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Early Linguists

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Abstract

This article was written to draw attention to the earliest serious linguistic documents in existence: a set of sophisticated bilingual Sumerian-Akkadian paradigms dating to the early 2nd millennium BC, when Sumerian was dead or dying as a spoken language. The fascinating material is relevant for the early history not only of linguistics, but of history of science in general.

1. Introduction.

The tablet collection of the Oriental Institute of the University of Chicago contains a remarkable set of five closely knit Old Babylonian bilingual Sumerian-Akkadian verbal paradigms, totaling almost 900 lines, dating to the early second millennium BC, when Sumerian was dead or dying as a spoken language. These sophisticated texts are by far the earliest serious grammatical documents in existence. Their relevance to the history of science – more precisely: the history of linguistics – is comparable to, or even surpassing, that of the mathematical texts of the same period to the history of mathematics. Regrettably, these texts are hardly known outside of Sumerological circles and deserve wider publicity. This article was written with the hope to remedy the situation.

Modern science – more precisely: the modern presentation of science – follows the discursive style inspired by Greek role models such as Aristotle, Euclid and Ptolemy. Pre-Greek learning does not know this style, it relies on lists, examples and recipes. In early philosophy (“wisdom literature”) the principal vehicles of communication were proverbs and parables, in mathematics exemplary solutions of selected problems, and in astronomy the so-called procedure texts. In the Sumerian and Old Babylonian philology of the late third and early second millennium BC we have lexical lists, collections of stock phrases, and most remarkably, the above-mentioned bilingual verbal paradigms.

While collections of stock phrases merely demonstrate knowledge of the languages, these paradigms go beyond: they demonstrate active linguistic interest in the grammatical structure of the two languages. The paradigms come about as close to comparative linguistics as is possible within a non-discursive approach. In distinction to traditional comparative linguistics, which operates within a family of related languages, we have here a structural comparison of unrelated languages: Akkadian is an inflecting Semitic language, while Sumerian is an agglutinating language with no known ancient or modern relatives; for a conceivable relation to Uralic languages see Parpola (2016)^[7].

To avoid potential misunderstandings I should emphasize that the focus of this paper is not on the Sumerian language flourishing in the third millennium BC, but on its streamlined grammatical understanding developed by ancient scholars at a time when it was dying as a spoken language. Back then, an Akkadian speaking student, learning Sumerian grammar assisted by bilingual paradigms, would have enjoyed the benefit of oral comments from his teacher. The modern reader is at a clear disadvantage.

The systematic thinking of the Old Babylonian linguists and the sophisticated construction underlying the paradigms are worthy of our admiration. By discussing a few selected, easily accessible grammatical features, I shall try to give an impression into what depths a carefully designed paradigmatic approach can advance, but also of its limitations. I hope to have been able to present the

difficult, somewhat recalcitrant material in a form digestible by a modern reader even if he is not familiar with Sumerian and Akkadian. To assist him, I have complemented the quoted passages of the paradigms with an English translation of the Sumerian forms and with an indication of the grammatical structure of the Akkadian ones.

2. The texts.

The relevant paradigms are published in MSL IV (1956)^[6] as OBG T VI-X. These five texts are of unknown provenience; they are preserved in the tablet collection of the Oriental Institute of the University of Chicago and form a closely knit group. They throw a sharp spotlight on a narrowly focused aspect of Sumerian grammar: verbal morpho-syntax. Their concern is not entirely accidental: the analysis of verbal structure is regarded as the most difficult and controversial part also of modern Sumerian grammatical study. Closely related material can be found in the Ur Excavation Texts UET 7, which in particular offer another recension of OBG T VII, and in a unilingual OB paradigm (N3513+N3592) from Nippur, see Black (1991: 137-143, 155-158)^[1]. All these texts have been treated extensively by Black and more recently by Huber (2007)^[3], (2008)^[4], (2018)^[5]. I have made a considerable effort to extract the grammatical structure, *as it was understood by the Babylonians*, from these texts alone. Thereby, I have hoped to steer clear of unwarranted modern preconceptions (of whose dangerously misleading influence I had become aware during my work with Babylonian mathematics, where we originally had overrated the role of algebraic thinking). This self-contained approach necessitated paying close attention to the design underlying the paradigms, and it revealed an astonishing amount of systematic, sophisticated grammatical information the Old Babylonian scholars had packed into them. My last-mentioned essay (2018)^[5] contains the full text of the above paradigms, together with detailed analyses and English translations. Claims made in the following without further attribution refer to that essay.

On the tablets, the paradigms are arranged in parallel columns, with Sumerian forms on the left and Akkadian ones on the right. The paradigms are subdivided into paragraphs, that is, into groups of a few consecutive lines of text, separated by a horizontal dividing line. The internal structure of these paragraphs is based on Akkadian conjugation. Most paragraphs have 3 lines, in the order: 3rd, 1st, 2nd person subject. With non-indicative forms, the order is reversed: imperative(2nd), volitive(1st), precativ(3rd).

Three of the paradigms (OBGT VI, VII and X) exhibit strictly organized grid structures, the other two are somewhat less disciplined. It is clear from OBG T VI that the underlying grids are based on the two-case (dative-accusative) Akkadian structure rather than on the richer Sumerian one. The grids are supplemented by inserts, highlighting features that did not fit into the straitjacket of an Akkadian-based grid. I have called these inserts “didactic”, since the paradigms apparently originate out of the Sumero-Babylonian school system. This is confirmed by an Old Babylonian letter to the *ummiānum* (“scholar”, “teacher”) whose author writes that he will go to the school and read and correct a tablet, which by its first word is identified as the paradigm we shall discuss in the next section; see Huber (2018: 9)^[5].

It is remarkable that the paradigms seem to put special emphasis on precisely those aspects that still are controversial in modern Sumerian grammars. This concerns in particular the so-called conjugation prefixes (see Section 7). Apparently, they were regarded as difficult 4000 years ago. Were these questions controversial already then?

3. An intransitive verb.

We begin the discussion with the largest text OBG VII, which on 318 lines treats an intransitive verb: Sumerian gen/du, Akkadian *alākum* = “to go”. Table 1 should give an impression of the layout of such a paradigm. It is quoted here from the Ur recension, the first paragraphs of the Oriental Institute version are broken off. The text on the tablet is highlighted.

OBGT VII. Non-indicative forms: imperative, volitive, precative				Akk. structure	
§1	1	gen-am ₃	<i>al-kam</i>	come!	– G V Ni
	2	ga-am ₃ -gen	<i>lu-ul-li-kam</i>	may I come!	
	3	ḫe ₂ -em-du	<i>li-il-li-kam</i>	may he come!	
§2	4	gen-am ₃ -še	<i>al-ka-aš-šum</i>	come to him!	3D G V Ni
	5	ga-am ₃ -ši-gen	<i>lu-ul-li-ka-aš-šum</i>	may I come to him!	
	6	ḫe ₂ -em-ši-du	<i>li-li-ka-aš-šum</i>	may he come to him!	
§3	7	gen-am ₃ -mu-še	<i>al-kam a-na še-ri-ya</i>	come to me!	1D G V Ni 2D 2D
	8	ga-mu-e-ši-gen	<i>lu-ul-li-ka-ak-kum</i>	may I come to you!	
	9	ḫe ₂ -mu-e-ši-du	<i>li-li-ka-kum</i>	may he come to you!	
§4	10	gen-am ₃ -ma	<i>at-la-kam</i>	come away!	– Gt V Ni
	11	ga-am ₃ -ma-gen	<i>lu-ut-ta-al-kam</i>	may I come away!	
	12	ḫe ₂ -em-ma-du	<i>li-it-ta-al-kam</i>	may he come away!	
§5	13	gen-am ₃ -ma-še	<i>at-la-ka-aš-šum</i>	come away to him!	3D Gt V Ni
	14	ga-am ₃ -ma-ši-gen	<i>lu-ut-ta-al-ka-aš-šum</i>	may I come away to him!	
	15	ḫe ₂ -em-ma-ši-du	<i>li-it-ta-al-ka-aš-šum</i>	may he come away to him!	
§6	16	gen-am ₃ -ma-mu-še	<i>at-la-kam a-na še-ri-ya</i>	come away to me!	1D Gt V Ni 2D 2D
	17	ga-am ₃ -mu-e-ši-gen	<i>lu-ut-ta-al-ka-ak-kum</i>	may I come away to you!	
	18	ḫe ₂ -em-mu-e-ši-du	<i>li-it-ta-al-ka-ak-kum</i>	may he come away to you!	
§7	19	gen-ni	<i>a-lik</i>	go!	– G – Ni
	20	ga-gen	<i>lu-ul-lik</i>	may I go!	
	21	ḫe ₂ «-en»-du	<i>li-il-lik</i>	may he go!	
§8	22	gen-en-ši	<i>a-lik-šum</i>	go to him!	3D G – Ni
	23	ga-en-ši-gen	<i>lu-ul-lik-šum</i>	may I go to him!	
	24	ḫe ₂ -en-ši-du	<i>li-lik-šum</i>	may he go to him!	
§9	25	gen-ba	<i>at-la-ak</i>	go away!	– Gt – Ni
	26	ga-ba-gen	<i>lu-ut-ta-la-ak</i>	may I go away!	
	27	ḫa-ba-du	<i>li-it-ta-la-ak</i>	may he go away!	
§10	28	gen-ba-ši	<i>at-la-ak-šum</i>	go away to him!	3D Gt – Ni
	29	ga-ba-ši-gen	<i>lu-ut-ta-la-ak-šum</i>	may I go away to him!	
	30	ḫa-ba-ši-du	<i>li-it-ta-la-ak-šum</i>	may he go away to him!	

Table 1. The first ten paragraphs of OBG VII (taken from the Ur recension, UET 7, 100). They cover Non-indicative forms (Ni): imperative, volitive, precative. An analysis of the Akkadian structure is given on the right: Person and case of the object, Akkadian stem (G or Gt), ventive or non-ventive. Line 21 contains a scribal error, the expected ḫe₂-du is given in the parallel texts. I use hyphens to connect transliterated cuneiform signs when they form part of a word.

Already this small excerpt of 30 lines illustrates several relevant points. Both languages possess a so-called ventive construction, in Akkadian involving the elements /am/ (sg.) and /nim/ (pl.), and in

Sumerian the marker /m/, all expressing a direction towards “me”, “here”. Thus, in Table 1 the ventive “come!” of §1 (literally: “go here!”) corresponds to the non-ventive “go!” of §7.

In §2 and §8 a 3rd person indirect object is added to the ventive and non-ventive constructions of §1 and §7. The Akkadian side suffixes the dative pronoun *šum*, in §2 assimilating the m of the ventive to š. The Sumerian side adds the compound element /n-/š*i*/, consisting of the 3rd person pronoun /n/ and the terminative case marker /š*i*/; the latter sometimes is written /š*e*/. Thus the morphology of line 4 is /gen/-/m/-/n-/š*i*/, where /gen/ is the verbal base “to go”, /m/ the ventive marker, /n/ the 3rd person pronoun, and /š*i*/ the terminative case marker. In §2 /n/ is elided, but note that in §8 it is spelled out. See the discussion of spelling problems in Section 4.

The verbal root of Akkadian verbs usually consists of three consonants. However, *alākum* is a so-called weak verb, whose first consonant has become invisible. The consonants carry the basic meaning of the verb, to be modified by vowels and inserts. The Akkadian t- (or ta-) infix is inserted after the first of the three radical consonants; it generally expresses a change of direction. The paragraphs §9 and §10 show that in non-ventive constructions it is matched by the Sumerian prefix /ba/; we shall denote it as “separative” and mechanically render it by “away” in our translations. A comparison of ventive and non-ventive forms shows that the ventive /m/ and the separative /ba/ in §4 to §6 combine to /m/-/ba/ > /mma/.

Furthermore, a comparison of the first six imperatives (lines 1, 4, 7, 10, 13 and 16) shows that the Sumerian form in line 16 should be analyzed as /gen/-/m/-/ba/-mu/-š*i*/, where /gen/ is the verbal base “to go”, /m/ the ventive, /ba/ the separative, /mu/ the 1st person pronoun and /š*i*/ the terminative case “to”. Interestingly, by using a double m in line 7, and through separating the ventive and the 1st person pronoun by the separative /ba/ in line 16, the Old Babylonian grammarians clearly treat various usages of m-morphemes very systematically and syntactically different from modern Sumerian grammars. The latter do not separate the ventive-m from the m of the 1st person pronouns /mu/ (sg.) and /me/ (pl.), nor from that of the conjugation prefix /mu/ (for non-ventive use of the latter in the paradigms see Section 7).

In principle such differences may be due to errors (on either side), or more likely to differences between the underlying language material – the modern grammars are based on a diachronic and synchronic hodge-podge of unilingual written documents, the ancient paradigms perhaps on a scholarly oral tradition. But possible concerns about artificiality and normative over-systematization of the grammar under scrutiny do not really matter for us, who are not concerned with the language spoken by native Sumerians, but with the theoretical edifice built by the ancient grammarians. The closer one looks, the more astonishing it is into what details a sophisticated non-discursive approach can advance, despite the intrinsic limitations caused by the structural differences between Sumerian and Akkadian.

For example, the Akkadian language does not distinguish between the 1st person singular dative and the ventive, while the Sumerian language apparently does. The resulting problem is illustrated in OBT VI by a pair of paragraphs containing Sumerian and Akkadian 1st and 2nd person singular dative constructions. Thus, 1st person singular datives occur in the first line of the *non-ventive* paragraph VI§13, but in the parallel *ventive* VI§15 (where the Akkadian column would have to display an impossible dative + ventive combination) the corresponding line is omitted. In OBT VII, where the Akkadian dative is paired with the Sumerian terminative, the same problem is resolved in a slightly different fashion. In order to distinguish the Akkadian of line 7 from line 1, the OB grammarians here emphasize the goal by adding “*ana šēriya*”, literally “to my back”. But this device is used only with imperatives. With analogous present and preterite tense constructions they omit the line with the 1st person terminative and show only the ventive version.

Such subtleties become visible only because the grid of the paradigm is complete. With a total of 292 lines the regular part of OBG VII covers all combinations: singular and plural subjects (all three persons), no object and dative objects (all three persons, singular and plural), ventive and non-ventive, separative and non-separative constructions, and among the aspects non-indicative (imperative, volitive, precative), present and preterite tense. It is complete subject to the following three restrictions: it omits semantically impossible self-references, it requires the ventive when the motion is toward a 1st or 2nd person, and it avoids 1st person singular objects, except with imperatives.

In addition to this regular part there are 26 lines of inserts. One insert covers stative constructions, highlighting a difference between Sumerian and Akkadian: in Sumerian a non-resultative verb like “to go” admits a stative, indicated by the prefix /an/, while in Akkadian it does not (and therefore in its place the Akkadian column in VII§14 uses an ordinary present tense: an-du = *illak* = “he goes”, in contrast to the Akkadian stative used in VI§29: an-gar = *šakin* = “he/it is placed”). Another insert illustrates that Sumerian does *not* use the ventive when the motion is *away from* a 1st or 2nd person (VII§71: ba-me-du = *ittallak niāti* = “he goes away from us”, with the Akkadian accusative, to be contrasted with the preceding regular ventive entry: VII§70: am₃-ma-me-du = *ittallakam niāsi* = “he comes away to us”, with the Akkadian dative). It follows that here the views of the Old Babylonian grammarians pointedly disagree with those of their modern colleagues. The latter identify the m of the 1st person pronouns (sg. /mu/ and pl. /me/) with the ventive and therefore claim that 1st person automatically requires ventive, see Edzard (2003: 93)^[2].

A careful reader may have noticed that in Table 1 volitive and precative use different verbal bases. See Section 7 for a brief discussion of the usage of such bases.

4. Phonology and dialectal(?) variability.

The material accessible through the paradigms does not allow us to dig into the Sumerian phonology assumed by the Old Babylonians. The cuneiform writing system is deficient and in particular cannot express consonant clusters. In the transliterations of cuneiform texts the subscripts serve to separate homophonous signs, but have no phonetic significance. Though, there are a few sparse glimpses. The paradigms give the impression that the cuneiform sign /am₃/ sometimes is used to express a syllabic m (like the m in English “bottom”). The stative prefix alternatively is written /a/ or /an/; this may suggest nasalization, and therefore I normalize it as /ã/. Furthermore, the paradigms show that a morphological /bi₂/ after labial + vowel is dissimilated to /ni/, see Huber (2018: 44)^[5].

There sometimes are substantial differences of spelling between the recensions. For example, the two recensions of VII§35 mirror the Akkadian *alkaniššum* = “come(pl.) to him!” with:

ga₂-a-mu-un-še-en-ze₂-en (Oriental Institute recension, line 99),

gen-am₃-ši-ze₂-en (Ur recension, UET 7,101, ii 42).

The grid and the Akkadian translation make it clear that the underlying common Sumerian morphology must be: /gen/-/m/-/n/-/ši/-/enzen/. Here, /gen/ is the verbal base “to go”, /m/ the ventive prefix, /n/ the 3rd person pronoun, /ši/ the terminative case marker, and /enzen/ the 2nd person plural pronoun. We cannot know for sure whether the differences are dialectal or merely in spelling, or between theoretical (logographical/morphological) and phonetic writings. As a rule verbal bases are written logographically (so that phonetic variations mostly remain invisible), while for prefixes and suffixes syllabic writings are used. But for example, ga₂-a- could be the phonetic rendering of a morphological gen- when it precedes m. Elision of /n/ is very common. The conclusion is that we can rarely distinguish whether a seemingly absent morpheme really is absent, or invisible because it has been assimilated or elided, or omitted because of inadequacies of the cuneiform representation.

5. Comparing widely different languages.

A side effect of the non-discursive, paradigmatic nature of the presentation is that only such structural features can be dealt with effectively as have approximate correspondences in both languages. It is interesting to see how the OB grammarians cope with this problem, and the subterfuges they use.

For example, Akkadian distinguishes two genders, male–female, and assigns grammatical gender to inanimate things somewhat arbitrarily. Sumerian has a different two-way split between characteristic themes /n/ and /b/, variously, but inaccurately, analyzed by modern authors as animate–inanimate, or as human–non-human, or as person–non-person.

The paradigms approach this as follows. First, they simply omit female pronouns. Second, they use a surrogate split: definite–indefinite, choosing the 3rd person suffixed Akkadian pronoun (accusative *-šu*, dative *-šum*) for rendering /n/, and no pronoun for rendering /b/. In actual language use, this comes quite close to a person–non-person split: in an Akkadian sentence context a human personal pronoun almost inevitably is definite, since it refers to a person mentioned beforehand. Moreover, we note that in “true” Sumerian /b/ also can be used when referring to a group of human beings, especially when its members not are important as separate individuals. One should keep in mind that there is a fundamental difference between how Akkadian and Sumerian verbal pronouns are used in the sentence context. At least in principle, the Akkadian pronomial suffixes are true *pro-nouns*, used as substitutes for the nouns to which they refer, while the Sumerian pronomial prefixes pick up and recapitulate relationships expressed in the nominal part of the sentence.

In my English translations of these paradigms I approximate the split by rendering /n/ with “he”, “him”, and /b/ with “someone”, “it”.

Curiously, in the paradigms the Akkadian accusative pronouns never are used for referring to a direct object. Instead they are used in a comitative or in an ablative sense (“with him” or “away from us”), or to refer to a subordinate subject (“make him do it”).

6. Transitive verbs.

OBGT VI treats the transitive Sumerian verb *gar* = Akkadian *šakānum* = “to place, to put”, while OBGT X is concerned with Sumerian *gub* = Akkadian *izuzzum*, *uzuzzum* = “to stand”. Curiously, also *gub* is treated like a transitive verb, apparently as “to set up”. The regular grids of the two paradigms agree, except that OBGT X only gives the first line of each paragraph. But VI offers more inserts. A comparison of the two paradigms was the crucial ingredient that helped to recognize the common grid and to separate the inserts from the grid.

The forms without, or with 3rd person Akkadian indirect objects, are strictly ordered: the paragraphs alternate between non-causative (G) and causative (Š) forms, and three such pairs, without objects (–), accusative objects (3A) and dative objects (3D) are grouped together. Forms with 1st and 2nd person indirect objects are treated more loosely, they may have been added as afterthoughts. The first lines of two such six-tuplets are shown here as illustrations:

VI§1	gar-ra	<i>šukun</i>	place (it, or yourself?)!	Ni	G		–
VI§2	gar-bi ₂ -ib ₂	<i>šuškin</i>	make someone(bi ₂) place it(b)!	Ni	Š		–
VI§3	gar-ra-an-da	<i>šukuššu</i>	place (it, or yourself?) with him(n-da)!	Ni	G		3A
VI§4	gar-ra-ni-ib ₂	<i>šuškiššu</i>	make him(ni) place it(b)!	Ni	Š		3A
VI§5	gar-ra-na-ab	<i>šukuššum</i>	place it(b) for him(na)!	Ni	G		3D
VI§6	gar-ra-na-ni-ib ₂	<i>šuškiššum</i>	make him(ni) place it(b) for him(na)!	Ni	Š		3D

VI§66	ma-an-gar	<i>iškunam</i>	he(n) put (it) here	Pt	G	V	–
VI§67	ma-ni-in-gar	<i>ušaškinam</i>	he(n) caused someone(bi ₂ >ni) to put (it) here	Pt	Š	V	–
VI§68	ma-da-an-gar	<i>iškunaššu</i>	he(n) put (it) with him(da) here	Pt	G	V	3A
VI§69	ma-di-ni-ib ₂ -gar	<i>ušaškinaššu</i>	someone(b) caused him(ni) to put it with him(di) here	Pt	Š	V	3A
VI§70	ma-ši-in-gar	<i>iškunaššum</i>	he(n) put (it) to him(ši) here	Pt	G	V	3D
VI§71	ma-ši-ni-in-gar	<i>ušaškinaššum</i>	he(n) caused him(ni) to put (it) to him(ši) here	Pt	Š	V	3D

Note that the Akkadian accusative sometimes is rendered by a Sumerian comitative (da, di), sometimes by a subordinative (ni), and the Akkadian dative sometimes by a Sumerian dative (na), sometimes by a terminative (ši). The Akkadian causative Š-stem is mirrored by a Sumerian subordinate subject, here either an impersonal /bi₂/ or a personal /ni/. If both an indirect object and a subordinate subject occur together, the former is put first and is referenced by the Akkadian suffixed pronoun, as in VI§6, §69 and §71. Note that in VI§68 to 71 the /n/ of the 3rd person indirect object is elided.

But the most remarkable feature of the two paradigms VI and X is that they provide a clear account of the Old Babylonian view of the so-called conjugation prefixes. These constitute the most controversial part of modern Sumerian grammars. No two Sumerologists appear to agree fully on their form, meaning, etymology and identity; the number of ranks that they occupy is equally disputed.

The systematic central part of the grid, ranging from VI§29-71, provides an admirably clear segmentation of these “conjugation prefixes”. This part of the grid treats the indicative forms in six separate groups of six paragraphs each.

From the point of view of the Akkadian grid structure each group covers the six possible combinations of non-causative and causative, no object, accusative object and dative object in regular alternation: G, Š, G-3A, Š-3A, G-3D, Š-3D, as illustrated above. The six groups themselves are concerned with, in this order:

	Akkadian:	Sumerian:
§29-34:	Stative	prefixes /ã/, /ba/
§36-43:	Preterite	prefix /i ₃ /
§44-49:	Preterite	prefix /mu/
§50-55:	Preterite + t-stem	prefix /ba/
§58-63:	Preterite + t-stem + ventive	prefix /mma/ (written im-ma-)
§66-71:	Preterite + ventive	prefix /m/ (written ma-)

Apart from an insert inside of the /i₃/-group (§37-39), there are some inserts between the groups (§35, §56-57, §64-65). The Sumerian conjugation of the preterite groups is of the infix type: it places the subject marker immediately before the base /gar/, while the stative group uses suffix conjugation: it places the marker immediately after it. For more on the two types of conjugation see Section 8.

The first lines of the last group (§66-71) have been printed above, the other groups use different prefixes, but otherwise are basically the same. The Akkadian renderings do not distinguish between the Sumerian prefixes /i₃/ and /mu/.

This gives a total of nine conjugation prefixes in three triples:

stative (/ã/, (/al/), /ba/), main (/i₃/, /bi₂/, /mu/), directional (/m/, /ba/, /mma/).

In the stative triple, /ã/ indicates a straight stative and /ba/ a stative/passive, mirrored by an Akkadian causative; /al/ does not occur in OBGT VI (but in VII and VIII) and therefore has been put in parentheses. In the main triple /bi₂/ occurs in a subtle insert inside the /i₃/-group (§37-39). Seemingly

the nine prefixes are considered to be mutually exclusive – at least they are treated as such in the paradigms.

In OBG VI and X the spellings mu- and ma- pointedly mirror non-ventive and ventive Akkadian forms: VI§44: mu-un-gar = *iškun* = “he placed it”, VI§66: ma-an-gar = *iškunam* = “he placed it here”). But the situation is delicate. We posit the underlying morphemes as /mu/ and /m/ respectively, with and without an adjoining vowel, for the following reason. In our paradigms the morpheme /mu/ reflects an Akkadian non-ventive transitive construction and always is spelled mu-. On the other hand, the morpheme /m/ corresponds to an Akkadian ventive, but it admits a variety of Sumerian spellings: am, im, ma or mu, all containing an m; see Section 8 for an explicit example where it is spelled mu-. This suggests that the vowel is not part of the ventive morpheme. Presumably the vowel represents nuances that are lost in the Akkadian rendering – here we are reaching the limitations of an approach to grammar through bilingual paradigms.

The /bi₂-insert (§37-39) follows the regular §36 and is among the subtlest inserts in our paradigms. It deserves a separate discussion.

VI§36	i ₃ -gar	<i>iš-ku-un</i>	he(n, elided) placed it(∅)	Pt	G		
	i ₃ -gar	(<i>aškun</i>)	I(∅) placed it(∅)	Pt	G		
	i ₃ -gar	(<i>taškun</i>)	you(e, assimilated) placed it(∅)	Pt	G		
VI§37	bi ₂ -in-gar	<i>iš-ku-un</i>	he(n) placed it(∅)	Pt	G		
	bi ₂ -gar	(<i>aškun</i>)	I(∅) placed it(∅)	Pt	G		
	bi ₂ -gar	(<i>taškun</i>)	you(e, assimilated) placed it(∅)	Pt	G		
VI§38	bi ₂ -ib ₂ -gar	<i>u₂(!)-ša-aš-ki-in</i>	he(∅) had it(b) placed	Pt	Š		
	bi ₂ -ib ₂ -gar-re-en	(<i>ušaškin</i>)	I(en) had it(b) placed	Pt	Š		
	bi ₂ -ib ₂ -gar-re-en	(<i>tušaškin</i>)	you(en) had it(b) placed	Pt	Š		
VI§39	mi-ni-in-gar	<i>u₂-ša-aš-ki-in</i>	he(∅) had him(n) placed by someone(ni<bi ₂)	Pt	Š		
	mi-ni-in-gar-re-en	(<i>ušaškin</i>)	I(en) had him(n) placed by someone(ni<bi ₂)	Pt	Š		
	mi-ni-in-gar-re-en	(<i>tušaškin</i>)	you(en) had him(n) placed by someone(ni<bi ₂)	Pt	Š		

The sign ∅ here is used to indicate empty (i.e. not merely elided or assimilated) markers; this concerns in particular suffixed 3rd person direct objects and infixes 1st person subjects. Parenthesized forms correspond to blanks in the Akkadian column; in most cases they can be filled in easily and unambiguously. In the absence of a teacher’s comments my morphological analyses and English translations of the Sumerian forms admittedly must remain somewhat conjectural.

After §36, in analogy to the parallel mu-prefix form in §45 (which has mu-ni-in-gar = *ušaškin*, standing for a morphological *mu-bi₂-in-gar, with dissimilation bi₂ > ni after labial + vowel) one would have expected the i₃-prefix form

i₃-bi₂-in-gar = *ušaškin* = he(n) made someone(bi₂) place it(∅)

with infix conjugation (that is, the Sumerian pronoun mirroring the Akkadian subject is infixes).

Instead, the insert illustrates three contrasts. The first is between §36 and §37, it shows that the Akkadian of the paradigm cannot distinguish between the prefixes /i₃/ and /bi₂/. But the mere fact of the juxtaposition of these two paragraphs indicates that the OB grammarians were aware of some semantic difference.

The second, between §37 and §38, remarkably switches not only to the Akkadian causative, but also to the Sumerian suffix conjugation, that is, the Sumerian pronoun mirroring the Akkadian subject now is suffixed. Why this shift? Perhaps a question of focus is involved, shifting the focus from an impersonal agent “he made someone place it” to the object being placed: “he had it placed”?

The crux of the morphological interpretation sits in the infixes marker /b/. We first note that the Akkadian uses the preterite tense. But in Sumerian, preterite tense suffix conjugation indicates intransitivity, see Section 8. In view of the Akkadian causative, the Sumerian construction thus ought

to be interpreted as an intransitive causative construction of a transitive verb. It follows that the infix /b/ cannot be a direct object, but must be interpreted as rendering the subordinate subject.

It appears that in our paradigms the infix markers have the following typical functions:

- transitive subject in preterite tense transitive constructions
- direct object in present tense or non-indicative transitive constructions
- subordinate active subject in intransitive constructions of intransitive verbs
- subordinate passive subject in intransitive constructions of transitive verbs

The last two correspond to English constructions of the type “have someone run” and “have someone placed”, respectively. Our interpretation of §38 matches the fourth case.

The third contrast between §38 and §39 is non-trivial. Apparently, the morphology of §39 is /bi₂/- /bi₂/- /n/- /gar/- /ø/, with a doubly dissimilated bi₂-bi₂ > bi₂-ni > mi-ni and two(!) subordinate subjects: the infix /n/ is the subordinate subject suffering the action, and /bi₂/ > /ni/ is an impersonal subordinate agent performing the action of placing. The dissimilation /bi₂/ > /ni/ is required because a morphological /ni/ would have resulted in a human subordinate agent and on the Akkadian side in the personal pronoun -*šu*. By the way, the parallel OBG X has the form mi-ni-ib₂-gub with an impersonal subordinate subject /b/.

In passing we note that (together with some forms occurring in §44 and §45) we thus have no fewer than three Sumerian forms rendering Akkadian *iškun* and four rendering *ušaškin*.

7. Tenses: “present” and “preterite”?

Given that the grids are based on Akkadian, it seems appropriate to refer to the tenses by the names “present” and “preterite” customary in today’s Akkadian grammars, and to avoid the approximately coextensive Akkadian(!) terms *marû* (“fat”, “slow”) and *hamtu* (“quick”, “swift”). These terms are used in some Babylonian grammatical lists to distinguish between different Sumerian verbal bases that translate to the same Akkadian verb; they may suggest a dichotomy between durative and punctual, rather than between tenses.

However, a unilingual Sumerian paradigm offers evidence that the “present”, using the *marû* base, relates to an unfinished or future action, and the “preterite”, using the *hamtu* base, to a finished action. Our main paradigms OBG VI-X lack negations. But we first note that, as illustrated in several passages of OBG III, the Sumerian prefixes nu- and na- are mirrored by the Akkadian negative particles *ula* and *la*, respectively. Before verbs *ula* is a straight “not”, while *la* is used in a prohibitive sense. (By the way, the use of *ula*, instead of the common *ul*, is of interest with regard to dating the paradigms, since it may indicate an early-OB origin.) The interesting fact now is that in the unilingual OB paradigm N3513+N3592, which covers the same verb gen/du “to go” as OBG VII, the prefix na- is used with what we have called “present tense”, but is avoided with the “preterite tense”, while nu- is used with both. Since you cannot prohibit a finished action, the conclusion is that the “present” tense refers to an unfinished or future action, the “preterite” to a finished action.

The usage of the different bases is far from straightforward. The present tense of “to go” consistently uses the *marû* bases du (sg.) and su₈ (pl.), while the preterite tense uses the *hamtu* bases gen (sg.) and re₇ (pl.), see some examples in Section 8. But the complexities go beyond a distinction between present and preterite, and some of them have shown up already in Table 1 of Section 3. Thus, the imperative uses gen (both sg. and pl.), the volitive gen and re₇, the precative du and su₈. Perhaps the Sumerian volitive is punctual (“I would like to go”) and the precative durative (“let him keep going”)? To complicate matters, du and gen are written logographically with the same cuneiform sign DU, while su₈ and re₇ both are written with the composite sign DU+DU. Fortunately, the distinctions occasionally become visible through phonetic complements.

8. Split ergativity.

By juxtaposing Akkadian and Sumerian conjugation the paradigms show that the Sumerian verbal system is split ergative. Intransitive constructions show suffix conjugation both in present and preterite tense:

VII§22	ba-du	<i>ittallak</i>	he goes away
	ba-du-un	<i>attallak</i>	I go away
	ba-du-un	<i>tattallak</i>	you go away

VII§32	ba-gen	<i>ittalak</i>	he went away
	ba-gen-en	<i>attalak</i>	I went away
	ba-gen-en	<i>tattalak</i>	you went away

In the present tense the verb “to go” uses the *marû* base /du/, in the preterite tense the *hamtu* base /gen/. The suffixed pronouns for the 3rd, 1st and 2nd person intransitive subject are /ø/, /en/ and /en/, respectively.

OBGT VIII contains a few fully conjugated present and preterite tense transitive constructions of the two-part verb *kas₄ ... du₁₁ = lasāmum* = “to run”. This verb is construed transitively as “do (du₁₁) a running (kas₄)”. In the present tense it uses suffix conjugation:

VIII§15	kas ₄ am ₃ -me	<i>ilassumam</i>	he runs here
	kas ₄ am ₃ -me-en	<i>(alassumam)</i>	I run here
	kas ₄ am ₃ -me-en	<i>(talassumam)</i>	you run here

The morphology is /m/-/b/-/e/-/e/, /m/-/b/-/e/-/en/, /m/-/b/-/e/-/en/, where /m/ is the ventive, /b/ the direct object referring to *kas₄*, the first /e/ the present tense *marû* base corresponding to the preterite tense *hamtu* base *du₁₁*. In transitive constructions the suffixed 3rd person pronoun is not /ø/, but /e/.

But in the preterite tense transitive constructions use infix conjugation:

VIII§19	kas ₄ mu-un-du ₁₁	<i>ilsumam</i>	he ran here
	kas ₄ mu-du ₁₁	<i>(alsumam)</i>	I ran here
	kas ₄ mu-e-du ₁₁	<i>(alsumam)</i>	you ran here

The infixed pronouns for the 3rd, 1st and 2nd person subject are /n/, /ø/ and /e/, respectively. Rather exceptionally, they are spelled out in this paragraph. The suffixed 3rd person direct object marker /ø/ referring to *kas₄* is invisible. Note that the ventive here is written mu-.

The conclusion is that the Sumerian verbal structure exhibits a familiar type of ergative split. Namely: in the preterite, but not in the present tense, they treat the direct object like an intransitive subject by placing it in suffix position.

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