

to be published in *Acta Sumerologica* 22

Structural interference from Akkadian in Old Babylonian Sumerian

Gábor Zólyomi

1. Introduction

In the Sumerian of the third millennium, an intricate system of correspondences existed between the nominal case-markers and the dimensional prefixes of the verbal prefix-chain. In the Old Babylonian period, arguably to a great extent under the influence of Akkadian, the nominal side of this system underwent considerable changes. Aspects of these changes have been treated in several studies on Sumerian¹. I am not aware, however, of any study which also considered the effects these developments had on the verbal prefixes and their correspondences with the nominal case-markers, although if the use of the nominal case-markers changed, it is only to be expected that the use of the dimensional elements in the verbal prefix-chain could not have remained the same. The present paper attempts to describe some of the changes that seem to have occurred in the prefix-chain, focusing on the use of the locative and directive prefixes in the Old Babylonian period.

The paper is organised as follows. First, section 2 gives a short summary of the distribution and functions of the locative and directive prefixes in the third millennium, outlining also their usual correspondences with certain nominal case-markers. This section also discusses some of the grammatical differences between Sumerian and Akkadian which might have influenced the use of Sumerian in the Old Babylonian period. Sections 3, 4, and 5 discuss the changes that occurred in the use of the locative and directive prefixes under the influence of Akkadian. Section 6 gives an analysis of the use of the verbal elements /bi/ and /ni/ in some of the Old Babylonian Grammatical Texts; and finally, section 7 attempts to summarise and evaluate the findings of the paper.

2. An outline of the system in the third millennium

In the third millennium, the grapheme NI was used to write two different morphemes: /ni/ and /n/ + /i/. The locative element /ni/ was unanalysable, while /n/ + /i/ consisted of an animate 3rd ps. sg. pronoun (/n/) and the element labelled “directive” by Krecher (/i/)².

¹ See, for example, Kärki 1967 and Wilcke 1998.

² See Krecher 1985:passim. The element called directive prefix in this paper corresponds more or less to that called “locatif-terminatif” by Attinger (1993:234–240 [§§ 149–152]). One of the differences between his and my description is that I consider the element called “préfixe locale” by him (Attinger 1993:240–247 [§§ 153–154]) to be one of the allomorphs of the directive (see fn. 7

These two morphemes were part of a larger system of dimensional and pronominal elements in the verbal prefix-chain. Table 1 below gives a summary of the distribution of these pronominal (3rd ps. sg.) and dimensional elements. Slots II–V contain the set of verbal elements called dimensional prefixes. There are furthermore two sets of pronominal prefixes: slot I contains the *final personal prefix* (= FPP); slots VI–VII are occupied by the *initial personal prefix* (= IPP)³. The IPP is always attached to the first dimensional prefix of a prefix-chain, and any subsequent dimensional prefix stands without a pronominal element.

VIII	VII	VI	V	IV	III	II	I	
ventive	middle	IPP	dative	comitative	ablative or	directive	FPP	
	prefix or				terminative	or		
	IPP					locative		
/m/	/ba/	/n/	/a/	/da/	/ta/ or /ši/	/i/ or	pronominal	base
		/b/				/ni/	elements	
							referring to	
							A or O	

Table 1

The following description gives an outline of the distribution and functions of the locative and directive prefixes.

Distribution: As Table 1 shows, the locative and the directive prefixes are assumed to occupy the same slot in the verbal prefix-chain, i.e., their distribution was mutually exclusive⁴. There was an important distributional difference between the locative and directive prefixes: if the directive was the first dimensional element in the verbal prefix-chain, then it was preceded by an initial personal prefix (=IPP). In contrast, the locative prefix always stood without an IPP. This difference explains the well-known phenomenon that while *mu-n-a-ni-* (= *mu-n-a-ni-* = *ven-3SG.pr-dat-loc-*) is a well-formed prefix-chain, the prefix-chains **mu-n-a-bi-*

below). I assume that there was a phonemic difference between /ni/ and /n/ + /i/ (cf. also Attinger 1993:236–237 [§ 150, 3°, R. 1], although I admit that I cannot offer a defensible account of this difference. However, I regard Jagersma's theory (p.c.), that the difference was between /ni/ and /nni/, as a real possibility.

³ Final personal prefix and initial personal prefix are the translation of Krecher's *hinteres* and *vorderes Personalpräfix*; see Krecher 1985:133 fn. 1. For more details on Table 1, especially on the complex relationship between the elements of slots VI and VII, see Zólyomi 1999:220–230 (2.1–3).

⁴ Their mutually exclusive distribution is also implied by the fact that when slot II is occupied with a locative prefix, participants which otherwise would be construed with a directive, are construed with a dative prefix instead. For this type of verbal form, see Attinger 1993:199 (§ 129 c), 233–234 (§ 148), 281–282 (§ 182 b), and Zólyomi 1999:238–242 (3.1).

(= mu-n-a-b-i- = ven-3SG.pr-dat-3N.pr-dir-) and * b a - b i - (= b-a-b-i = 3N.pr-dat-3N.pr-dir-) are not, because they would contain two IPPs and that was ungrammatical in the third millennium⁵.

Functions: Both the locative and directive prefixes were used primarily in a local function: they were construed with a verbal participant which functioned as an adverbial of place in the clause. Their meaning, however, was different. The locative /ni/ tended to express such meanings as “inside of”, “into”, while the directive /i/ tended to express such meanings as “on”, “at”⁶:

(1)

e₂ ki-aḡ₂-ḡa₂-ni, e₂-an-na ša₃ ḡir₂-su^{ki}-ka, mu-na-ni-du₃ (Gudea St. C 3.11–13

[Lagaš, 22nd c.]

e kiaḡ-ani eana-ø šag ḡirsu-ak-a mu-n-a-ni-n-du-ø

house beloved-her TN-abs heart GN-gen-loc ven-3SG.pr-dat-loc-3SG.A-build-O

“He (= Gudea) has built her (= Inana’s) beloved temple, the E-ana, for her **in** ḡirsu (lit., in the heart of ḡirsu)”

⁵ Abbreviations used in the analyses in this paper: **A** = subject of a transitive verb (in the glosses represents its marker); **abs** = absolutive case-marker; **aff** = affirmative prefix; **coh** = cohortative prefix; **dat** = dative case-marker or prefix; **dir** = directive prefix; **DN** = divine name; **equ** = equative case-marker; **erg** = ergative case-marker; **gen** = genitive case-marker; **GN** = geographical name; **loc** = locative case-marker or prefix; **lt** = locative-terminative case-marker; **middle** = middle prefix; **O** = object (in the glosses represents its marker); **plur** = plural marker; **PN** = personal name; **pr** = pronominal element; **S** = subject of an intransitive verb (in the glosses represents its marker); **sub** = marker of subordination; **TN** = temple name; **ven** = ventive prefix; **1SG** = first person singular animate; **3SG** = third person singular animate; **3N** = third person inanimate; **3PL** = third person plural animate; * = a hypothetical or unattested form or construction.

In the analyses in this paper, the case-marker *-ra/* will be glossed as dative, the case-marker *-a/* as locative, and the case-marker *-e/* as locative-terminative. The alternative would be to label them according to the marking-patterns listed in Table 2 below (the way they are labelled in Zólyomi 1999). I have decided to use the traditional labels here as the other way would have made it more difficult to follow my argument in the context of the present paper.

In the analytical glosses the IPP is specified according to person and gender (3SG.pr, 3N.pr etc.) and the FPP according to person, gender and syntactical role as agent or object (3SG.A, 3N.O).

⁶ See Wilcke 1988:35 for a similar description of the semantic difference between locative and directive.

(2)

e₂-ḥuš ki ḥuš-ḡu₁₀, muš ḥuš-gin₇ ki šur₂-ra bi₂-du₃ ([2.3.03] Gudea Cyl. A 10.19–20 [Lagaš, 22nd c.]

e-ḥuš ki ḥuš-ḡu-ø muš ḥuš-gin ki šur-a b-i-?-du-ø

TN place fierce-my-abs snake fierce-equ place dreadful-loc 3N.pr-dir-1SG.A-build-

O

“Like a fierce snake, I built E-ḥuš, my fierce place, **on** a dreadful location”

Another important difference between the locative and the directive was that the locative prefix could be construed only with inanimate participants. This might explain why it stood without an IPP. The nominal case-marker of the NP construed with the locative prefix was *-/a/*. In contrast, the directive prefix could be construed either with an inanimate or with an animate participant. The nominal case-marker of the inanimate participant was *-/a/*, and this participant was construed with a directive prefix preceded by */b/*, the 3rd ps. sg inanimate IPP (see example [2] above)⁷. The animate participant was case-marked with *-/ra/*, and was construed with a directive prefix preceded by */n/*, the 3rd ps. sg animate IPP.

Example (3) shows the use of the directive prefix in a local function construed with an animate participant⁸:

⁷ When the directive prefix was preceded by another dimensional element (e.g., by a dative) or by the prefix */ba/* in the prefix-chain (so that it stood without an IPP), and the verbal form was one-participant, then its allomorph was */y/* (see Zólyomi 1999:230 [2.3]; see furthermore Attinger 1999 and Zólyomi 2000). It is this allomorph of the directive that is called “préfixe locale” by Attinger. An instructive example is provided by the following line from Šulgi D (for the reading ay_x of the sign A, see Krecher 1985:135 and fn. 4):

niḡ₂ ki-en-gi-ra ba-ay_x-gu-la kur-ra ga-am₃-mi-ib-gu-ul ([2.4.2.04] Šulgi D 219)

niḡ kiengir-a ba-y-gul-ø-a-ø kur-a ga-m-b-i-b-gul

what GN-loc middle-dir-destroy-3N.S-sub-abs land-loc coh-ven-3N.pr-dir-3N.O-destroy

“Whatever has been destroyed in Sumer, I shall destroy in the foreign lands”

The syntax of the sentence suggests that the verbal forms must contain the same dimensional element, the directive prefix; the two verbal forms, however, contain different allomorphs of the directive (see also fn. 8 below). This morpheme is either syllabic or non-syllabic depending on its phonological and/or morphological environment: after a consonant, it is */i/*; after a vowel in a one-participant verbal form, it is */y/*.

⁸ The idiom *i n i m — ḡ a r* ‘to raise a claim against/for so/sth (lit. to put a case on so/sth)’ is one of the few expressions whose meaning allows the occurrence either of an animate or an inanimate participant construed with the directive prefix. Consider the following three examples. The participant construed with the directive prefix is inanimate in (i), and animate in (ii); their nominal case-markers are *-/a/* and *-/ra/* respectively. In (iii), the directive prefix is not preceded by an IPP because of the presence of the prefix */ba/*.

- (3)
^dnin-^gir-su-ke₄ iri-KA-gi-na-ra anzu₂^{mušen}-gin₇ a₂ bad mu-ni-DU (Ukg. 40 1 [Lagaš, 24th c.]

ni^girsuk-e irikagina-ra anzu-gin a bad- \emptyset mu-n-i-n-DU- \emptyset

DN-erg PN-dat anzu.bird-equ arm open-abs ven-3SG.pr-dir-3SG.A-place-O

“Like the Anzu bird, Ni^girsu has placed his outstretched arms over Irikagina”

In contrast with the locative prefix, the directive prefix was also commonly used in a syntactic function more abstract than its local function: it could be construed with a participant functioning as causee in the causative derived from a two-participant verb or as the second or oblique object of a compound verb. When this participant was inanimate, the nominal case-marker was *-e/*, and the directive prefix referring to it was preceded by */b/*, the 3rd ps. sg. inanimate IPP. When it was animate, the nominal case-marker was *-ra/*, and the directive prefix referring to it was preceded by */n/*, the 3rd ps. sg.1 animate IPP. In (4) the causee is inanimate; in (5) the oblique object is animate:

- (4)
 gu₄ i₃ udu i₃ e₂-e bi₂-dab₅ ([2.3.03] Gudea Cyl. B 5.20 [Lagaš, 22nd c.]

gu i- \emptyset udu i- \emptyset e-e b-i-n-dab- \emptyset

ox fattened-abs sheep fattened-abs house-lt 3N.pr-dir-3SG.A-receive-O

“He (= Gudea) made the temple receive (i.e., allotted to the temple) fattened oxen and sheep”

- (i)
 lu₂-ge-na ab₂-ba inim bi₂-^gar (NSGU 194:31' [Lagaš, 21st c.]

lugena-e ab-bi-a inim- \emptyset b-i-n-gar- \emptyset

PN-erg cow-that-loc claim-abs 3N.pr-dir-3SG.A-place-O

“(Ur-Ninmarki has bought a cow from Abakala.) Lugena raised a claim for that cow”

- (ii)
^migi-sag₉-ga urdu₂ maš-gu-la-ra, i₃-bi₂-la maš-gu-la-ke₄-ne, inim in-ni-^gar^{af}-eš (NSGU 205:2-4 [Lagaš, 21st c.]

igisag urdu mašgula-ak-ra ibila mašgula-ak-ene-e inim- \emptyset in-i-n-^gar-eš

PN₁ slave PN₂-gen-dat heir PN₂-gen-plur-erg claim-abs 3SG.pr-dir-3SG.A-place-3PL.A

“The heirs of Mašgula raised a claim for Igisaga, the slave of Mašgula”

- (iii)
 kug-ba [inim] ba-a-^ga₂-ar (NSGU 212:2 [Lagaš, 21st c.]

kug-bi-a inim- \emptyset ba-y-^gar- \emptyset

silver-that-loc claim-abs middle-dir-put-3N.S

“(It was established that Dinili has bought Agi for 6 shekels of silver.) A claim has been raised for that silver”

(5)

e₂-an-na-tum₂-ra lu₂ ti mu-ni-ra (Ean. 1 9:2-3 [Lagaš, 25th c.]

eanatum-ra lu-e ti-ø mu-n-i-n-ra-ø

PN-dat man-erg arrow-abs ven-3SG.pr-dir-3SG.A-hit-O

“Somebody let an arrow fly at Eanatum”

Table 2 gives a summary of the various marking patterns which involved the use of either the locative or the directive prefix.

pattern	animate		inanimate	
	case-marker	verbal element	case-marker	verbal element
locative	—	—	-/a/	/ni/
directive	-/ra/	/n/ + /i/	-/a/	(/b/) + /i/
oblique	-/ra/	/n/ + /i/	-/e/	(/b/) + /i/

Table 2

There were a number of significant differences between the Sumerian system as shown in Table 2 and the functionally corresponding Akkadian structures. First, as pointed out above, an important contrast existed between the local meanings of the locative and directive prefixes. This distinction corresponded approximately to one between inessive, illative vs. superessive, sublative. In Akkadian, notions of location were commonly expressed with the prepositions *ina* and *ana*. The basic distinction between *ina* and *ana* corresponded to that between locative and allative⁹. There existed therefore no formal distinction in Akkadian corresponding to that between /ni/ and /i/ in Sumerian.

Second, Sumerian distinguished two grammatical genders¹⁰: inanimate vs. animate. The locative prefix was construed only with inanimate participants. The directive prefix was construed with different case-markers depending on the gender of the participant. The Akkadian system of grammatical gender involved a classification on different principles: it distinguished a feminine and a masculine gender.

Third, the directive prefix also played a role in the causative constructions of Sumerian. In the causative form derived from a two-participant verb, it referred to the participant functioning as the causee. In the causative form derived from a one-participant verb, the causee functioned as the object and correspondingly it was construed with a different set of verbal elements: the pronominal elements used for cross-referencing the object of the verb¹¹. In Akkadian causativity was expressed by

⁹ See GAG § 114 c and d.

¹⁰ The term gender is used here in a broader sense than is usual in Assyriology: it refers to any system of noun classes “in which a class to which a noun is assigned is reflected in the forms that are taken by other elements syntactically related to it” (Matthews 1997:248 [s.v. noun class]).

¹¹ See, e.g., example (6) below.

derived stems: by either the Š- or the D-stem, and the choice between the Š- or D-stem was determined by distinctions different from that of the number of participants.

Finally, syntactic relations were usually marked both on the head and on the dependent element in Sumerian. In (6), for example, the syntactic relation between the noun phrase ‘flowery bed’ (the dependent element) and the verb ‘to stand’ (the head) is marked both on the head (with the directive prefix *-/i/-*) and on the dependent element (with the case-marker *-/a/*)¹².

(6)

^{giš}nu₂ gi-rin-na ħe₂-bi₂-in-gub-en ([2.5.04.01] Išme-Dagān A 105 [Isin, 1953])¹³

nu girin-a ħe-b-i-n-gub-en

bed flowery-loc aff-3N.pr-dir-3N.A-stand-1SG.O

‘‘She (= Inana) made me step onto the flowery bed’’

In Akkadian, adverbials of place were usually expressed by prepositional phrases. The verbal form contained no element marking the relation between the verb and the noun phrase governed by the preposition.

Given the number and nature of the differences between the two languages, it would be unreasonable to expect no interference to have occurred when a scribe whose native language was Akkadian used Sumerian. In what follows, I attempt to show that interference did occur and that it was fairly substantial in so far as it eventually led to fundamental changes in the distribution and use of the locative and directive prefixes.

3. Grammatical distinctions missing from Akkadian

In the third millennium, */b/ + /i/* (the directive prefix preceded by the inanimate 3rd ps. sg. IPP) stood in two oppositions to verbal elements written with the sign NI. When NI stood for */n/ + /i/* (the directive prefix preceded by the animate 3rd ps. sg. IPP), the distinction was that between inanimate and animate gender; when NI stood for */ni/*, the distinction was that between directive and locative. In Akkadian neither of these distinctions existed and one can find a number of examples in Old Babylonian texts which show that the Akkadian scribes had difficulties in applying properly distinctions that were lacking in their native language. In the following discussion, an analysis of the third millennium morphosyntax is followed by contrasting examples from the Old Babylonian period.

¹² On head-marking and dependent marking see Nichols 1986 and 1992.

¹³ Literary texts are quoted after the edition of the Electronic Text Corpus of Sumerian Literature (Black et al. 1998–2000); the number in square brackets is the composition’s catalogue number in the corpus. Dates after royal names refer to the accession year of the ruler according to the middle chronology. The numbering of Old Babylonian royal inscriptions follows Frayne 1990.

In the third millennium the verb $k u_4$ ‘to enter’ usually used the locative pattern for marking the place entered. In (7) and (8), the verbal prefix-chain, however, contains /bi/ (regarding the terminative case-marker in (8), see section 4 below).

(7)

e_2 $^d nanna$, $ki u_6$ - di $^l kalam$ - ma - ka ¹, bi_2 - in - $^l ku_4$ ¹ (Sîn-iddinam 12 13–15 [Larsa, 1849])

“He (= Sîn-iddinam) brought it (= a great copper statue) into the house of Nanna, the spectacle of the Land”

(8)

$larsa$ ^{ki-še₃}, im - mi - ku_4 - ra (Rīm-Sîn I 10 36–37 [Larsa, 1822])

“(the booty ...) which I (= Rīm-Sîn) brought to Larsa”

The expression $d u r_2$ — $ḡ a r$ ‘to take one’s seat on sth’ uses the directive pattern for marking the place of sitting¹⁴. In (9) the verbal form contains the locative prefix; the nominal case-marker is probably $-e/$, providing an example of the interchangeable use of the case-markers $-a/$ and $-e/$. In (10), the locative and directive prefixes are each other’s variants.

(9)

u_4 - bi - a $^d iškur$ $diḡir$ - ra - ni , $ḡiṣ$ - gu - za ka - $silim$ - ma - ka - ne_2 , gal - bi dur_2 mi - ni - in - $ḡar$ (Sîn-iddinam 15 68–70 [Larsa, 1849])

“At that time, Iškur, his personal god, grandly took his seat on his throne of glory”

(10)

$^d nin$ - e_2 - gal - la - ke_4 $barag$ za - gin_3 - ba dur_2 an - $še_3$ {Q:} bi_2 - ib - $ḡar$ / {K:} mi - ni - $ḡar$
([4.28.01] Nungal Hymn 36)

“Ninegala takes her seat high on its lapis lazuli dais”

The adverbial expression $ṣ a_3$ - pr / NP - a ‘within (lit. in the heart of) sth’ is usually construed with the locative prefix (see examples [44]-[45] below). In (11) the verbal form uses the directive prefix.

(11)

$ṣ a_3$ - zu - a $eṣ_3$ bi_2 - in - du_3 ([2.5.04.23] Išme-Dagān W, Segment A 65 [Isin, 1953])¹⁵

“He (= Enlil) has built a sanctuary in your (= Nibru’s) midst”

¹⁴ See PSD B, s.v. $bara_2$ 1.8.1.

¹⁵ But cf. Išme-Dagān W, Segment C 16: $ṣ a_3$ - $z u$ - a $s u k k a l$ $^d n u s k a$ - $r a$ $m e m u$ - $n a$ - $n i$ - $i n$ - $ṣ u m$ $_2$ - $m u$ - $u ṣ$ “In your (= Nibru’s) midst they (= Enlil and Ninlil) have given divine powers to Nuska as minister”, where $ṣ a_3$ - $z u$ - a , as expected, is construed with the locative prefix. Note that the reconstruction of Segment A 65 and Segment C 16 is based on different manuscripts: Segment A 65 is based on mss. A and B (U 7744 = UET 6, I, 118; and CBS 10512), while in ms. C the verbal form is broken away; Segment C 16 is based on ms. C (UM 29-15-254).

The expression *na m — tar* ‘to decide so’s fate’ uses the directive pattern to mark the participant whose fate is decided¹⁶. In (12) this participant is inanimate, yet the verbal prefix-chain contains a /ni/:

(12)

nam gal^den-lil₂-le, zimbir^{ki} e₂-babbar-ra mu-ni-in-tar-ra-še₃ (Samsu-iluna 3 20–22 [Babylon, 1749])

“Because of the great fate which Enlil decided for Sippar and the E-babbar”

The verb *u s₂* ‘to be next to so/sth, to reach so/sth’ uses the oblique pattern to mark the participant “reached”, as is also shown by (13). In (14) the verbal form, rather than containing a /bi/ corresponding to the gender of the participant “reached”, has instead a /ni/.

(13)

kar niġin^{ki}-na-ke₄ ma₂ bi₂-us₂ ([2.3.03] Gudea Cyl. A 4.4 [Lagaš, 22nd c.])

“He (= Gudea) moored the boat at the quay of Niġin”

(14)

kar silim-ma-ke₄, ħu-mu-ni-us₂ (Ḫammu-rāpi 12 19–20 [Babylon, 1792])

“I (= Ḫammu-rāpi) made it (= the Euphrates) reach a prosperous quay”

The phrase *s a ġ — i l₂* ‘to raise the head’ uses either /bi/ or /ni/ in its prefix-chain in the royal inscriptions of Larsa and Babylon, without any apparent condition governing the choice:

(15)

saġ-bi mu-ni-in-il₂-iš (Rīm-Sîn I 2 19 // 3 18 [Larsa, 1822])¹⁷

“They (= Kudur-mabuk and Rīm-Sîn) raised its (= the E-me-urur’s) head”

(16)

saġ-bi im-mi-in-il₂, (Rīm-Sîn I 6 30 [Larsa, 1822])¹⁸

“He (= Rīm-Sîn) raised its (the E-ġeštu-šu-du’s) head”

4. The disappearance of correspondence between case-markers and verbal dimensional prefixes

In the third millennium, Sumerian marked syntactic relations both on the head and on the dependent element (cf. example (6) above); fairly consistent correspondences existed between nominal case-markers and verbal elements. In this section I will discuss some characteristics of Sumerian in the Old Babylonian period which may

¹⁶ See Edzard 1975:70–73 for more examples.

¹⁷ See also Sîn-iddinam 4 27–28; Warad-Sîn 27 42–43; Samsu-iluna 3 65–69; 5 62; 6 14–15; 8 75–76.

¹⁸ See also Warad-Sîn 21 33; Rīm-Sîn I 6 30–31; 8 35; 9 46; 10 44; 11 32; 17 39; Ḫammu-rāpi 2 39–40; 12 10–14.

well be interpreted as resulting from an interference of Akkadian in which there was no correspondence between the verbal forms and the prepositional phrases expressing adverbials of places.

In the third millennium, the Sumerian verb *ku₄* ‘to enter/bring’ generally used the locative pattern for marking the place entered. The corresponding Akkadian verb *erēbum* / *šūrubum* marked the same participant always with the preposition *ana*. The use of this preposition considerably overlapped with the use of the Sumerian case-marker *-/še/* and their correspondence was extended analogously to other expressions which originally used a case-marker different from *-/še/*, but which were translated into Akkadian with *ana*. Consider the following examples:

(17)

ur-^dnin-urta-ke₄ ħe₂-ni-ib-ku₄-ku₄ e₂-kur za-gin₃-še₃ ([2.5.06.02] Ur-Ninurta B 42

[Isin, 1923])

“Let Ur-Ninurta bring it (= the tribute) into the shining E-kur”

(18)

mu alan urudu gu-la e₂ ^dutu-še₃ i-ni-in-ku₄-re (Gungunum year name 8 [Larsa, 1932])¹⁹

“Year: He brought into the house of Utu a big copper statue”

(19)

^{giš}gu-za ^{giš}šu-nir, gi₁₆-sa libir-a-ni, ša₃-bi-še₃, mu-ni-ku₄ (Nūr-Adad 6 25–28 [Larsa, 1865])²⁰

“He (= Nūr-Adad) brought his throne, standards, and ancient treasures into it (= E-me-kukuga)”

(20)

iri didli gu₂ bar-ra-^gu₁₀-ne, du₆ ka-ar₂-me-še₃ ħe₂-ni-ku₄ (Samsu-iluna 3 35–36 [Babylon, 1749])

“I (= Samsu-iluna) turned each city of my enemies into mounds and ruins”

(21)

a₂-tuku kisal maḥ-a ku₄-ku₄-gin₇ ([2.1.05] The cursing of Agade, Ur III version, Segment C 4²¹ = OB version 1. 102)

a₂-tuku kisal maḥ-še₃ ku₄-ku₄-gin₇ ([2.1.05] The cursing of Agade 102)

“Like a wrestler who is about to enter the great courtyard”

(22)

gu₅-li-^ga₂ / {AA:} gu₅-li-^gu₁₀-še₃ nam-ba-e-ni-ku₄-re-en ([1.8.2.02] Lugalbanda 107)

“I will befriend you (lit. I will make you enter into the status of being my friend)”

¹⁹ See also his year name 2 and 10. Year names are quoted after Sigrist and Damerow 1997.

²⁰ See also *Sîn-iqīšam* 1 5:5–10; Samsu-iluna 3 36.

²¹ 6N-T76 = IM 70097, obv. 4 (see Cooper 1983:pl. XIX).

(23)

uru₂ ḡal₂-la-bi nu-ḡal₂-la / {N₉:} nu-ḡal₂-la-aš mi-ni-in-ku₄-ra-am₃ ([2.2.03] The lament for Nibru 102)

“He (= Enlil) turned the city which used to be there into a city no longer”

(24)

uga^{mušen}-aš u₃-mu-ni-in-ku₄ ([6.2.12.02] Enlil and Namzitara 13)

“After he (= Enlil) had turned into a raven”

The expression *š u — s i* ‘to place sth in so’s hand, to deliver so into so’s hand (lit., to fill sth into so’s hand)’ displays a pattern of change very similar to that of *k u₄*. In this expression *š u* was originally marked as in the oblique pattern (see Table 2 above), i.e., *š u* was case-marked with an *-/e/* which was construed with a directive prefix in the verbal prefix-chain. In the 2nd millennium, however, *-/e/* is often replaced with the terminative case-marker. Since, as the bilingual inscriptions from Babylon also show, the Sumerian expression corresponded to *ana qātiya/kalšumullûm* in Akkadian²², it is not unreasonable that the use of the terminative case-marker is again to be explained as an interference from Akkadian²³.

(25)

š u en-an-na-tum₂-ma-ke₄, i₃-mi-si-a (En. I 29 7:5–6 [Lagaš, 24 c.]

“(when, and) he placed it in En-ana-tum’s hand”

(26)

šul-gi ^den-lil₂-le šag₄ kug-ge bi₂-pad₃ kalam šu-ne₂ bi₂-si ([2.4.2.07] Šulgi G 24 (Urim, 2094)

“Enlil chose Šulgi in his pure heart and placed the Land in his hand”

(27)

saḡ-gi₆ šu-ni-še₃ bi₂-ib-si-si-in ([2.5.01.05] Išbi-Erra E 77 [Isin, 2017])

“You (= Nisaba) placed the black-headed people in his (Išbi-Erra’s) hand”

²² See Hammu-rāpi 3 17–19; 7 14–16; 17 24–26; Samsu-iluna 1 9–11; see also CAD M/I, s.v. *malû*.

²³ The verb *t u m₂ wasāmu* ‘to befit so/sth’ is another case in point. Originally it used the directive pattern to mark the participant “befitted”. See, for example, *l u g a l - b i - r a t u m₂- m a* (Ukg. 6 5:3’) “(brewery) made worthy of its lord”, and *n a m - n i - n - a t u m₂- m a* (Išme-Dagān 13 5) “(Ningal), who is worthy of the ladyship” (for more examples, see Zólyomi 1999:228–229 [2.2]). In the inscriptions of Rīm-Sîn the same participant is marked with *-/še/*; see, for example, *m e - t e l u g a l - š e₃ t u m₂- m a* (Rīm-Sîn I 17 32) “(Simat-Eštar), the ornament befitting the king”, and *k i - t u š n a m - d i ḡ i r - b i - š e₃ t u m₂- m a* (Rīm-Sîn I 13 31 // 16 20) “a residence befitting his (= Ninšubur’s) divinity”. In Akkadian, the participant “befitted” is marked with the preposition *ana*, so the use of *-/še/* seems again to be an interference from Akkadian (cf. CAD A/II, s.v. *asāmu*). Notice that by replacing the directive pattern with the terminative the distinction between animate and inanimate “befitted” (*-/ra/* vs. *-/a/*) also disappears.

- (28)
^dnergal a-ra₂ gal me huš-bi šu maḥ-zu-uš im-si ([2.5.02.01] Šu-ilišu Hymn A 21 [Isin, 1984])
 “Nergal, your great hands are filled with mighty actions and terrible powers”
- (29)
 a₂ maḥ šu zid-da-ḡu₁₀ NI ḥe₂-bi₂-in-si ([2.5.04.01] Išme-Dagān A 89 [Isin, 1953])
 “(Ninurta) has put great power into my (= Išme-Dagān’s) right hand”
- (30)
 kilib₃-ba-bi ku₃ ^dinana-ra šu-ne₂ im-mi-in-si-[si-eš] ([2.5.04.11] Išme-Dagān K 34 [Isin, 1953])
 “They (= Enlil and Ninlil) entrusted all these into Inana’s hands”
- (31)
 nun ^dli-pi₂-it-eš₄-tar₂-ra ^{ḡiš}tukul ḥul du-ni, gi-^lgin₇ ^lša₅-ša₅ šu maḥ-a-ne₂ si-bi₂-^lib₂ ^l
 ([2.5.05.04] Lipit-Eštar D 52–53 [Isin, 1934])
 “(Ninurta,) put a weapon which snaps off his enemies as if they were reed into prince Lipit-Eštar’s mighty hands”
- (32)
 [a] ^lzid^l-da-ta ri-a-na šu maḥ-a-ne₂ si-bi₂-ib ([2.5.06.04] Ur-Ninurta D 32 [Isin, 1923])
 “Place them in the exalted hands of him who was created from good seed”
- (33)
 u₄ ^dnin-si₄-an-na, gu₂-erim₂-ḡal₂-la-gu₁₀, šu-gu₁₀-še₃ bi₂-in-si-a (Rīm-Sîn I 18 27–29 [Larsa, 1822])²⁴
 “When Ninsiana delivered my enemies into my hands”
- (34)
 u₃-luḥ niḡ₂-si-sa₂ šu-zu-še₃ ḥu-mu-ra-ab-si ([2.6.14.03] Rīm-Sîn C 20 [Larsa, 1822])
 “May he (= An) place the sceptre of justice in your (= Rīm-Sîn’s) hand”
- (35)
 eš₂giri kalam ge-en-ge-en šu-ne₂ bi₂-in-si-a ([2.6.14.05] Rīm-Sîn E 5 [Larsa, 1822])
 “The staff which strengthens the Land has been placed in his (=Rīm-Sîn’s) hand”
- (36)
 u₃-luḥ niḡ₂-^lsi^l-[sa₂] ^lšu^l-ni-še₃ si-bi-ib ([2.6.14.05] Rīm-Sîn E 65 [Larsa, 1822])
 “Place in his (= Rīm-Sîn’s) hand the sceptre of justice”
- (37)
 eš₂-kiri₃-bi, šu-ni-še₃, bi₂-in-si-a (Ḥammu-rāpi 14 21–23 [Babylon, 1792])
 “(When Utu) entrusted their (= Sumer and Akkad’s) nose-rope into his hands”

²⁴ See also Warad-Sîn 24 17–18; Rīm-Sîn I 13 23–26; 17 1–4; 19 17–19; Hammu-rāpi 16 26–28.

(38)

erim₂-ḡal₂-zu šu-zu-še₃, ḥe₂-bi₂-ib-si-si ([2.8.07.05] Samsu-iluna E 35 [Babylon, 1749])

“May he (= Ninurta) deliver your enemies into your hands”

(39)

ḥur-saḡ zi šu-ḡu₁₀ ga-am₃-mi-ib-si ([1.3.02.] Inana and Ebiḥ 35 // 94)

“I will deliver the rebellious mountain into my hands”

(40)

kug-ḡu₁₀ lu₂ kug nu-zu-u₃-ne šu-be₂ ḥa-ba-da-ab-si ([2.2.01] The lament for Urim 280)

“Men ignorant of silver have filled their hands with my silver”

(41)

ḡarza₂ maḥ ḡarza gal-^lgal^l šu-zu ga-mu-un-si ([4.07.03] Inana C 108)

“I (= An) will place the august royal rites and the great divine rites in your (= Inana’s) hand”

(42)

^dnun-gal nin e₂ kur-ra-ra šu maḥ-a-ne₂ im-si ([4.28.01] Nungal Hymn 42)

“He is delivered into the august hands of Nungal, the warden of the prison”

(43)

e₂-kur eš₃ maḥ me nam-nun-na šu-zu-še₃ im-mi-si ([4.29.01] Nuska Hymn A 9)

“Enlil entrusted you (= Nuska) with the E-kur, the lofty shrine of the princely divine powers”

What examples (17)–(24) and (25)–(43) suggest is that something more happened than the simple replacement of one case-marker with another (-/a/ with -/še/, and -/e/ with -/še/, respectively) under the influence of the construction used in Akkadian. The examples which contain a finite verbal form show that the change of the nominal case-marker did not go together with the change of the verbal element. The terminative case-marker is usually construed with the terminative prefix -/ši/- in the verbal prefix-chain, so one might expect that the locative prefix should be replaced with the terminative in the prefix-chain as well. Given the fact that in Akkadian the verbal form itself does not mark in any way the presence of an adverbial, the examples concerned may indicate a disappearance of correspondence between nominal case-markers and verbal elements, on the model of Akkadian. This would imply that the elements /ni/ and /bi/ in the verbal prefix-chains might be used in a capacity different from indicating a location. I come back to this possibility at the end of section 5, where it will be suggested that the function of /ni/ and /bi/ has been reinterpreted in these forms to reflect the Š- and D-stems of Akkadian verbal forms corresponding to them.

The fading away of correspondence between case-markers and verbal dimensional prefixes can show itself in another way too. In the examples (46) and (49), the noun phrase case-marked with -/a/ is not construed with any element in the

verbal prefix-chain. In the contrasting examples from the third millennium, however, the noun phrase case-marked with *-/a/* is always construed with a locative prefix.

(44)

e_2 ki-a \check{g}_2 - $\check{g}a_2$ -ni, e_2 -an-na $\check{s}a_3$ $\check{g}ir_2$ -su^{ki}-ka, mu-na-ni-du₃ (Gudea St. C 3.11–13 [Lagaš, 22nd c.]

“He (= Gudea) has built her (= Inana’s) beloved temple, the E-ana, for her in Ĝirsu”

(45)

$\check{s}a_3$ -ba, e_2 -a-ni mu-na-ni-du₃ (Gudea 70 11–13 [Lagaš, 22nd c.]²⁵

“He (= Gudea) built within it (= the wall of Gu-aba) her house for her (= Ninmarki)”

(46)

$\check{s}a_3$ urim₅-ma-ka, mu-na-du₃ (Lipit-Eštar 6 27–28 [Isin, 1934])

“He (= Lipit-Eštar) has built it (= the *ġipar*) for her (= Enninsunzi) in Urim”²⁶

(47)

kisal e_2 -ninnu-ka mu-na-ni-du₃ (Gudea St. B 6.11–12 [Lagaš, 22nd c.]

“He (= Gudea) set them (= the stelae) up in the courtyard of E-ninnu”

(48)

e_2 ^dnin- $\check{g}ir_2$ -su-ka, eridu^{ki}-gin₇, ki sikil-la bi₂-du₃ (Gudea St. B 4.7–9 [Lagaš, 22nd c.]

“He (= Gudea) has built the temple of Ningirsu at a place as pure as Eridu”

(49)

bad₃ gal urim₂^{ki}-ma, $\check{h}ur$ -sa \check{g} -gin₇, ki sikil-la mu-un-du₃ (Šîn-iddinam 13 28–30 [Larsa, 1849])²⁷

“He built the great wall of Urim as if it were a mountain at a pure place”

5. The emergence of a causative marker in Sumerian

In Akkadian, causatives of transitive and intransitive-fientive verbs predominantly use the Š-stem, whereas causatives of intransitive-stative (or adjectival) verbs, often called factitives, predominantly use the D-stem²⁸. In Sumerian there is no corresponding regular formalised way of indicating causativity; a causative verbal

²⁵ The numbering of the Gudea inscriptions follows Edzard 1997.

²⁶ See also Lipit-Eštar 7 13–16; Sūmû-El 1 and 2; Warad-Šîn 24 19–26.

²⁷ See also Nūr-Adad 7 64–65; Rīm-Šîn I 18 33–36.

²⁸ This description agrees with the traditional distinction made between the use of the D- and Š-stems, which eventually goes back to Goetze 1942. Kouwenberg 1997 introduces a more subtle characterization of this distinction. Since, as he himself admits, “in practice, there is a large overlap between the two approaches” (*op. cit.*, 251), I decided to retain the traditional description in order to avoid unnecessary introduction of new linguistic concepts.

form differs from the corresponding non-causative form only in the increased number of participants and the causee will be construed with different verbal affixes depending on whether the underlying verb has one, two, or three participants. Causatives derived from a two-participant verb use the oblique pattern for marking the causee, whereas in causatives derived from a one-participant verbs, the causee functions as the object of the verb. Unlike Akkadian, Sumerian does not make a formal distinction between the causative of intransitive-stative verbs and that of intransitive-fientive verbs. In examples (50)–(52), the underlying verb *g u - u l / g a l* ‘to be(come) great’ is a one-participant verb; one therefore expects the participant which ‘is made great’ to be construed as the object. This, however, leaves the verbal elements written with the signs BI_2 and NI , respectively, without any obvious function.

(50)

bad_3 iri ia-bu-šum^{ki}, d lugal-^{giš}asal₂, mu nam-lugal-la- $\check{g}u_{10}$ -um, bi_2 - ib_2 -gu-ul-la-aš
(*mu-šar-bi_2-u_3*) (Samsu-iluna 5 43–46 [Babylon, 1749])

“(I built) fort Yabušum for the god Šar-šarbatim, who made my royal name great”

(51)

d en-lil₂-le, nam tar-ra-zu mi-ni-ib-gal (*u_2-lšar l-bi_2*) (Samsu-iluna 7 14”–15”
[Babylon, 1749])

“Enlil has made your destiny great”

(52)

d utu en an-ta $\check{g}al_2$ -la-aš nam-lugal-a-ni bi_2 - ib_2 -gu-la-aš (Samsu-dītāna, year name 7a
[Babylon, 1625])

“For Utu, the lord who resides above and who made his (= Samsu-dītāna’s) kingship great”

Looking at the Akkadian version of the texts, one might find an explanation for the presence of /bi/ or /ni/ in the verbal prefix-chain. The Akkadian versions show that the verbal forms use the Š-stem in Akkadian. It is not unreasonable therefore to explain the Sumerian verbal forms as causatives formed on the model of Akkadian: the causatives of one-participant verbs are formed like the causatives of two-participant verbs, similarly to Akkadian in which the use of the Š-stem does not depend on the number of participants. In other words, a distinction maintained in the grammar of Sumerian, namely the use of different constructions depending on the number of participants, disappears as the result of interference from the author’s native language. Note, however, that this change also presupposes a change in the status of the elements written with the signs BI_2 and NI . In the third millennium, the /bi/ and /ni/ consisted of two elements: an IPP (/b/ or /n/) and a directive prefix (/i/). The choice of IPP reflected the gender of the causee, whereas the use of the directive prefix reflected the syntactic function of the participant, the causee, which it referred to. Since the verbs in (50)–(52) are one-participant, and in the causative derived from one-participant verbs the causee functions as the object, it seems that in these verbal forms /i/ does not reflect the function of the causee anymore; rather, /b/ + /i/

and /n/ + /i/ have fused here into an unanalysable /bi/ or /ni/, respectively. In contrast to the Sumerian of the third millennium, in which /b/ + /i/ and /n/ + /i/ were verbal elements construed with a participant functioning as the causee, /bi/ and /ni/ function in (50)–(52) as markers of causativity, i.e., as the Sumerian equivalent to the Š-stem, used, however, only with 3rd ps. causees²⁹. The distinction between “being construed with a participant functioning as the causee” and “functioning as the marker of causativity” is a fundamental one, because the latter implies that Sumerian has changed into a language with a morphological causative in which the causative verbal form is derivationally related to the non-causative verb.

The verbal form in (53) is probably to be explained similarly to those in (50)–(52), since in bilingual texts *b u l u ḡ₃* is also translated with *rabûm*³⁰.

(53)

u₄ [an], ^den-[lil₂], nam-a-[ni], bi₂-ib₂-^lbuluḡ₃-ḡe₂₆^l-eš-a (Ḥammu-rāpi 4 12–15 [Babylon, 1792])

“When An and Enlil made his (= Ḥammu-rāpi’s) fate great”

Consider now the verbal forms used with the expression *š a₃ / s u — d u₁₀* ‘to make so feel content (lit., to make so’s heart/flesh sweet)’. As *d u₁₀* is a one-participant verb, *š a₃ / s u* is expected to be construed as the object of the verbal form, and in fact this is what we most often find:

(54)

iri an-gin₇ šag₄ bar-ta sig₇-ga, nibru^{ki} dim-gal an ki-a su-bi ḥu-mu-du₁₀-du₁₀ ([2.5.04.01] Išme-Dagān A 183–184)

“I make the city whose interior and exterior are as blue-green as the sky, Nibru, the mooring pole of heaven and earth, feel content”

(55)

ša₃ kalam-ma mu-du₁₀ (Enlil-bāni 1001 6.11 [Isin, 1860])

“I (= Enlil-bāni) have made the Land feel content”

(56)

^dsuen-i-din-na-am, sipa niḡ-ge-na-ke₄, ša₃ ^dutu ^lu₃ ^ddumu-zi-bi, mu-un-du₁₀ (Sîn-iddinam 14 32–35 [Larsa, 1949])

“Sîn-iddinam, the righteous shepherd, made Utu and Dumuzi feel content”

²⁹ For a possible example with a 2nd ps. causee, consider *^da-nu-n-na-ke₄-ne mi-ri-i b-g u l* ([2.8.05.01] Abī-Ešuh A 10 [Babylon, 1711]) “He (= Enlil) has made you (= Marduk) eminent among the Anuna”. Cf., however, the differing interpretation of van Dijk, who thinks that the verbal form is in fact a translation of *ušarbīku bēlūtka*, but “la forme verbale a été détachée de son contexte” (van Dijk 1966–67:73). He assumes that the /ri/ reflects the datus ethicus of the Akkadian verbal form.

³⁰ See PSD B, s.v. *buluḡ₃*.

There exist a number of relatively late examples from Larsa and Babylon in which the verbal form contains a /bi/ or /ni/ element similar to that in examples (50)–(53) above³¹:

(57)

u₄ ša₃ uri₅ki-ma, bi₂-in-du₁₀-ga (Nūr-Adad 3 26–27 // 4 23–24 [Larsa, 1865])
 “when he (=Nūr-Adad) made Urim content”

(58)

si-ga nu-mu-un-su lu₂ ki-gu-la, su-bi mi-ni-du₁₀ (Nūr-Adad 7 55–56 [Larsa, 1865])
 “I (= Nūr-Adad) made the weak, the widows, and the orphans feel content”

(59)

su kalam-ma bi₂-in-du₁₀-ga (Abī-Ešuh year name ab [Babylon, 1711])
 “(Year in which Abī-Ešuh) made the Land feel content”

(60)

mu pad₃-da-ni-gin₇ mu pad₃-da-zu su ^den-ki-ke₄ ḥa-ba-ni-du₁₀ ([2.8.06.02] Ḫammu-rāpi B 8 [Babylon, 1792])
 “May the uttering of your name make Enki content as much as the uttering of his own name”

However, the explanation used to account for the presence of /bi/ or /ni/ in examples (50)–(53) cannot be applied to these examples automatically, because d u₁₀ was translated into Akkadian mostly with the D-stem of the verb *ṭiābum* in the expression š a₃ / s u — d u₁₀ ‘to make so feel content’³². The D-stem was predominantly used only for causatives of intransitive-stative verbs in Akkadian; and these forms were translated into Sumerian as “ordinary” two-participant verbal forms, as examples (54)–(56) also demonstrate. In contrast to Š-stem forms, there existed therefore no factitive D-stem forms in Akkadian which might have corresponded to Sumerian verbal forms marking the causee with the directive prefix (IPP + /i/). Consequently, the verbal forms with /bi/ or /ni/ in (57)–(60) could not have been formed on the analogy of the other verbal forms translated with the D-stem forms in Akkadian. Consider Tables 3–5:

³¹ Cf., however, (2.5.04.01) Išme-Dagān A 294: ^{giš}gu - z a - b i s u ^den - l i l₂ - l a₂ - k a g a l - l e - e š b i₂ - d u₁₀ “I delighted Enlil greatly with those thrones (lit., I made those thrones make Enlil feel greatly content)”. The verbal form contains here a /bi/ (IPP + directive) element because it is the causative derived from an intransitive verb’s causative. The word final /-a/ of ^den - l i l₂ - l a₂ - k a is probably to be explained as the copula /-am/ without its final /m/; for this phenomenon see Attinger 1993:312 (§ 206 a1°); Wilcke 1998:464.

³² See, e.g., Hammu-rāpi 2 34 (of the Akkadian version) Samsu-iluna 3 110 (of the Akkadian version); for more occurrences, see CAD Š/III, s.v. *šīru* A 1b 3’.

	transitive	intransitive-fientive	intransitive-stative
Akkadian	Š-stem	Š-stem	D-stem
Sumerian	/b/ + /i/ or /n/ + /i/	Object markers	Object-markers

Table 3



	transitive	intransitive-fientive	intransitive-stative
Akkadian	Š-stem	Š-stem	D-stem
Sumerian	/bi/ or /ni/	/bi/ or /ni/	?

Table 4



	transitive	intransitive
Akkadian	Š-stem	Š-stem □ D-stem
Sumerian	/bi/ or /ni/	/bi/ or /ni/

Table 5

Table 3 summarises the grammatical devices the two languages used to form causatives in the third millennium. It shows that Sumerian used different verbal prefixes depending on the number of participants. Table 4 shows that causatives of intransitive verbal forms in Sumerian corresponding to Š-stem forms in Akkadian may have been formed on the model of causatives of transitive forms by analogy with Akkadian in which language there was no formal distinction between causatives of transitive and intransitive-fientive verbs. This table also demonstrates that the same formal analogy could not have given rise to intransitive verbal forms with /bi/ or /ni/ if the form corresponded to a D-stem form in Akkadian because there could have been no transitive forms to serve as the basis of the analogy. Table 5, however, offers an explanation for the verbal forms in (57)–(60), suggesting that Sumerian forms corresponding to factitives in Akkadian could also have been formed on the model of causatives of two-participant verbal forms, because of the appreciable functional similarity between the D- and the Š-stem; for example, a considerable number of verbs use both the D- and the Š-stem with similar or partially overlapping meanings³³. A good case in point is the verb *ṭiābum* itself, because there is no difference in meaning between the D- and Š-stems of this verb. In fact, in literary texts, the D-stem of the very expression *libbam ṭubbum* can be replaced by the Š-stem³⁴. In summary, the use of the expression $\check{s} a_3 / s u \text{ — } d u_{10}$ suggests that

³³ Cf. Huehnergard 1997:256–258, 299–301, and Kouwenberg 1997:265–281 (especially, 277–279 [7.5.6]).

³⁴ Cf. AHw, s.v. *ṭiābum* D 4b/c and Š 4, and Kouwenberg 1997:276.

the verbal elements /ni/ and /bi/ may reflect not only the Š-stem of the corresponding Akkadian verbal form, as has usually been assumed, but also an Akkadian D-stem.

Another verb occurring sometimes with /ni/ in the prefix-chain, which may reflect the D-stem of the corresponding Akkadian verb, is *g e - e n* ‘to make firm’:

(61)

suḥuš ma-da, nam-en-bi ak-de₂, ma-an-šum₂-ma, ma-ni-in-ge₄-en (*u₃-ki-in-nam*)
(Ḥammu-rāpi 2 12–15 [Babylon, 1792])
“He (= Šamaš) made firm for me the foundation of the land which he had given to me to rule”

(62)

kilib₃ kur-kur-ra-ke₄, suḥuš-bi ṽmi¹-ni-ge-en (*u₂-ki-in*) (Samsu-iluna 5 63–64 [Babylon, 1749])
“I (= Samsu-iluna) made the foundation of all countries firm”

(63)

kalam mi-ni-ib-ge-en-e ([4.27.02] Ninurta B, Segment C 31)
“You make the land firm”

The verb *m u₂* ‘to grow’ is a one-participant verb and in the third millennium its causative is formed accordingly:

(64)

e₂ ḥur-saḡ-gin₇ im-mu₂-mu₂-ne ([2.3.03] Gudea Cyl. A 21.19 [Lagaš, 22nd c.])
“They made the house grow as high as the hills”

(65)

ensi₂-ke₄ e₂ mu-du₃ mu-mu₂, kur gal-gin₇ mu-mu₂ ([2.3.03] Gudea Cyl. A 22.9–10 [Lagaš, 22nd c.])
“The ruler built the house, he made it high, high as a great mountain”

(66)

gu₃-de₂-a e₂ ḏnin-ḡir₂-su-ka, ḏutu-gin₇ dugud-ta ba-ta-e₃, ḥur-saḡ za-gin₃-na-gin₇ mu-mu₂ ([2.3.03] Gudea Cyl. A 24.13–15 [Lagaš, 22nd c.])
“Gudea made Ninḡirsu’s house come out like the sun from the clouds, had it grow to be like hills of lapis lazuli”

In some texts from Larsa, the causative of the same verb is formed as if it were a two-participant verb:

(67)

ḥur-saḡ-gin₇ bi₂-in-mu₂ (Rīm-Sîn I 6 31 [Larsa, 1822])
“I (= Rīm-Sîn) made it (= E-ḡeštu-šudu) grow as high as a mountain”

(68)

ḥur-saḡ-gin₇ bi₂-in-mu₂-uš (Rīm-Sîn I 2 19 // 3 19 [Larsa, 1822])
“They (= Kudur-mabuk and Rīm-Sîn) made it (= E-me-urur) grow as high as a mountain”

The verb *s u k u d* ‘to be high, lofty’ provides another example of a one-participant verb forming its causative with a /bi/:

(69)

[e₂]-eš₃-ki-te, [ki]-[tuš ša₃ ħul₂-la-ka¹-ni, [mu¹-na-du₃, [ħur-saġ¹-gin₇ [bi₂-in-sukud¹
(Warad-Sîn 5 14–17 [Larsa, 1834])³⁵

“He (= Kudur-Mabuk) built the E-eškite, his joyous residence, and made it as high as a mountain”

The findings of this section may also provide a fresh perspective for interpreting the function of /ni/ and /bi/ in examples (17)–(24) and (25)–(43) above. If, as the results of this section seem to suggest, /bi/ and /ni/ develop during the Old Babylonian period into a marker of causativity which is used both in one-participant and two-participant verbs, and can correspond both to a Š- and a D-stem in Akkadian, then the conditions must have been given for some users to reinterpret the prefix /ni/ in the prefix-chain of *k u₄* and the prefix /bi/ in the prefix-chain of *š u — s i* as elements which correspond there to the Š-stem and D-stem, respectively, of their Akkadian translations, and which are therefore not construed with the participant case-marked with -/še/ any more.

If the assumption is correct, that /ni/ has been reinterpreted as a causative marker in certain forms of *k u₄*, this would also carry a significant implication for the difference between /ni/ and /n/ + /i/ (IPP + directive) in the Old Babylonian period. It implies in fact that the difference, which must have existed in the third millennium, has vanished. The prefix /ni/ takes over the function of /n/ + /i/ (IPP + directive), and this could have been possible only if the two elements were perceived as identical or sufficiently similar³⁶.

The possibility that /bi/ and /ni/ could correspond to a D-stem in Akkadian may also help in identifying the function of these elements in the prefix-chain of the verbal forms of *s a ġ — i l₂* ‘to raise the head’ in the royal inscriptions from Larsa and Babylon (cf. examples [15] and [16] above). In theory, (15), for example, could be analysed as the causative of the underlying sentence “The E-me-urur raised its head” resulting in “Kudur-mabuk and Rīm-Sîn made the temple raise its head”. I consider it, however, more likely that /bi/ and /ni/ in these forms reflect again the D-stem of the corresponding Akkadian verb: *i l₂* is regularly translated with *ullûm* in the bilingual inscriptions.

³⁵ See also Warad-Sîn 6 19–21.

³⁶ One cannot rule out the possibility that the identification of /n/ + /i/ with /ni/ is the result of the fact that both elements were written with the same grapheme — many of the modern descriptions of Sumerian identify them on the same basis disregarding their different distribution. This assumption might imply the loss of a tradition of spoken Sumerian.

6. Old Babylonian Grammatical Texts

Although the Old Babylonian literary texts and royal inscriptions can inform us about the changing use of Sumerian under the influence of Akkadian in many ways, they cannot tell us, for example, what assumptions the ancient users of Sumerian might have had about the nature of the distinction between /b/ + /i/ and /n/ + /i/ if their original was lost³⁷. We are fortunate enough, however, to have a group of texts at our disposal, the Old Babylonian Grammatical Texts (= OBGTs), which can provide us with information exactly about this. These texts are in fact much more useful for learning about these assumptions than as basis for our modern descriptions of Sumerian³⁸. They are scholarly attempts to describe Sumerian in terms of the morphosyntactic categories of a language considerably different in its structure and functioning, Akkadian, and as such are bound to lead to erroneous analysis. Nevertheless, they might provide precious hints about the system of grammatical rules the scribes of the early second millennium formulated for themselves and which eventually might have influenced their use of language when composing Sumerian texts.

The longer paradigms of the OBGTs are divided into sections, and within the sections only the person of subject varies. The OBGTs treat the imperative, the 1st ps. and 3rd ps. volitive forms (henceforth referred to as non-indicative forms) as three persons of the same grammatical category. Sections contrast with each other in specific grammatical features. One section may contrast with many other sections, differing from each section in another grammatical feature.

Tables 6, 7, and 8 (see below on pp. 00–00) give a summary of the grammatical contrasts in OBGT IX, 1–54, OBGT VI, 1–55, and OBGT VIII, 1–36, respectively. OBGT IX, 1–54 list the various non-indicative forms of the Sumerian compound verb *sa₂ — du₁₁* ‘to reach’, translated with Akkadian *kašādum*. The nominal constituent of *sa₂ — du₁₁* functions grammatically as the object, and so consequently “what is reached”, i.e., the oblique object, is construed with the same set of prefixes in the verbal prefix chain as the causee of the causative form. OBGT VI, 1–55 list the non-indicative forms of the two-participant verb *ḡ ar* ‘to put’, translated with Akkadian *šakānum*. OBGT VIII, 1–36 list the non-indicative forms of the compound verb *ka s₄ — du₁₁* ‘to run’, translated with Akkadian *lasāmum*.

³⁷ Assumptions like the following from Krispijn must remain only a vague guess not based on any linguistic argument: “Was ist zum Beispiel der Unterschied zwischen *hé.em.mi.íl* ... und *mi.ni.íl* ... ? Ich vermute, dass es ein Unterschied in Bestimmtheit ist: »Die Sipparmauer erhöhte ich« gegenüber »dies genannte (Mauer) habe ich erhöht«” (Krispijn 1982:159).

³⁸ It is interesting that, as far as I know, the OBGTs have only been used as a source for Sumerian grammar. Since they analyse Sumerian in terms of Akkadian morphosyntactic categories, their intricate system of contrasts should tell us a lot about the way Akkadians analysed their own native language. For an attempt to evaluate the OBGTs also in these terms, see Zólyomi 2001.

The left-hand columns of the tables show the non-causative forms, the right-hand columns show the corresponding causative forms. The odd columns list the Akkadian forms with their grammatical features, and the even columns list the Sumerian elements corresponding to these features; their sequence reflects their actual order in the verbal prefix-chain. The contrasted grammatical features are the following: G-stem (G), Š-stem (Š), 1st, 2nd, or 3rd ps. sg. object suffix (A^{1/2/3}), 1st, 2nd, or 3rd ps. sg. indirect object suffix (D^{1/2/3}), Ventive (V), t-infix (T).

Certain forms, crossed through in the Tables 7 and 8, are missing from the paradigms. Some of these gaps are to be explained by the meaning of the verb. In OBGT VIII (Table 7), for example, there are no non-causative forms with an object suffix because the verb is intransitive. Some gaps are, however, the result of the mismatch between the morphosyntactic categories of the two languages and of the compilers' attempt to maintain the principle that each Akkadian form should be set against a different Sumerian form. In OBGT IX (Table 8), for example, on the analogy of the contrast between forms "G" and "G + A³", and "G" and "Š", the Sumerian form corresponding to "Š + A" should contain both /bi/ and /ni/. The distribution of /bi/ and /ni/ is mutually exclusive and the list therefore omits "Š + A". On the analogy of the contrast between the forms "G" and "G + A³", and "G + V" respectively, the Sumerian form corresponding to "G + V + A³" should contain /m/ and /ni/. The form "Š + V + A³", however, contains the same elements, so "G + V + A³" and "Š + V + A³" should look alike. The compilers "solve" the problem again by omitting one of the forms.

As regards the choice between /bi/ and /ni/ in these paradigms, it seems to depend on other features than the grammatical gender of the causee or oblique object. In OBGT VI, 4–6 and OBGT VIII, 7–9 the Š-stem of the Akkadian corresponds to the element /bi/ of the Sumerian form. In OBGT VI, 10–12 and OBGT VIII, 10–12 the presence of the 3rd ps. sg. object suffix triggers the replacement of /bi/ by /ni/. In these forms the object suffix must refer to the causee in the Akkadian forms, because in OBGT VIII *lasāmum* is an intransitive verb, and in OBGT VI the object suffix referring to the 3rd ps. direct object corresponds to /da/ in the Sumerian forms³⁹. The contrast between OBGT VI, 7–9 and 10–12 suggests that /ni/ in 10–12 corresponds to a Š-stem form with an object suffix referring to the causee. In these forms, therefore, the difference between /bi/ and /ni/ seems to correspond to the lack or presence of the object suffix in the Akkadian forms. Without textual context, it is difficult to see what difference in meaning between the forms with suffix and those without suffix was intended by the compilers. One possibility is that the forms without object suffix were meant to be causatives without an explicit causee, like, e.g., *ṭuppam uštābil* "I made someone carry the tablet = I have sent the tablet"; in contrast to *ṭuppam uštābilšu* "I made him carry the tablet = I have sent the tablet

³⁹ The presence of the direct object suffix also triggers the use of /bi/ in OBGT IX, 22–24 as compared to 19–21. The omission of the form "G + V + A³" might suggest that the direct object was meant to refer to the causee in this form too.

with him”. Should this be the case, this may indicate a reinterpretation of the original distinction between /ni/ and /bi/, animate vs. inanimate, in terms of a formal distinction existing only in Akkadian.

Other contrasts in the paradigms suggest that the use of /ni/ in the causative forms can also be triggered by the presence of other elements in the prefix-chain: forms containing a dative prefix (e.g., /na/) or /ba/ always use /ni/⁴⁰. On the one hand, the avoidance of using /bi/ after a dative prefix or /ba/ is correct according to third-millennium Sumerian, because prefix-chains like *mu-na-bi- or *ba-bi- were not grammatical then. But on the other hand, the use of the pronominal prefix /n/ in /n/ + /i/ (IPP + directive), the elements referring to a 3rd ps. sg. animate causee, is not allowed after a dative prefix in the system outlined in Table 1⁴¹: in the third millennium only m u - n a - n i - (= mu-n-a-ni- = ven-3SG.pr-dat-loc-) but not *m u - n a - n i - (= mu-n-a-n-i- = ven-3SG.pr-dat-3SG.pr-dir-) was grammatical. So, although /ni/ reflects here the Š-stem of the Akkadian forms, its distribution corresponds to the locative /ni/, which can co-occur freely with the dative prefix (see section 2 above). It is therefore not unreasonable to assume that the grammatical system underlying the OBGTs ceased to make a distinction between /n/ + /i/ (IPP + directive) and locative /ni/⁴². The element /ni/ in these verbal forms appears to

⁴⁰ In OBG T VI, 34–36, 40–41, 44–45, OBG T VIII 22–24, OBG T IX, 28–30, 40–42, 52–54 /ni/ corresponds to the Š-stem in the Akkadian forms as the contrasting G-stem forms show.

It is not unlikely that it is the use of the 1st ps. sg. dative /ma/ that triggers the use of /ni/ also in the following example: u₄ a n ^de n - l i l₂, ^de n - k i, ^di ġ i r g a l - g a l - e - n e, u n u g^{ki} i r i u l, ^š u - ġ u₁₀ - ^š e₃ m a - n i - i n - s i - e š - a (Rīm-Sîn I 18 12–18) “when An, Enlil, and Enki, the great gods, entrusted me with Unug, the ancient city”. This example can be contrasted, for example, with the following one: ^dn i n - e₂ - g a l, n i n g a l k i l i b₃ s a ġ g i g₂ ^š a r₂ - r a - b a, a n ^de n - l i l₂ ^de n - k i - b i, ^š u - n i - ^š e₃ b i₂ - i n - s i - e š - a (Rīm-Sîn I 17 1–4) “For Ninegal, the great lady, whom An, Enlil, and Enki entrusted with all the numerous black-headed people”.

⁴¹ I am not aware of any examples from the third millennium contradicting this rule. For Ean. 1 rev. 5.32–33, the only example which seemingly disobeys it, see Zólyomi 1999:221¹².

⁴² Analysing the paradigms of k a s₄ — d u₁₁ and s a₂ — d u₁₁, Attinger arrives at a different conclusion. He divides the Sumerian forms with /ni/ into two groups, and claims that in forms corresponding to a Š-stem form with an object suffix, the grapheme NI stands for /n/ + /i/ (i.e., IPP + directive, in the terminology used by the present paper), while in forms corresponding to a Š-stem form without an object suffix it stands for the locative /ni/ (“ni causatif”) (Attinger 1993:584 [§ 588 d, 4 and 5]; 650 [§ 710 e, 4 and 5]). He assumes that the “ni causatif” forms came into existence on the basis of an erroneous analysis of oppositions like b a - a n - k u₄ ‘he entered’ vs. b a - n i - k u₄ ‘he made it enter’ (Attinger 1993:60²⁶ and 197–198 [§ 129 a]). I believe that Attinger’s dividing of the Sumerian forms with /ni/ into two groups does not do justice to the grammatical system underlying the OBG Ts. For example, according to his classification, all the Sumerian forms containing both a dative prefix and a /ni/ belong to his

function similarly to the /ni/ element of the verbal forms discussed in section 5 above, where it was assumed that it developed into an unanalysable causative marker.

In summary, the grammatical system underlying the verbal forms of the OBGTs apparently tallies with that of some actual texts (especially, with that of the royal inscriptions from Larsa and Babylon)⁴³. As in some later texts, in the OBGTs too, the choice between /ni/ and /bi/ when used as causative markers is governed by grammatical features which are different to the distinction animate vs. inanimate, and the distribution of the element /ni/ points to an elimination of the difference between locative /ni/ and /n/ + /i/ (3rd ps. sg. animate IPP + directive).

7. Some conclusions

The present paper aimed to show that interference from Akkadian led to fundamental changes in the distribution and function of the locative and directive prefixes. In the third millennium these verbal elements were part of an intricate system of correspondence between nominal case-markers and verbal prefixes. Both prefixes was primarily used in a local function; but in contrast to the locative prefix, the directive prefix was also used in a more abstract syntactic function: it could also be construed with the participant functioning as the causee in the causative derived from a two-participant verb or as the oblique object of a compound verb.

During the early second millennium this system underwent a number of changes and these changes appear to be connected with the difference in linguistic type

second group (“ni causatif”). Forms with a dative prefix, however, are never set against an Akkadian form with an object suffix, because the grammatical texts happen to avoid listing Akkadian forms with both a dative and an object suffix. His second group, therefore, is in fact the result of the texts’ organisation and not of their grammar.

Attinger’s classification is eventually based on his assumption that Sumerian forms with /n/ + /i/ must correspond to an Akkadian form with an object suffix (see Attinger 1993:60 [§ 6 °3]; 198⁴⁰¹). In my view, this is an assumption which is not borne out by the facts. In third-millennium Sumerian, the causatives of two-participant verbal forms use /b/ + /i/ or /n/ + /i/ depending on the gender of the causee, while in Akkadian the presence of the object suffix in the Š-stem is contingent upon completely different factors. So, for example, Akkadian forms like *tuppam uštābil* “I made someone carry the tablet = I have sent the tablet” would probably have to be translated with a Sumerian verbal form with an /n/ + /i/ in the prefix-chain, since even a “someone” counted as an animate participant.

As regards his assumption about the erroneous analysis of oppositions like *b a - a n - k u₄* vs. *b a - n i - k u₄*, this may prove to be true, but section 5 above showed that the emergence of a /ni/ causative-marker is more likely to be the result of interference from Akkadian.

⁴³ Note that according to Jacobsen, OBGT VI, VIII, and IX may come from a “southern site, perhaps Larsa” (Landsberger et al. 1956:1*).

between Sumerian and Akkadian. Akkadian is a language with a morphological causative: the causative verbal form is derivationally related to the non-causative verb. In the third millennium Sumerian used a different strategy; it did not have a causative marker: a causative verbal form differed from the corresponding non-causative only in the increased number of participants, and the causee would be construed with different verbal affixes depending on whether the underlying verb has one, two, or three participants. By the time of the royal inscriptions from Larsa and Babylon, Sumerian seems to have developed a way of expressing causativity very similar to that of Akkadian: the verbal elements used to refer to the causee in the causatives derived from a two-participant verbal form, /b/ + /i/ and /n/ + /i/, have fused into unanalysable morphemes, /bi/ and /ni/, respectively, and become causative markers used both in transitive and intransitive verbal forms. These markers appear to have a broader range of use than the Š-stem in Akkadian as they are also used in forms which are translated with factitive D-stems. The causative marker /ni/ also differs from the earlier /n/ + /i/ in its distribution: its distribution corresponds to that of the locative /ni/, in fact the difference between /n/ + /i/ and the locative /ni/ seems to have vanished during the Old Babylonian period.

The fusion of /b/ + /i/ and /n/ + /i/ into /bi/ and /ni/, respectively, is connected with and facilitated by another change in Sumerian under the influence of Akkadian. In Akkadian the syntactic relationship between a participant functioning as an adverbial of place is marked on the dependent element by the use of a preposition. In contrast, Sumerian marks the same relationship both on the head and on the dependent element, a strategy called double-marking. It is this difference in marking strategies that must explain why under the influence of Akkadian the correspondence between nominal case-markers and verbal prefixes becomes less regular in Sumerian, and in turn this difference enables, for example, /b/ + /i/ to fuse into a /bi/ element which is not construed with any verbal participant but functions as the marker of causativity.

The changes in the distribution and function of the locative and directive prefixes are also instructive in hinting at the possible general development of the verbal prefix-chain in Old Babylonian Sumerian: the morphological structure of its elements becomes obscure and the elements are reinterpreted in terms of Akkadian morphosyntactic categories. The same development might well account for some of the as yet unexplained phenomena of Old Babylonian verbal grammar.

OBGT VI 1-55

(1-3)	G		(4-6)	Š	/bi/
(7-9)	G + A ³	/nda/	(10-12)	Š + A ³	/ni/
(13-15)	G + D ³	/na/	(16-18)	Š + D ³	/na/, /ni/
(19-21)	G + V	/m/	(22-24)	Š + V	/m ³ /, /ni/
(25-27)	G + V + A ³	/m/, /da/	(28-30)	Š + V + A ³	/m ³ /, /ni/
(31-33)	G + V + D ³	/m/, /na/	(34-36)	Š + V + D ³	/m/, /na/, /ni/
(37-39)	G + D ^{1/2}	/ma/(?) and /ra/	(40-41)	Š + D ²	/ra/, /ni/
(42-43)	G + V + D ²	/m/, /ra/	(44-45)	Š + V + D ²	/m/, /ra/, /ni/
(46-48)	G + A ^{1/2}	/mun/ and /eda/	(51-53)	Š + A ^{1/2}	/mub/ and /ri/
(49-50)	G + V + A ²	/eda/	(54-55)	Š + V + A ²	/m/, /ri/

Table 6

OBGT VIII 1-36

(1-3)	G		(7-9)	Š	/bi/
(4-6)	G + V	/m/		Š + V	
	G + A ³		(10-12)	Š + A ³	/ni/
	G + V + A ³		(13-15)	Š + V + A ³	/m/, /ni/
(16-18)	G + D ³	/na/	(22-24)	Š + D ³	/na/, /ni/
(19-21)	G + V + D ³	/m/, /ši/	(25-27)	Š + V + D ³	/m ^a /, /ši/ (?)
	G + V + A ^{1/2}		(28-30)	Š + V + A ^{1/2}	/mub/ and /ri/
(31-33)	G + V + D ^{1/2}	/mušē/ and /m/, /eši/	(34-36)	Š + V + D ^{1/2}	/mušē/ and /m ^a /, /eši/

Table 7

OBGT IX, 1-54

(1-3)	G		(7-9)	\check{S}	/bi/
(4-6)	G + A ³	/ni/		$\check{S} + A^3$	
(10-12)	G + D ³	/na/	(13-15)	$\check{S} + D^3$	/na/, /ni/
(16-18)	G + V	/m/	(19-21)	$\check{S} + V$	/m/, /bi/
	G + V + A ³		(22-24)	$\check{S} + V + A^3$	/m/, /ni/
(25-27)	G + V + D ³	/m/, /na/	(28-30)	$\check{S} + V + D^3$	/m/, /na/, /ni/
(31-33)	G + T	/ba/	(34-36)	$\check{S} + T$	/ba/, /ni/
	G + T + A ³			$\check{S} + T + A^3$	
(37-39)	G + T + D ³	/ba/, /na/	(40-42)	$\check{S} + T + D^3$	/ba/, /na/, /ni/
(43-45)	G + T + V	/m/, /ba/	(46-48)	$\check{S} + T + V$	/m/, /ba/, /ni/
	G + T + V + A ³			$\check{S} + T + V + A^3$	
(49-51)	G + T + V + D ³	/m/, /ba/, /na/	(52-54)	$\check{S} + T + V + D^3$	/m/, /ba/, /na/, /ni/

Table 8

References

- Attinger, Pascal (1993), *Eléments de linguistique sumérienne. La construction de du₁₁/e/di "dire"* (Orbis Biblicus et Orientalis. Sonderband). Fribourg, Suisse: Editions Universitaires / Göttingen: Vandenhoeck & Ruprecht.
- Attinger, Pascal (1999), 'L'infixe directif /i/, /y/' , *N.A.B.U.* no. 94.
- Black, Jeremy et al. (1998–2000), *The Electronic Text Corpus of Sumerian Literature* (<http://www-etcsl.orient.ox.ac.uk/>). Oxford.
- Cooper, Jerrold, S. (1983), *The Curse of Agade*. Baltimore, MD: The Johns Hopkins University Press.
- Edzard, Dietz Otto (1975), 'Zum sumerischen Eid', in Stephen J. Lieberman, ed., *Sumerological Studies in Honor of Thorkild Jacobsen on his Seventieth Birthday June 7, 1974* (Assyriological Studies, 20). Chicago — London: The University of Chicago Press, 63–98.
- Edzard, Dietz Otto (1997), *Gudea and His Dynasty* (RIME. Early Periods, 3, I). Toronto — Buffalo — London: University of Toronto Press.
- Frayne, Douglas R. (1990), *Old Babylonian Period (2003-1595)* (RIME. Early periods, 4). Toronto — Buffalo — London: University of Toronto Press.
- Goetze, A. (1942), 'The So-Called Intensive of the Semitic Languages', *Journal of the American Oriental Society* 62, 1–8.
- Huehnergard, John (1997), *A Grammar of Akkadian* (Harvard Semitic Museum Studies, 45). Atlanta, Georgia: Scholars Press.
- Kärki, Ilmari (1967), *Die Sprache der sumerischen Königsinschriften der frühaltbabylonischen Zeit* (Studia Orientalia, 35). Helsinki.
- Kouwenberg, N.J.C. (1997), *Gemination in the Akkadian Verb* (Studia Semitica Neerlandica, 32). Assen: Van Gorcum.
- Krecher, Joachim (1985), 'Die /m/-Präfixe des sumerischen Verbums', *Orientalia* NS 54, 133–181.
- Krispijn, Th.J.H. (1982), 'Das Verb in den zweisprachigen Inschriften der Hammurabi-Dynastie', in G. van Driel et al., eds., *Zikir šumim. Assyriological Studies Presented to F.R. Kraus on the Occasion of his Seventieth Birthday*. Leiden: E.J. Brill, 145–162.
- Landsberger, Benno et al. (1956), *Materialien zum sumerischen Lexikon*, IV. Roma: Pontificum Institutum Biblicum.
- Matthews, P.H. (1997), *The Concise Oxford Dictionary of Linguistics* (Oxford Paperback Reference). Oxford — New York: Oxford University Press.
- Nichols, Johanna (1986), 'Head-Marking and Dependent-Marking Grammar', *Language* 62, 56–119.
- Nichols, Johanna (1992), *Linguistic Diversity in Space and Time*. Chicago — London: The University of Chicago Press.

- Sigrist, Marcel and Peter Damerow (1997), *Mesopotamian Year Names. Neo-Sumerian and Old Babylonian Date Formulae* (http://www.mpiwg-berlin.mpg.de/Yearnames/yn_index.htm). Berlin.
- van Dijk, J.J.A (1966–67), ‘L’hymn à Marduk avec intercession pour le roi Abī’ešuh’, *Mitteilungen des Instituts für Orientforschung* 12, 57–74.
- Wilcke, Claus (1988), ‘Anmerkungen zum “Konjugationspräfix” /i/- und zur These vom “silbischen Charakter der sumerischen Morpheme” anhand neusumerischer Verbalformen beginnend mit ì-ib-, í-im-, und í-in-’, *ZA* 78, 1–49.
- Wilcke, Claus (1998), ‘Zu “Gilgameš und Akka”. Überlegungen zur Zeit von Entstehung und Niederschrift, wie auch zum Text des Epos mit einem Exkurs zur Überlieferung von “Šulgi A” und von “Lugalbanda”’, in Dietrich, Manfred and Loretz, Oswald, eds., (1998), *Dubsar anta-men. Studien zur Altorientalistik. Festschrift für Willem H. Ph. Römer zur Vollendung seines 70. Lebensjahres, mit Beiträgen von Freunden, Schülern und Kollegen* (AOAT, 253). Münster: Ugarit-Verlag, 457–486.
- Zólyomi, Gábor (1999), ‘Directive Infix and Oblique Object in Sumerian: An Account of the History of their Relationship’, *Orientalia* NS 68 (1999), 215–253.
- Zólyomi, Gábor (2000), ‘About a Found Donkey and the “Local” Prefix’, *N.A.B.U.* no. 34.
- Zólyomi, Gábor (2001), ‘L’analisi linguistica: grammatica’ in S. Petruccioli et al. , eds., *Storia della Scienza, I: La scienza antica*. Rome: Istituto della Enciclopedia Italiana 2001, 341–344.