS No. 2, pp. 16ff.), while the e of the latter is a *short* open vowel. As for the postclassical periods, there seems to be at least one period in one locality in which PI interchanges with BI. In the Sargonid texts from Nippur, published by Barton, UPUM, Vol. IX, Part I, and by Pohl, TMH, Vol. V, the 3d person neuter possessive pronoun is written with PI (i.e., be$_6$) as well as with BI (i.e., bé). Cf. in UPUM, Vol. IX, Part 1, inim-BI (No. 4 ii 3) with inim-PI (No. 4 ii 13), lú-ki-inim-ma-BI-me (Nos. 8:24, 12:19, 13:26, etc.) with lú-ki-inim-ma-PI-me (Nos. 4 iii 7, 5 iii 12, 7 iv 9, etc.), ki-lá-BI (No. 6 i 4, 6, and 8; No. 10'i 3, 5, 7, and 11 and ii 1 and 5) with ki-lá-PI (No. 5 i 11, 13, and 15; No. 33 i 4), nig-šám-

BI (Nos. 8:4 and 52:13) with nig-šám-PI (No. 7 ii 6); cf. also TMH, Vol. V, Nos. 58, 59, 67, 73, 87, etc. Since in the Sargonid texts from Lagash and Umma and in texts from Nippur itself outside of the Sargonid period the use of PI for the 3d person neuter possessive pronoun is not found, it is reasonable to conclude that the reading be (whose vowel is the short open ĕ) for PI never became a fully recognized feature of Sumerian orthography.

[60] That both the subject element -ĕ and the first ĕ of -ĕne are short is obvious from the fact that they are regularly absorbed by a preceding vowel (cf. GSG §§ 138 and 344).

[61] Nik. 23 xiii 6, 143 ii 4; RTC 47 i 9, iii 5, vii 9, viii 6. In all examples except Nik. 143 the formula is N. gen-né, grammatically gen-e, i.e., the intransitive participle followed by the subject element. Thus if we use Nik. 23 as an illustration the text reads: munus-lagašu$^{k\,i}$-šè gen-né giš-bé-tag, "the Lady (i.e., Baranamtarra) coming to Lagash brought as a sacrifice (the flower etc.)." This construction is closely paralleled by all the other examples listed above except Nik. 143, where, to judge from the verbal form e-na-dug$_4$, "she assigned to him," one would have expected gen-ra rather than gen-né.

[62] DPr 25 ii 4, 73 ix 1, 77 iv 1, etc. The form en-en-né-ne, at least on the surface, seems to be a plural with the connotation of totality corresponding to such forms as dingir-dingir-ré-ne; i.e., it consists of the reduplicated form of the noun, to which the plural ending -ĕne is added (cf. GSG § 144).

The realization that the value nĕ of the sign NE contains a *long* vowel and therefore can never represent the final consonant of a preceding word combined with (a) the subject element -ĕ, (b) the locative element -ĕ, (c) the first e of the plural ending -ĕne, or (d) the ĕ which characterizes the endings of the present-future, is of no small practical importance, especially when it is further realized that the vowel ĕ of the syllable -dĕ, which is another common value of the same sign NE, is a *short* vowel and that this syllable -dĕ may and frequently does represent the final d of a preceding word combined with the vowel ĕ of any of the grammatical particles just listed. Thus we do not know as yet the Sumerian word for the official represented by the sign ŠUL. Since, however, when the latter is the subject of a transitive verb it is followed by NE (Nik. 221 ii 3, 227 iii 2, 229 iii 5, etc.), it is obvious that the latter, which represents a syllable consisting of the final consonant of the word represented by ŠUL and the subject element -ĕ, is to be read not nĕ (for, as noted above, the vowel ĕ of the syllable -nĕ represented by the sign NE is *long*) but dè, and the sign ŠUL must therefore represent a word which ended in d. Similarly, despite the fact that the syllabaries give the readings unù and utul for the sign AB.KU, the facts that it is followed by NE when it is the subject of a transitive verb (Nik. 248 ii 3, 251 ii 3) and that its plural is written AB.KU-NE-ne (Nik. 250 iii 2,

253 iii 4, 257 iii 4, etc.) indicate that the word represented by ÁB.KU, too, must have ended in *d*. It is not impossible, therefore, that the sign ÁB.KU, unless it represents a still altogether unknown word for "shepherd" ending in *d*, is to be read un u(d); i.e., the value unù given for the sign by the syllabaries may represent a longer value un u d whose final consonant has been dropped.

Differentiation between the long syllable ně represented by NE and the short syllable ně represented by NI is continued as a regular feature of the Sumerian of all periods. Thus when such words as an, nun, en are followed by a subject element, the resulting complex is written either as an-e, nun-e, en-e or as an-NI (i.e., an-né), nun-NI (i.e., nun-ně), en-NI (i.e., en-né), but never as an-NE, nun-NE, or en-N E. Similarly, when the vowel which characterizes the endings of the present-future (as well as the ě of the present-future element -ěd-) is combined with the final *n* of verbs ending in *n*, such as gin, "to stand form," or gěn, "to go," the resulting syllable ně is written not with NE but with NI. To take an example which illustrates excellently the practical application of this rule, the verbal form ba - e - d è - NIGIN-NE - eš in a recently published Gilgamesh text (U 9364 [= RA XXX 128f.] rev. 60 and 62) cannot be read ba - e - dè - nigin-ne - eš, for the syllable -ně would in that case have been written with the sign NI. On the other hand, the dative infix -ně-, "to them," and the ně of the pronominal forms -ěně, ě-ně-ně, etc., which has a *long* open vowel, is written not with NI but with NE.

[63] DPr 114 xviii 3, 115 xviii 4, 121 xiv 3, etc.

[64] Ent., Cones A and B iv 23. The subject complex starts with Il (*ibid.* l. 19) and ends with the reduplicated active participle dug₄-dug₄-ge (gram.: dug-dug-ě).

[65] Nik. 219 ii 1; šag₅-šag₅-ge is the subject of the transitive verbal form e-na-ba (*ibid.* l. 4).

[66] UET I, No. 1 v 4.

[67] Eann., Small Column (DC, Vol. XLIV) i 6.

[68] Cf. n. 7.

[69] Uruk., Cones B and C iii 14, viii 25; Ov. Pl. i 6 and 8.

[70] Uruk., Cones B and C xi 31, xii 11.

[71] Cf. AS No. 2, pp. 34f.

[72] Cf. n. 18.

[73] The distinction between GI and GI₄ remains a regular feature of Sumerian orthography of all periods. Thus the syllable gě which results from combination of the final *g* of a word with the vowel ě of a following grammatical element is always written with GI; the verb gi, "to return," on the other hand, is regularly written with GI₄, although because the two signs resemble each other the sign GI is occasionally found for the verb gi, "to return," in the very latest post-Sumerian period. For the possibility that this distinction was due to historical writing, i.e., that it appears only

in the orthography and not in the actual pronunciation of the two signs in the periods following classical Sumerian, cf. n. 90. It is interesting to note, moreover, that at times in the post-Sumerian period, though very infrequently, the syllable $gĕ$ which results from combination of the final g of a verb with the following $ĕ$ of a grammatical particle is represented by the sign KI, e. g. in such verbal forms as $bí\text{-}sig_{10}\text{-}ge_5$ (BE, Vol. XXXI, No. 54:28) and $ù\text{-}bí\text{-}in\text{-}sig_{10}\text{-}ge_5\text{-}eš$ (UPUM, Vol. I, Part 2, No. 98 obv. 7); cf. especially $kalam\ US\text{-}a\ sig_{10}\text{-}ge\text{-}dè$ (SRT, No. 52 obv. i 3) with $kur\text{-}kur\ US\text{-}a\ sig_{10}\text{-}ge_5$ (CT, Vol. XXXVI, Pl. 30, 1. 23).

[74] AWLU 118 ii 2; DPr 163 v 10; Nik. 90 iii 3; etc.

[75] AWLU 188 iv 4; DPr 553 iii 2; Nik. 184 i 5; etc.

[76] DPr 417 ii 6.

[77] RTC 17 rev. viii; VAT 4746 (Or. No. 9, p. 59).

[78] Ov. Pl. iv 12.

[79] Ent., Cones A and B i 3; Uruk., Cones B and C iv 9 and 14; Ov. Pl. iii 29.

[80] Ov. Pl. i 15; AWLU 175 iii 3.

[81] DPr 487 i 3.

[82] DPr 25 ii 6; meaning unknown.

[83] Ov. Pl. ii 13.

[84] *Ibid.* iii 9.

[85] Eann., Vulture Stela, rev. v. 41.

[86] Uruk., Cones B and C iv 18. For analysis of the form cf. Poebel in AJSL L 157, n. 8.

[87] Cf. AS No. 2, p. 38.

[88] Cf. *loc. cit.*

[89] Cf. n. 20.

[90] With the end of the classical period the distinction between RI and Rí, quite unlike that between GI and GI_4, disappears, or at least begins to disappear, as a feature of Sumerian orthography. Thus as early as Lugalzaggisi, the contemporary of Urukagina as well as of Šarrukin, we find the form $mu\text{-}tar\text{-}ri\text{-}eš\text{-}a$, "(the good fate) which he caused them to decree for me" (cf. the analysis of the form by Poebel in AJSL L 157); i.e., RI is used where Rí would have been used in classical Sumerian. For the period between Lugalzaggisi and Gudea, because of insufficient material nothing conclusive can be stated in regard to distinction between the two signs. Beginning with the Gudea inscriptions, however, and continuing through Ur III as well as the post-Sumerian periods, not only is RI used for the value ri (e.g., for ri(g), "to remove"), but it regularly represents the syllable $rĕ$ which results from combination of the final r of a word with the vowel $ĕ$ of a following grammatical element, i.e., the syllable which in classical Sumerian is represented by Rí.

In attempting to explain this phenomenon we are confronted with two possibilities. Either (*a*) in the Sumerian of the post-classical periods

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beginning with Gudea ʀɪ had not only the value ri, as in the classical
period, but also the value rĕ, which according to all indications it did *not*
have in the classical period; or (*b*) the actual pronunciation of the syllable
transcribed above as rĕ, resulting from the combination of a final *r* of a
word with the vowel of a following grammatical element which when not
combined with a preceding consonant is regularly written with ᴇ even in
the post-classical Sumerian periods (cf. n. 58), was ri (not rĕ). If, as is
not unlikely, the second possibility should prove correct, it would support
the assumption that the writing of ᴇ in the post-classical Sumerian periods
for (*a*) the subject element, (*b*) the locative element, (*c*) the first vowel of
the plural ending -ĕne, or (*d*) the vowel which characterizes the present-
future is the result of historical orthography and that it was actually pro-
nounced i (cf. n. 58), and that, similarly, the distinction between ɢɪ
and ɢɪ₄, which remains a regular feature in all post-classical Sumerian
texts, did not hold in the pronunciation, but was also the result of historical
orthography.

Nor would it be at all surprising to find that this vowel, which had been
pronounced as a broad open ĕ by the Sumerians of the classical inscriptions,
had changed by the time of the beginning of the latter half of the Dynasty
of Akkad to the close vowel *i*. For this is but another illustration of the
same gradual shift in pronunciation (for its historic background cf. AS
No. 2, pp. 22f.) which took place in connection with (*a*) the simple prefix,
(*b*) the locative infixes -mɪ- and -šɪ-, and (*c*) the dimensional prefix bɪ-,
which in the classical Sumerian period were pronounced respectively ĕ
as well as i, mĕ as well as mi, šĕ as well as ši, bĕ as well as bi, but beginning
approximately with the second half of the Dynasty of Akkad were pro-
nounced i, mi, ši, bi only. It is true that while, in the case of the four particles
just listed, with the change of pronunciation there is also a corresponding
change in the orthography (i.e., the simple prefix is written with ɪ̀, not
with ᴇ; -mɪ-, -šɪ-, and -bɪ- are written with mɪ, šɪ, and bɪ́ respectively,
not with ᴍᴇ, šᴇ̀, and bᴇ́), on the other hand the vowel which represents
(*a*) the subject element, (*b*) the locative element, etc., is written with ᴇ
even down to the latest post-Sumerian period. Obviously, however, this
difference in the orthographic development is due to the fact that the
simple prefix, the infixes -mɪ- and -šɪ-, and the prefix bɪ- were written
with ᴇ, ᴍᴇ, šᴇ̀, and bᴇ́ only when pronounced ĕ, mĕ, šĕ, and bĕ; when,
because of the law of vowel harmony, they were pronounced i, mi, ši, and
bi, the signs used even in classical Sumerian were ɪ̀, mɪ, šɪ, and bɪ́. When,
therefore, following the classical period, the pronunciation ĕ, mĕ, šĕ, and
bĕ began to disappear altogether and i, mi, ši, and bi gradually became
the only pronunciation, it was only logical that the signs which had until
then been used for these four particles when so pronounced, i. e., the signs
ɪ̀, mɪ, šɪ, and bɪ́, should continue to be so used. On the other hand, the
vowel ĕ which represents (*a*) the subject element, (*b*) the locative element,

etc. was never pronounced i in the classical period; in that period, therefore (when not combined with a preceding consonant), it was never written with I but always with E. It would not be at all unexpected, therefore, to find that even when the pronunciation had shifted to i, the historical orthography, i.e., the use of E for this vowel, which had originally been pronounced ĕ but which was now pronounced i, remained in vogue. The same explanation might be given for the use of GI, which in classical Sumerian had only the value gĕ, for the syllable resulting from the combination of this vowel with a preceding g, a syllable which had originally been pronounced gĕ but which after the shift in pronunciation had taken place was pronounced gi. What would still remain unexplained, however, is the failure of the historical orthography to continue in the case of the syllable resulting from the combination of this vowel with a preceding r, a syllable which had originally been pronounced rĕ but, if the assumptions outlined above hold true, was pronounced ri in post-classical Sumerian. In other words, why, in post-classical Sumerian, was RI substituted for the sign Rí of classical Sumerian?

[91] In post-classical Sumerian, too, and even in the inscriptions of the post-Sumerian periods, the usual eme-KU orthography regularly distinguishes between each pair of signs listed in this table, with the exception of RI and Ré; cf. the preceding note.

[92] AS No. 2, p. 15.

[93] Nik. 164 iv 1; cf. AS No. 2, p. 37.

[94] Nor is it possible as yet to arrive at any definite conclusions concerning the relationship between the syllable ḫe represented by ḪI and the syllable ḫe (written ḫi-e) which according to the post-Sumerian syllabaries was one of the values of the sign GAN. This is quite certain, however: in the texts of the classical period as well as in those of the post-classical periods which were written in the eme-KU dialect, GAN was not used to denote the syllable resulting from the combination of a final ḫ with the vowel ĕ of a following grammatical element; nor, on the other hand, was ḪI used to represent the optative particle ḫe-. Moreover, it must be noted that certain indications point to the possibility that the consonant contained in the syllable ḫe, given by the syllabaries as one of the readings of the sign GAN, may at least more originally have been pronounced more like g than ḫ. Thus the optative particle ḫe- (always written with GAN in the eme-KU dialect) appears as dĕ- in the eme-SAL; and if this latter should prove to be but a dialectal variation of ḫe-, rather than a special particle in no way related to it (cf. GSG § 651), one might have expected the eme-KU form to be gĕ- rather than ḫe-, since the equation eme-KU g = eme-SAL d in the beginning and middle of a word is known from other examples (cf. GSG § 80). Note too that the optative particle for the first person is ga-, beginning with g.

[95] To be sure, hitherto the sign KIT, when representing this combination,

has been almost universally read as ge by Sumerologists; but the only reason for this transliteration, instead of the expected and more natural reading ke, is probably the syllabary equation KIT = gi-e. Note, however, that the syllabaries also give the value ki (written ki-i). That the reading ke has not yet been found in syllabaries is no doubt accidental, since the post-Sumerian syllabaries in giving the readings for a sign frequently fail to differentiate between the vowels i and ĕ. The following table compares the values given by the syllabaries for some of the signs tabulated on p. 7 with values for the classical period as known from contemporary sources.

Sign	Value in Classical Sumerian	Values Given by the Syllabaries
𒀹	bĕ (not bi)	bi-i, bi-e
𒁲	di (not dĕ)	di-i, di-e
𒉈	dĕ (not di)	di, di-e, dé-e
𒄀	gi (not gĕ)	gi-e
𒈨	mi (not mĕ)	me-e
𒅆	šĕ (not ši)	ši-i, še-e

[96] Eann., Vulture Stela, rev. i 21. The verbal form ba-ra-ak-ke₄ is the 1st person singular present-future (not 3d person); it is part of the oath of the Ummaites beginning with rev. i 11.

[97] That the verb written AG was pronounced ak and not ag in classical Sumerian is shown by the verbal form e-da-ak-ka-am₅ (Uruk., Clay Tablet, rev. iii 3), "(the sins) which he (the Ummaite) had committed against him (Ningirsu)," as well as by the verbal form ak-ka (Ent., Brick C iv 14), "of (Entemena) the maker (of the é-maḫ)," which is grammatically ak-a(k). If the final consonant were g, the root would have been followed by GA instead of KA. It is interesting to note that in the inscriptions of the post-Sumerian period where the root represented by AG is followed by a grammatical element beginning with a vowel the root and the following vowel are usually kept distinct (e.g., ... AG-a, ... AG-e, ... AG-en, ... AG-eš) — a fact which would indicate that the root represented by AG ended in a vowel. Moreover, when followed by the present-future element -ĕd, the root represented by AG usually absorbs the initial ĕ of this particle (cf. among others such writings as ḫa-ba-AG-dè [SRT, No. 17 ii 7], ḫe-AG-dè [BE, Vol. XXXI, No. 29 obv. 5], AG-dè [UPUM, Vol. X, Part 2, No. 11 rev. 7 and 8, the sign DÈ being on the tablet according to Dr. Chiera's collation; SRT, No. 6 rev. iii 5, and its duplicate, SRT, No. 7 obv. 16; BE, Vol. XXXI, No. 3 obv. 3]); again, therefore, the orthography points to the conclusion that the root ended in a vowel. As far as is known to me, we have only one example in which the scribe of a post-Sumerian

text seems to have treated the root represented by the sign AG as though it ended in *g*: ì-ag-gi-eš (VAS, Vol. II, No. 35 ii 3).

[98] Ov. Pl. ii 30, iii 4.

[99] Ent., Cones A and B iv 34, vi 19.

[100] Ent., Cones A and B iii 34.

[101] Ov. Pl. iii 3.

[102] Uruk., Cone A iv 5 and 6, Cones B and C iii 7 and 9. The root of the word is udul. The *l* is dropped unless it is followed by a grammatical element beginning with a vowel; hence ú-du-bi, "their shepherd" (Ent., Cones A and C viii 19).

[103] Lugalzaggisi, Vases ii 29; included here, although this text belongs to the transition period between the classical and postclassical Sumerian.

[104] What has been said of the use of the signs ḪI, KIT, and LI during the classical period holds true for the Sumerian of the postclassical periods; i.e., they represent the syllables ḫĕ, kĕ, and lĕ respectively. For the possibility, however, that the actual pronunciation of these syllables was ḫi, ki, and li, cf. n. 90.

[105] Cf. AS No. 2, pp. 40, 43, and 45.

[106] Nor do the texts of the post-classical Sumerian periods offer any additional criteria for the readings of these three signs.