

The study of diachronic and synchronic variation in Sumerian

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The written sources for Sumerian extend over a period of more than two thousand years. During this time Sumerian changed from being the mother tongue of a population into a language used only for a limited range of functions by people who were native speakers of other languages. At the same time, our written sources come from a wide variety of communicative situations and from different locations. All these factors suggest that attempts to give a systematic description of the language should take into consideration the likelihood that documents from different periods and places, or different manuscripts of the same literary composition, will reflect different or changing usages. Inevitably also, it remains the case that discussion of contexts, especially for literary examples, is hampered by the absence of information about beyond-the-text aspects such as function, performance and audience response; moreover, there is no contemporary ancient history of interpretation. And not even all documents can be dated or sourced.

1. Sumerian as the object of traditional ‘philological’ study

The importance of diachronic as well as synchronic variation in the study of any language cannot be overemphasised. It is perhaps symptomatic that most of the important grammars and grammatical studies of Sumerian over the years (Langdon 1911; Delitzsch 1914; Poebel 1923; Jestin 1943, 1946, 1951, 1954; Falkenstein, *Das Sumerische* [1964]; Jacobsen 1965; Thomsen 1984; Attinger 1993; Edzard 2003), including the three most recent, do not present their material in a chronologically gathered way so as to take diachronic development or synchronic variation into account in any general overview. Pleas have been made for grammars of particular phases of Sumerian (Falkenstein 1949:2), but only occasional attempts (none of them recent) have been made to provide them (Deimel 1924; Falkenstein, *GSGL* [1949–50]; Sollberger 1952; Kärki 1967). Instead, attempts have been made to write all-embracing grammatical descriptions of the entirety of something called ‘Sumerian’.

There are several explanations for this state of affairs. First, the writing of grammars and dictionaries is itself a highly self-referent tradition. In the case of Sumerian, grammatical and lexicographical work has tended also to reflect a broader tradition including Akkadian, for reasons of academic history. The inchoate *Pennsylvania Dictionary of Sumerian* volumes A and B were influenced by the *Chicago Assyrian Dictionary*, itself modelled in some ways on the *Oxford English Dictionary*. These heroic undertakings seek to provide encyclopaedic descriptions of (in the case of *CAD*) two millennia of linguistic history, and the paradigm has been transferred to linguistic description of Sumerian. This goes some way to explaining why global descriptions (which strictly speaking can never be true grammars) are still being written of a language the very existence of which was still disputed just over a century ago. To some extent it is attributable also to the practical needs and even the pedagogical aspects of such works.

Second, there is a finite, exclusively written, corpus of material, and the distribution of this is not always sufficient to provide a full basis for a detailed grammatical study of every phase. This leads to an understandable but methodologically indefensible habit of supplementing evidence from one period by ‘borrowing’ from another. Occasionally this is even excused, on the grounds that Sumerian ‘changed less fast’ than other languages — a form of Orientalism — or that because to a large extent we are dealing with a self-conscious written tradition, the structures and features of a later phase will mirror those of its predecessors. Both of these assumptions are very unlikely to be true.

Any consideration of the (written) material available for the study of Sumerian must take into account two further features: the cuneiform writing system, in which all the sources are preserved, and the status of the text. As regards the first, while it has long been known that the writing system reflected the morphophonological structure of the language to varying degrees in different phases of its history, it is increasingly being realised that actually it was *never* a completely adequate representation of the phonetic system of Sumerian (whose phonology can be demonstrated to have changed during its history, as would be expected of any language). This means that without an additional level of interpretation it is unacceptable simply to take conventionalised transliterations of written sources as authoritative material for grammatical study. A particular danger is the assumption that morphs which are transliterated in the same way must have been phonetically identical. It is equally dangerous to assume that graphically identical morphs, and even morphs whose phonology is reconstructed as identical, must have the same historical origin. This would be equivalent to ascribing an identical origin to the ‘suffix /s/’ in English ‘houses’ (plural noun) and ‘buys’ (3rd ps. sg. verb), where in fact there are two distinct but phonetically and graphically identical morphs.

The literary material in Sumerian is bound to attract special attention, as the most diverse category. The complex problems surrounding the status of the written literary text are discussed in general by Cooper (in press).¹ For a variety of purposes, editors have sought to present ‘literary’ compositions in the format of a single-line composite text. (For present purposes, ‘literary’ can be defined as referring to any composition which survives in multiple exemplars.) Grammarians need to be aware that such composite texts conceal a host of *ad hoc* decisions made by editors, although they may be supplemented by *apparatus critici* or notes of ‘variants’. Even when the complete text of all available individual exemplars is diagrammatically presented in a *Partitur* (‘musical score’) or ‘textual matrix’ format, variation in line order among the manuscripts can be difficult to detect. Manuscripts of Sumerian literary compositions made by Mesopotamian scribes exhibit a great deal of variation, especially at the morphological level, which we are often at a loss to explain, and some works have more heterogeneous traditions than others (see Gragg 1972; Attinger 1993:95–127). This is largely a result of the social and cultural context of the ‘manuscripts’ used by editors (see most recently Civil 1999–2000). The majority of such clay tablets are the material débris of the educational process, as young Babylonian scribes learnt to speak and write Sumerian in scribal academies and training workshops. Most of the literary sources we have are their discarded exercises. Thus the variation may be synchronic geographical variation (but often irrecoverable, since so many exemplars cannot be sourced), it may be diachronic (but most exemplars cannot be dated precisely), or it might be on the level of personal scribal idiolect. Furthermore, literary compositions were transmitted in multiple versions with varying degrees of closeness, so it is usually impossible to know whether to ascribe textual variation to individual scribes or to the particular textual tradition within which they were working. And a modern composite text of lines 1–10 of a composition is likely to be assembled from a completely different group of fragmentary exemplars from lines 100–110 of the same composition — jigsaw pieces which may not overlap at all. All this calls into question the legitimacy of linguistic arguments based even on single literary works.

It might appear that the only methodologically correct procedure would be to use as linguistic evidence only the text of individual scribal exemplars. But while these would at least have the status of being the product of a single writer, a large number are too fragmentary to be used for any statistically valid evidentiary purposes. A crucial problem concerns the distinction between textual variation and scribal error: one must bear in mind that sometimes a written source (and this applies equally to administrative and other documents which were written as

¹ See also, at greater length, Black 1998:28–38.

unique exemplars, since they are also of the greatest value for linguistic study) may contain a variety of types of error. There may be simple copying errors, and errors caused by inattention, and genuine learners' errors. Some of the scribes whose work we use were schoolboy apprentices whose teacher would have agreed with us that their written work was simply wrong: it is not always easy to distinguish this from authentic textual variation. It is, in equal measure, risky to seek to 'correct' incomprehensible originals, and naive to insist that sense must always somehow be made of the sources as they stand because the scribes 'knew Sumerian better than we do'.

Textual variation, i.e. substantive, lexical variation, must also be distinguished from variation in orthography. This term is used in confusing ways in the literature (see Cooper in press). It may be simply a descriptive term for 'spelling', or it may presuppose some sort of standardisation ('correct' orthography; Greek *orthos* 'standard'). Most scholars would agree that the more common a Sumerian word or morph is, the more likely it is to have a standardised spelling. Sometimes there is an alarming variation in the writing of rare words, a phenomenon paralleled in the history of other languages and easily explicable. At different phases during its history, Sumerian spelling habits underwent various diachronic changes, and it is apparent that a certain degree of variation in spelling was tolerated synchronically within the same tradition. An 'un-orthographic' spelling is then one which departs from the majority spelling of a particular word in that particular sociolinguistic context. In addition, there may be several different orthographies (sets of spelling habits) in parallel use in synchronic traditions (e.g. literary vs. administrative). A complication is the use of archaic (or are they archaising?) orthographies, such as those identified by Klein in the less widely copied praise poems of Šulgi (see also Klein in press). Apparently the orthography of the more frequently copied poems was modernised, leading (apparently) to the conclusion that the textual traditions of others preserved, through three centuries or more, an orthography characteristic of the period (Ur III) when they were composed.

Notably divergent orthographies are those classed as 'phonetic' (or, less satisfactorily, 'syllabic'). Neither designation is wholly ideal: the first term attempts to explain the purpose of such writings on the level of spoken language, implying that they reproduced something closer to the actual pronunciation in that region or period or generally; and the second is descriptive of the graphic tendency to replace logographic writings with short or common syllabic (CV or VC) signs. It is fair to say that Emesal exhibits a tendency to spell phonetically as one of its distinguishing features (e.g. *du₅-mu* vs. *dumu*). Typically, divergent orthographies of this sort occur in areas outside the Sumerian heartland (northern Babylonia, Ešnunna, Syria, Elam); or they may originate in contexts where a 'pronunciation' spelling was required for learners (e.g. in Hellenistic Ur), sometimes alongside a text in a standard orthography (e.g. at Emar or Ugarit). Sometimes they may be the result of ignorance or incompetence. It can be particularly problematic when text is preserved only in such a 'phonetic' orthography, since it is often incomprehensible without a standard original for comparison.

2. Sumerian as a spoken and obsolescent language

Sumerian was a living language which became obsolescent and finally extinct during the period for which we have evidence.² Descriptions of obsolescent languages occur frequently in the linguistic literature, mostly referring to actual linguistic situations among illiterate peoples in the last hundred years. However, real-life linguistic situations, such as might be observed today, cannot necessarily be transplanted to the (exclusively written) evidence preserved from ancient southern Mesopotamia over a period of several centuries in the early second millennium BC.

² Some of the points made in this section are discussed further in Black (in press).

Probably 95% of Sumerian language history is anyway inaccessible to us and lost forever, precisely because we have only written materials, and the vast majority of ancient Mesopotamians were illiterate (For estimates of literacy see now Wilcke 2000). It is likely that the linguistic data at our disposal is not adequate to provide the answer to the question ‘when Sumerian died out’ (see Edzard in press). An answer would only be a guess based on information from other, historical, sources. What we *do* know is that Sumerian was written as a literary and administrative language until roughly the end of the Old Babylonian Dynasty. We can observe, simply as a phenomenon of historical data, that Sumerian was not (much) used in administration after that period, and never again functioned as an official governmental language.

We should expect such a situation of obsolescence to be dynamic, having both synchronic and diachronic aspects. Languages do not die out overnight: it is a very gradual process. It does not happen in all geographical areas of a language at the same time, or in all sections of the population, or in all linguistic contexts or environments. Language death, which is after all a form of language change, spreads from town to town and person to person.

Leaving aside the total and sudden extermination of a people, language death is always a phenomenon of language contact, and in the case of Sumerian, it is fairly clear that the major language in contact was Akkadian; we could expect the contact to have begun at least as early as the middle of the third millennium BC. We can guess that there might be others (including Amorite, Hurrian and Elamite). However, not all the changes in written Sumerian seem to be due to the influence of other languages.

Contraction of the range of written registers for which a language is used is also likely to be an indicator of such change. We may broadly distinguish vernacular and formal uses of written Sumerian. Vernacular or informal usage is reflected occasionally in some letters and some legal documents (Krecher 1993). A formal register is used for administrative documents, which can be viewed as having their own grammar (see Sallaberger in press). Most other functions use other formal ‘literary’ i.e. aesthetically stylised registers: some (so-called ‘literary’) letters, and the broad mass of literature, and religious ritual and magical procedures. It is likely that the ‘literary’ register sometimes evokes the register of oral poetry. A formal register which sometimes evokes the ‘literary’ register is used in royal inscriptions.

The vernacular or informal usage reflected in some letters and legal records had already disappeared completely by about the time of Lipit-Eštar (1934–1924 BC).³ Written Sumerian was no longer used for ordinary administrative documents after about the 1950s BC in central Babylonia (although it persisted perhaps until after 1800 BC at Uruk).⁴ From roughly 1800 BC onwards, the registers of written Sumerian were further restricted to occasional royal inscriptions (which were by then almost invariably published bilingually in Sumerian and Akkadian)⁵ and, in local usage, legal documents: Sumerian was still used until at least the 1730s as the language of legal records at Nippur, even if it had been abandoned at Lagaš sixty years

³ The latest administrative letter in Sumerian is dated in the reign of Lipit-Eštar, see Sallaberger 1996:391 fn. 8, Michalowski 1993 no. 244 = YOS 14 317. For convenience, dates throughout this introduction are given according to the middle chronology.

⁴ The Early Isin craft archive extends to Šu-ilišu year 3. The Nippur texts from the early Isin Period of Van De Mieroop 1986 are apparently in Sumerian (dates of Šu-ilišu (1984–1975) and Iddin-Dagan (1974–54)). Documents from the Sîn-kāšid palace at Uruk seem to be mixed Sumerian and Akkadian, some dated as late as e.g. Irdanene, a contemporary of Rīm-Sîn (1822–1763), see BaM 24 (1993), p. 142 no. 200.

⁵ Royal inscriptions of the Uruk dynasty (Sîn-kāšid to Anam) are all in Sumerian; those of Ammī-šaduqa (1646–1626) include monolingual Sumerian as well as bilingual. There may be a geographical aspect to this too: Sumerian probably continued to be more viable in the south.

earlier.⁶ However, many of the surviving copies of the extensive written tradition of ‘copied’ Sumerian literature, including religious material, probably date from the post-Hammurabi phase. The language continued to be used for official date formulae (in Akkadian documents) until the very end of the Old Babylonian Period, c. 1600 BC. And of course it continued to be taught and learnt for the purposes of the literary and scholarly tradition for another one and a half millennia, until the extinction of cuneiform writing.

All these changes tell us about the shifting prestige of a language written by perhaps 5% of the population; just to recapitulate, we can infer nothing from this about the vernacular use of the Sumerian spoken by the massive majority of illiterates other than its gradual decline.

3. Sumerian as the object of linguistic study

Sumerian is not related genetically to any known language. It is an extinct language, which no one acquires as their mother tongue any more; its transmission amongst contemporaries and from one generation to the next stopped thousands of years ago. Today the language can be studied solely from written sources which were recorded using a mixed logographic-phonographic writing system, and which come from a wide variety of communicative situations and from many different periods and locations. Sumerian was only one of the main languages used by a multilingual society, about whose sociolinguistic conditions, however, we know very little. As a vernacular, Sumerian was eventually replaced by another important language of the region, Akkadian, which itself later gave way to Aramaic, followed in due course by Arabic.

Any linguistic study of Sumerian must be aware of the limitations imposed by the characterization of the previous paragraph. At the most obvious level, it must be clear that one cannot even hope to recover the full complexity of the language. Its phonology, morphology, syntax, and usage can be reconstructed only incompletely and to varying extents from the evidence at our disposal, however extensive that evidence may be. The character of the linguistic evidence also determines the type of linguistic methods that can be meaningfully applied to Sumerian.

Accordingly in this section the editors offer an overview and discussion of the modern literature on diachronic and synchronic variation in Sumerian. This is intended to provide an introductory survey. First, we review some proposals which concern the grammar of Sumerian in the period before any written evidence is available. The second subsection aims to give a selective (and admittedly incomplete) survey of grammatical changes which have been identified in the modern literature on the basis of attested forms, and attempts a first classification of them. The section concludes with a survey of synchronic variation.

3.1 Diachronic variation

Within diachronic variation, a useful distinction can be made between the study of language history on the one hand, and its prehistory on the other. In the former case we are concerned with changes in languages as they are reflected in written sources; in the latter with changes hypothesized as having occurred before the appearance of such evidence.

3.1.1 Prehistory

Pointless though the reconstruction of the prehistory of Sumerian might seem at first, nevertheless it can potentially have a bearing on some of the main issues in the study of the historical phases of the language. One of these is the question of a Sumerian-Akkadian

⁶ The land sale from Nippur dated Samsu-ilūna year 29 (1721 BC; BE 6/2 64 = Stone and Owen 1991, no. 52) could be the latest document in Sumerian; cf. Schorr 1913, no. 265 (Lagaš, dispute over garden, in Akkadian: date = Hammurabi year 6).

linguistic area, since the full extent of the influence of Akkadian and Sumerian on each other's grammar could only be assessed if more was known about the grammar of each before the period of their first contact (see also below).

The two main methods used for reconstructing linguistic prehistory are the comparative method, and internal reconstruction. The comparative method is based on the comparison of related languages, and therefore by definition cannot be applied to the isolate Sumerian. Internal reconstruction is based on the principle that 'regular changes within a language will result in systematic alternations between forms, and that examination of these alternations will allow us to recover the original state of affairs' (Fox 1995:147; 'original' here has the sense 'previous'). Since it uses internal evidence for reconstruction without recourse to comparative evidence of related languages, its application to Sumerian is possible in principle.

However, its use for the reconstruction of proto-Sumerian is not without problems for two reasons. First, the quantity and quality of the linguistic evidence are often inadequate for a description which is detailed and systematic enough to carry out internal reconstruction. Second, even if the linguistic evidence exists, the evidence must be gathered and presented in a way which allows the convenient application of the method, which depends on recognition of the patterned structures of a language; it cannot work with descriptions which restrict themselves to the mere listing of morphemes without the establishment of grammatical patterns and the distributions of those morphemes.

Internal reconstruction 'attempts to reduce synchronic variation to earlier invariance' (Hock 1991:532), and the assumption that attested variation must derive from earlier invariance has sometimes been relied on in constructing hypotheses about the prehistory of Sumerian. Consider the following description:

'The use of -e to denote movement to external contact, also with words for person, represents undoubtedly an original usage. However, since movement to external contact with person would usually tend to affect him also internally, i.e. emotionally, -e tended to yield to -ra, which had the latter implication, so that by historical times -e survives with words for persons only in special cases — especially after genitive element.

Interesting is that when, consonantly with the older construction, adessive -e was resumed by an adessive -ni- in a following verbal form, later usage changed only the -e of the free form to -ra. The -ni- remained frozen as a bound form in the verb and was not changed to -na-' (Jacobsen 1983:195).

Here the assumption of earlier invariance resembles the method of internal reconstruction, but the reconstruction appears to turn the method upside down: instead of the alternating constructions, it starts from the invariant construction that is taken for granted.⁷ In another paper, Jacobsen presented a theory about the development ('intrusion') of the ergative conjugation pattern (1998a:204–220). Here too his reconstruction is based on the underlying assumption that invariance represents the earlier state. (On the development of ergative pattern, see now also Coghill and Deutscher [2002].)

An associated problem is represented by etymology. Etymology is 'the *historically verifiable* sources of the formation of a word and the development of its meaning'.⁸ Proposals for so-called etymologies of Sumerian words and morphemes are not uncommon in the

⁷ In particular, one may point out the following problems with Jacobsen's reconstruction: First, the use of -e/ with 'words for person', i.e. the assumed 'original usage', is attested only from the Ur III Period on (see fn. 24 below). Second, there is no plausible linguistic explanation for what makes -e/ 'survive' in those 'special cases', i.e. the environment of the alternation is not specified. Third, the mechanism of change which replaced -e/ by -ra/ seems to involve reference to psychological rather than to linguistic factors. The opposite view, namely that it is -ra/ that is occasionally replaced by -e/ from the Ur III Period on, appears to meet with wider acceptance now among Sumerologists (see below 000).

⁸ *Concise Oxford Dictionary*, 9th edn. (1995), our emphasis.

literature, often on the basis of visual similarity of the transliterations. However, without prehistoric linguistic evidence and in the absence of comparative evidence from related languages or detailed historical evidence from successive phases of Sumerian, these must remain speculations without credibility.⁹ Their inherent flaw is clearly shown by the fact that they are always based on word forms and meanings already known to us, and thus take no account of language change. In the vast majority of cases, there is little enough secure information about even the history of Sumerian words, let alone their prehistory. For the connected problem of the identification of Sumerian words that are allegedly non-Sumerian in their origin, one can now consult Rubio's (1999) recent negative re-assessment of the evidence.

Descriptions of Sumerian that purport to be synchronic sometimes also rest on assumptions that in essence are 'etymological'. Consider the following statement about the case-marker *-ra/*:

'Für die Aufnahme des Dativs beim finiten Verbum *fehlt* dem Sumerischen ein besonderes richtungsanzeigendes Element, sodass es zum *Ersatz* auf das Element *-a-* des Lokativs oder seltener das *-e-* des Lokativ-Terminativs zurückgreifen muss.'¹⁰

The reference here is to verbal prefixes (of the type called 'infix' in most descriptions of Sumerian) such as */na/*, */ra/* and */ni/*, */ri/*, which in various constructions can be construed with the case-marker *-ra/*. Falkenstein's account is based on the assumption that */na/* and */ra/* contain 'das richtungsanzeigende Infix des Lokativs *-a-*' which is 'mit der Lokativpostposition *-a* beim Nomen identisch' (Falkenstein 1949:190 and 200), and that */ni/* and */ri/* contain 'das richtungsanzeigende Element des Lokativ-Terminativs der unmittelbaren Nähe *-e- > -i-*' (Falkenstein 1949:192), which is identical with the locative-terminative suffix *-e/*. The statement that no special verbal element corresponds to *-ra/* is based on an analysis of the verbal elements which in its turn rests on the assumption that there existed a morphological identity between nominal case-markers and elements of the verbal prefix-chain.¹¹

What is the methodology underlying this description? On a synchronic level, there is no evidence to connect a prefix like *-na/-*, which is always construed with a noun phrase case-marked with *-ra/*, with any idea of 'locativeness'. The analysis of *-na/-* as containing a 'locative' element, and the assumption made in the passage cited above, involve an 'etymology' of the verbal prefixes which cannot be supported by comparative evidence and consequently ends up as an unverifiable statement about the prehistory of Sumerian.¹² A derivation of *-na/-*, for example, from */n/ + /ra/ --> /nna/ --> /na/* would seem just as plausible and would be equally unverifiable without further evidence.

Linguistic typology studies the cross-linguistic patterns of language structure. The study of these patterns in turn results in generalisations that represent constraints on which language types are likely to be found in natural languages. Such generalisations can be useful for assessing the probability of a proposed reconstruction. For example, Jagersma (in press) uses a survey of attested sound and phoneme inventories for testing the probability of his phonological reconstruction.

⁹ It is by no means accidental that alleged 'etymologies' are the principal hunting grounds of those who try to establish a genetic relationship between Sumerian and other languages; they try to answer questions which cannot be answered on the basis of the evidence available.

¹⁰ Falkenstein 1950:89; italics are ours.

¹¹ 'Die richtungsanzeigenden Elemente stimmen mit der Kasuspostposition beim Nomen überein' (Falkenstein 1949:193–194).

¹² The enduring idea that the prefix */ba/* (or */ma/*) is a locative prefix is based on the same 'etymology'; no synchronic evidence seems to support it.

Another approach which uses typology rests on the assumption of two consistent (or canonical) word-order types: adjunct–head (OV) and head–adjunct (VO).¹³ Rightly or wrongly, some have considered these two types to be the most natural language states, and deviations from them are traced back to the influence of some other language. Starting from these premises, both Oberhuber (1983) and Hayes (1991) have argued that the possessed–possessor construction in Sumerian developed under the influence of Akkadian. It is, however, fair to say that the very basis of reconstructions of this kind has been seriously questioned in the linguistic literature, and concerns about the reliability of the method led Comrie to state that ‘the number of reservations that have to be made makes it questionable whether, to date, any solidly reliable results have been achieved in this area’ (1989:210).¹⁴

Haayer 1986 discusses the question whether the SOV word order of Akkadian is the result of the interference of Sumerian. Boisson 1989 studies possible typological constraints on the Sumerian phonological system. Steiner 1990 provides a typological comparison of Sumerian and Elamite. Woods (in press) discusses the historical development of deictic elements in Sumerian from a typological perspective.

Sumerian was only one of the two main languages in ancient Mesopotamia, and consequently the question of linguistic interference between Sumerian and Akkadian has become a major issue in the discussion of the prehistory as well as the history of Sumerian. Similarities between the two languages have been pointed out on the level of lexicon, phonology, morphology and syntax;¹⁵ Edzard (1977) had already introduced the concept of a Sumerian–Akkadian linguistic area. There has been a persistent debate centering on the problem of the date when Sumerian ceased to be the native language of a population. As already noted above (§2), we consider this to be almost certainly an unanswerable question, if indeed it is proper to ask it in first place. The position taken by the various participants in the debate appears also to determine their views on the status of Sumerian during and after the second half of the third millennium BC. Those who put the date of Sumerian’s demise some time after the Ur III Period (Edzard, Streck; Sallaberger in press) explain the changes in Sumerian in the Ur III and subsequent periods as ongoing developments in the linguistic convergence, i.e. mutual borrowing, between Sumerian and Akkadian within a linguistic area. By contrast, those who put the date earlier (Michalowski; Kienast 1982) have considered the changes merely as signs of a continuous language attrition characteristic of dying languages. Michalowski (in press) discusses the problem with reference to the extensive linguistic literature on language contact and death and provides thereby a perspective which is substantially different from that of Edzard.

Many of the similarities between Sumerian and Akkadian described in the literature are thought to have occurred before the period of usable written records. We have to speculate as to the mechanisms by which they came about. It is true that research on contact-induced language changes has shown that it is possible to distinguish between the linguistic effects of borrowing and interference through shift.¹⁶ However, it has also shown that the effects of these two types of linguistic change can be separated only if one has sufficient information about the social setting in which the changes took place. In the absence of historical data on social

¹³ See, for example, Comrie 1989:86–103, Croft 1990:44–63, or Croft 1999:96–105 on word order typologies.

¹⁴ See Comrie 1989:201–226 and Fox 1995:261–265 on the use of typology for linguistic reconstruction.

¹⁵ See Falkenstein 1960, Cooper 1973:fn. 36 and 38, Edzard 1977, Lieberman 1977, Pedersén 1989, Streck 1998; and Edzard 2003:173–178; Edzard in press; Michalowski in press.

¹⁶ ‘Borrowing is the incorporation of foreign features into a group’s native language by speakers of that language: the native language is maintained but is changed by the addition of the incorporated features’ (Thomason and Kaufman 1988:37). Interference through shift ‘results from imperfect group learning during a process of language shift. That is, in this kind of interference a group of speakers shifting to a target language fails to learn the target language (TL) perfectly. The errors made by members of the shifting group in speaking the TL then spread to the TL as a whole when they are imitated by original speakers of that language’ (*ibid.*:38–39).

circumstances, linguistic attitudes, length and intensity of contact, relative numbers of speakers, degree of bilingualism etc., the interpretation of the strictly linguistic evidence will always involve a great deal of conjecture.

3.1.2 History

It has been noted above that there is a tendency to write all-embracing grammatical descriptions of the whole of Sumerian without taking into account diachronic development. This was explained partly by the fact that our evidence is a finite, exclusively written, corpus of material, and that the distribution of this is not always sufficient to provide a full basis for a detailed grammatical study of every phase. However, by neglecting the diachronic development of Sumerian, one not only fails to recognise an important dimension of the study of Sumerian, but also runs the risk of arriving at an incorrect synchronic description. Consider the following examples. Examples (a) and (b) show that Sumerian distinguished two grammatical genders: human vs. non-human. In example (c), however, a human participant is referred to by the possessive enclitic¹⁷ used to refer to a non-human one in (b), and in (d), the reverse is true:

(a) gu₃-de₂-a-ni ġiš ba-tuku-am₃ ([2.1.7] Cyl. A 2.20 [Lagaš, 22nd cent.])¹⁸
 ‘His (= Gudea’s) call was heard’

(b) me-bi me gal-gal me-me-a dirig-ga ([2.1.7] Cyl A 9.12 [Lagaš, 22nd cent.])
 ‘Its (= the E-ninnu’s) divine powers are the greatest, surpassing all other divine powers’

(c) ki-tuš nam-diġir-bi-še₃ tum₂-ma (Rīm-Sîn I 13 31 [Larsa, 1822–])
 ‘a residence befitting his (= Ninšubur’s) divinity’

(d) an-dul₃ daġal-la-ni kur kalam-ma dul (Warad-Sîn 21 76 [Larsa, 1834–])¹⁹
 ‘its (= Urim’s) broad shadow covers the foreign countries and the Land’

With only this and similar evidence to describe the use of 3rd ps. sg. possessive enclitics, and no information about the date of the attestations, by default one would consider the examples as belonging to the ‘same’ grammatical system. One might conclude that the choice between *-/ani/* and *-/bi/* is determined by a very complicated and unique system of classification of nouns in Sumerian which can no longer be recovered. But given the information that there are approximately 300 years between (a)/(b) and (c)/(d), and that the latter examples come from a period when Sumerian was no longer a vernacular but was used by people whose mother tongue distinguished masculine and feminine genders, one might conclude that in the 22nd century BC Sumerian distinguished human and non-human genders, but that later this system disintegrated as a result of interference from Akkadian. Few Sumerologists would disagree strongly with this second description; but one would have to say that the principles accepted thereby are not always observed in studies which describe or reconstruct parts of Sumerian grammar using linguistic evidence as different in date, context, and reliability as Pre-Sargonic royal inscriptions and the Middle Babylonian grammatical texts.

The example with the 3rd ps. possessive enclitics can also illustrate another important point, namely, that linguistic evidence itself is not enough to identify linguistic changes. *Linguistic changes become perceptible only through the particular interpretations imposed on*

¹⁷ Possessive enclitic replaces here the more common term “possessive suffix”. For the justification of its use, see Zólyomi 1996:34–36.

¹⁸ Literary sources are cited here from the ETCSL <<http://www-etcs1.orient.ox.ac.uk/>> and identified by the ETCSL catalogue number.

¹⁹ The city Urim is referred to by a human pronominal enclitic also in ll. 73 and 77, while it is referred to by a non-human one in ll. 72, 75, and 79.

the evidence (see further Lass 1997). The erosion of the gender system in the later Old Babylonian Period can be recognised because one system of gender in Sumerian had been previously identified and the contact with a language with a different gender system recognised. By the same token, one will be able to identify linguistic changes in other, more complex and less transparent parts of Sumerian grammar, e.g. in the prefix-chain, only if there exist synchronic descriptions that do justice to their structure and functioning.

The remainder of this section attempts to give a survey of the literature on diachronic change attested in historical periods. These are grouped into two categories, grammatical changes supposedly induced by contact with Akkadian (3.1.2.1), and changes in Sumerian where there is no apparent Akkadian influence (3.1.2.2).

3.1.2.1 Grammatical changes supposedly induced by contact with Akkadian

The grammatical changes that have been described as induced by contact with Akkadian can be classified into at least three types:

- A. Loss of grammatical distinctions found only in Sumerian: changes where a grammatical distinction of Sumerian is no longer maintained consistently, or is replaced as a result of a mismatch between Sumerian and Akkadian distinctions.
- B. Structural interference: structural changes in Sumerian under the influence of an Akkadian grammatical pattern.
- C. Transfer of rule: changes where an Akkadian phonological rule is carried over to Sumerian.

A. The loss of grammatical distinctions found only in Sumerian

Gender

As noted, the Sumerian system of grammatical gender²⁰ was based on a distinction between human and non-human; while Akkadian, in common with all Semitic languages, distinguished feminine and masculine genders. The mixing up of the 3rd ps. sg. human and non-human possessive enclitics (-/ani/ and -/bi/) is attested from the early Old Babylonian Period onwards.²¹ But the distinction between human and non-human also plays a role in both the verbal affix system and the case system of Sumerian. The case-marker -/ra/ functions as the case-marker of human nouns in a number of syntactic functions, in contrast to either -/e/ or -/a/, which mark non-human nouns in the same syntactic function. (In causatives of two-participant verbs, for example, the human causee is case-marked with -/ra/, and the non-human with -/e/).²² The human case-marker -/ra/ is at times replaced with non-human -/e/.²³ This phenomenon occurs from the Ur III Period onwards,²⁴ and is attested particularly often after the genitive case-marker -/ak/. In (a) and (b) below the participant case-marked with -/e/ functions as an indirect object (construed with /na/ in the prefix-chain), while in (c) it functions as an oblique object (construed with /ni/ in the prefix-chain). There is no obvious explanation for this replacement in phonetic terms, but since -/e/ serves as the non-human counterpart of -/ra/ in the function of

²⁰ 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]).

²¹ Falkenstein:1950:23 and fn. 1; Falkenstein 1950a:127²; Kärki 1967:203; Römer 1969:107; Kienast 1982:110; Thomsen 1984:72 (§103); Attinger 1993:172 (§108); Römer 1999:63 and fn. 165.

²² See Table 2 in Zólyomi in press and Zólyomi 1999:229 (Table 5).

²³ See Falkenstein 1950:99 and 118; Kärki 1967:247; Attinger 1993:240 (§152a R1); Zólyomi 1999:252⁷⁶; Römer 1999:fn. 222; Zólyomi 2000.

²⁴ Falkenstein (1950:118) states that the phenomenon is already attested in a manuscript of an inscription of Entemena (= ms. E of Entemena 45–73 in Steible 1982). Sollberger (1956:43, to B5), however, corrects Falkenstein's reading for ^dinana-ke₄ to ^dinana-ra¹.

An example dated to the Ur III period is Šulgi 2039:1–3 ^dmes-lam-ta-ed₂-[a¹], lugal a₂ zid-da, lagaš^{ki}-ke₄ where M. is the god to whom the the seal is fashioned (l. 9: mu-na-dim₂) (text no. follows Frayne 1997)

indirect and oblique object, it seems reasonable to account for it as an example of gender confusion. It is notable that no certain occurrence of a replacement of *-e/* by *-ra/* is known.

(a) ^den-ki-ke₄, ki-tuš kug ki aḡ₂-ḡa₂-ni, mu-na-du₃ (Nūr-Adad 5 11–13 [Larsa, 1865–])
‘I have built his beloved shining residence for Enki’

(b) ^den-ki-ke₄ ^dnin-maḥ-e mu-na-ni-ib-gi₄-gi₄ ([1.1.2] Enki and Ninmaḥ 56)
‘Enki answered Ninmaḥ’

(c) ud-bi-a {mss. L₁ and M₁:} munus-ra // {mss. H₁ and I₁:} munus-e arḥuš-a sa₂ nam-ga-mu-ni-ib₂-dug₄ ([1.6.2] The exploits of Ninurta 368)

‘At that time he (= Ninurta) also reached a woman with compassion’.

Also the case-marker *-ra/* is sporadically replaced also by *-a/* from the Ur III Period on.²⁵ This is attested only with participants that function as indirect object (construed with */na/* in the prefix-chain), and only if the case-marker is preceded by a singular possessive enclitic (*-ḡu/*, *-zu/*, or *-ani/*). It is not clear whether this too is a phenomenon of gender confusion.

Case distinctions

On the attrition of the Sumerian system of cases expressing local meaning, e.g. promiscuous use of *-a* and *-e*, see Wilcke (1998, esp. 464), and Zólyomi (in press). The phenomenon is thought to be explained by the mismatch between the Sumerian system and the functionally corresponding Akkadian structures.

It is also possible that this uncertainty over the use of *-a* and *-e* lies behind the occasional change of word-final genitive case-markers to */e/* from the Old Babylonian Period on.²⁶ In (a), Ur-Namma’s name is the rectum of an anticipatory genitive; the expected form would be ^dur-^dnamma-ka:

(a) sipad ^dur-^dnamma-ke₄ ar₂-a-ni ḥuš-am₃ ([2.4.1.2] Ur-Namma B 64)
‘The fame of the shepherd Ur-Namma is terrible’

B. Structural interference

Indefinite genitives

On structural and functional grounds, definite and indefinite genitives may be distinguished in Sumerian.²⁷ The former marks possession; the latter usually expresses a sort of attribution. The structural difference between the two can be seen best when a possessive enclitic is attached to the genitive construction:

(a)
sipad anše-ka-ni²⁸
= sipad anše-ak-ani
herder donkey-genitive-his
‘his donkey herder’

(b)
sipad anše-na
= sipad anše-ani-ak
herder donkey-his-genitive
‘the herder of his donkey’

²⁵ See Römer 1965:255; Kärki 1967:247; Attinger 1993:172–173 (§108R), 230 (§145R), and 248 (§157a R); Römer 1999:69 and fn. 218.

²⁶ See Poebel 1923:137 (§§372–373); Sjöberg 1961:10¹; Kärki 1967:48–49; Attinger 1993:259 (§168 3°) and 214⁴⁷⁸; Wilcke 1998:passim; Römer 1999:68²¹⁰.

²⁷ For the terms see Zólyomi 1996:36–38. The term ‘indefinite genitive’ is motivated by the fact that in these constructions the rectum does not refer to any definite, existing entity. Klein 1983:fn. 18 uses the term ‘internal genitive’ for indefinite genitive.

²⁸ Gudea Cyl. B 10:1 (2.1.7).

In (a), it is the regens, i.e. the herder, that belongs to the referent of the possessive enclitic, while in (b) it is the rectum, i.e. the donkey. The functional difference between the two types of genitives is reflected in the different order of the genitive case-marker and the possessive enclitic in (a) and (b).

In a much-debated expression in ll. 81 and 99 of *Gilgameš and Aga* (1.8.1.1), the order of the genitive case-marker and the possessive enclitic is that of an indefinite genitive.²⁹

šag₄ erin₂-na-ka-ni
 = šag erin-ak-ani
heart troops-gen-his

Here Krecher (1986:46) and Wilcke (1998:462–463) plausibly propose to translate the expression as if it were a definite genitive: ‘in the midst of his troops’. They suggest that the expression is formed by copying the structure of its Akkadian equivalent: *ina libbi ummānīšu*. Ending as it does with a word in the genitive case followed by a possessive suffix, the Akkadian construction is very similar structurally to a Sumerian indefinite genitive. It is assumed that the use of an indefinite genitive in a possessive meaning is due to the meaning of the structurally similar Akkadian construction.

Yoshikawa (1992) identifies a genitive construction where the regens takes a suffix *-e/*, comparable to the Akkadian construct. Wilcke (1998:463–465) explains the reduction of double genitives as due to the influence of the corresponding Akkadian structure. F. Huber (2001) surveys changes in the genitive construction in the royal correspondence of Ur.

Causative verbal forms

In the 3rd millennium, Sumerian had no regular formalised way of indicating causativity. A causative verbal form differed from the corresponding non-causative form only in the increased number of participants. In causatives of one-participant verbal forms the causee functioned as object of the verb; while in causatives of two-participant verbal forms the causee functioned as the oblique object and was construed with the directive prefix in the verbal prefix-chain. In contrast to Sumerian, Akkadian is a language with a morphological causative: the causative verbal form (*ušaškin*) is derivationally related to the non-causative verb (*iškun*).

But by the time of the royal inscriptions from Larsa and Babylon, Sumerian had developed a way of expressing causativity very similar to that of Akkadian: the verbal elements earlier used formally to refer to the causee in the causatives of two-participant verbal forms, */b/ + /i/* and */n/ + /i/*, fused into unanalysable morphemes, */bi/* and */ni/*, respectively, and became markers of causativity used both in transitive and intransitive verbal forms:³⁰

^den-lil₂-le, nam tar-ra-zu, mi-ni-ib-gal (*u₂-[šar¹-bi₂]*) (Samsu-ilūna 7 14’–15’ [Babylon, 1749])

‘Enlil has made your fate great’.

Verbal government

The case-marking of verbal participants in Sumerian is occasionally influenced by the corresponding Akkadian construction. The phenomenon is already attested in the time of Gudea and becomes very common in the Old Babylonian Period. In (a) below, the oblique object of the compound verb *si — sa₂* is not case-marked with an *-e/* as expected, but is instead in the

²⁹ See Zólyomi 1996:fn. 17 and Wilcke 1998:462 for earlier comments on the expression.

³⁰ For a more detailed argument and for more examples, see section 5. of Zólyomi in press.

absolute case, reflecting the accusative case of the object of the corresponding Akkadian verb *šūšurum*.³¹

- (a) šu-luḥ si bi₂-sa₂ ([2.1.7] Gudea Cyl. A 10.8 [Lagaš, 22nd cent.])
‘I perform correctly the hand-washing rites’.

In (b) the place of entry is case-marked with *-še/* instead of the expected *-a/*. The corresponding Akkadian verb *erēbum / šūrubum* marks the same participant always with the preposition *ana*. The use of this preposition overlapped considerably with the use of the Sumerian case-marker *-še/*, and their correspondence was extended by analogy with other expressions which originally used a case-marker different from *-še/*, but which were translated into Akkadian with *ana*.³²

- (b) mu alan urud gu-la e₂ d^utu-še₃ i-ni-in-kur₉-re (Gungunum, year name 8 [Larsa, 1932])
‘Year: He brought into the house of Utu a big copper statue’.

Precatives formed with the *hamtu* construction

Conventionally the prefix */ḥe/* expresses the precative with the so-called *marû* construction when the verbal form is two-participant, and the *hamtu* construction is used only with one-participant (intransitive or passive) verbal forms.³³ From the Old Babylonian Period onwards the precative of two-participant verbal forms is sporadically formed with the *hamtu* construction as in (a):³⁴

- (a) igi zid ḥe₂-en₆-ši-bar (Warad-Sîn 12 25 [Larsa, 1834])³⁵ [expected: ḥe₂-en-ši-bar-re]
‘May he look at me favourably’

The phenomenon is likely to be due to the influence of the Akkadian precative, which is formed with the preterite. Attinger (1993:293) claims that ‘les exemples ne sont fréquents que dans les textes *composés* après l’ép. d’Ur III: inscriptions royales, hymnes royaux, textes grammaticaux’ (his italics).

C. Transfer of rules

Loss of mimation

The *-m* of Akkadian mimation (*-um, -am, -im* etc.) gradually disappears in word-final position during the course of the Old Babylonian Period. The same rule is occasionally applied to the 3rd ps. sg form of the Sumerian copula *-am/*, resulting in */a/* from the Old Babylonian Period onwards:³⁶

- (a) teš₂ [kalam]-[ma]l-ka ba-šub^{ub} ([2.4.1.1] Ur-Namma A 45 [Nippur version])³⁷
‘As he, who was the vigour of the Land, had fallen’

The resulting */a/* without */m/* can undergo the same change as other word-final */a/* morphemes and might change to */e/*.

³¹ See Falkenstein 1950a:123–124; Falkenstein 1950:81–82 (§ 103a2); Kärki 1967:234–236; Attinger 1993:182 (§116 R2) and 228 (§143c); Wilcke 1998:460 fn. 9 and 466 (to l. 101) for more examples involving compound verbs. For *si — sa₂*, see Wilcke in press.

³² For other phrases which show the same pattern of change see section 4. of Zólyomi in press.

³³ The nature of deontic and epistemic modalities expressed in Sumerian by */ḥe/* and other prefixes is reviewed by Civil in press.

³⁴ Kärki 1967:175 and 319–320; Krecher 1969–1970:128; Römer 1970:163; Steible 1975:15; Attinger 1993:293 (§ 191 b1°).

³⁵ Kärki (1967:175 and 319) restores an ‘überhangenden Vokal’ by transliterating the verbal form as “ḥe₂-en_x(= IN)-ši-bare” in this and similar examples.

³⁶ See Attinger 1993:312 (§206 a1°); Wilcke 1998:464; Römer 1999:127 and fn. 719.

³⁷ The Susa ms. has here: teš₂ kalam-ma.

Local prefix

For an attempt to explain the change in the writing of the verbal element called ‘local’ prefix³⁸ as a case of transfer of rules, see Zólyomi 1999:230 and 2000; for Attinger’s differing views, see Attinger 1999 and 2000.

3.1.2.2 Changes in Sumerian without apparent Akkadian influence

Not all developments in Sumerian can be traced to Akkadian influence. Linguists have recognised that some of the changes in contracting and dying languages seem to be the product of pattern pressures within the individual language itself (‘autonomous change’), or even of movement away from expanding-language patterns (‘divergent change’). In some cases, it may have been Sumerian that influenced the languages with which it was in contact, but the evidence for this is limited. For example, it has been observed that while in Old Sumerian complementation (e.g. indirect speech) was expressed by parataxis, from the period of Gudea and the Third Dynasty of Ur Sumerian began to develop the use of subordinated complements with suffixed *-a*. Old Akkadian similarly used parataxis without any finite complements, but Old Babylonian began to develop various forms of complementation. The data imply that the phenomenon developed earlier in Sumerian. However, the influence of Sumerian on Akkadian would have to be on a purely functional level, for while the growth of complex constructions in Sumerian could have encouraged the increase in similarly complex constructions in Akkadian, in Sumerian the structure is based on nominalisation (by means of the suffix *-a/*), whereas in Akkadian it developed by so-called ‘bleaching’ of causal-adverbial constructions with *kīma* (originally ‘how; in what manner’) such that it could be used to mean ‘that’: *aqbi kīma...* ‘I said that etc.’³⁹

Jagersma (in press) argues that earlier the Sumerian phoneme inventory contained a phoneme distinct from both /d/ and /r/ which subsequently merged with either /d/ or /r/ during the later third millennium. There is no evidence so far that this can be attributed to the influence of a second language, likely though this may seem.

There is some evidence from personal names of diachronic change in idioms: compare Early Dynastic $\tilde{g}a_2$ -ka-nam-he₂-til₃ ‘May he live for my sake’ with later Ur III $\tilde{g}a_2$ -ke₄-eš₂-he₂-til₃, presumably meaning the same (see Krecher 1993:193).

Krecher (1987:79–81) argues that in the original construction of the compound verb *šu* — *teḡ/tiḡ* ‘to receive’, *šu* was case-marked with *-e/* and the participant ‘received’ was in the absolutive case. This construction later changed so that the participant ‘received’ became case-marked with *-e/* and *šu* became the object. He claims that this change occurred as part of a wider tendency ‘to construe as unmarked verbal complement the noun found in nearest place to verb (= preceding the verb) if this noun is not accompanied by an adjectival or a pronominal attribute’ (1987:80).

A relatively limited number of substitute adjectives formed with *-zu* ‘knowing’, *-tuku* ‘having’, *-du/dug₄/di* ‘doing’ and especially *-ḡal₂* ‘being/having’ have been identified. It is likely that the meaning of the verbal element in these expressions was gradually bleached, and that they were in the process of moving from productive verb-phrasal constructions to nominals with grammaticalised clitics used as adjective-forming mechanisms of restricted application (see Black in press a). Nothing remotely comparable can be identified in Akkadian.

3.2 Synchronic variation

³⁸ See Attinger 1993:240–246 (§§153–154) for the term.

³⁹ See Deutscher 2000.

Parallel with the historical changes just outlined, there are certain indications of synchronic regional variation in Sumerian, as well as of sociolinguistic variation in register. For these differences to qualify as dialectal, they would have to characterise distinct varieties of the language, not mere handfuls of individual isoglosses or occasional sociolectal alternations.

The most striking is perhaps the exclusively literary register known in Sumerian as Emesal, which appears to have been characterised by a considerable degree of phonological alteration and by limited lexical substitution. It is not possible to know at what date it first emerged, but it seems reasonable to conclude that it originated in a form of spoken Sumerian. Almost certainly one of its usages in the spoken language was as a women's dialect, but at what historical period and in what regions this may have been true is no longer recoverable, since by the early second millennium BC (the period in which it is first recorded in writing) that had already been submerged by its specialisation to certain religious and poetic genres and contexts (which include, but are not restricted to, the literary representation of women's speech; see Schretter 1990, Black 1992, and Krispijn in press).

Bauer (1998:435–436) suggested that there might have been a regional dialect spoken in Pre-Sargonic Lagaš (26th cent. BC) which was similar to the Emesal attested in literary manuscripts of seven or more centuries later. His assumption is based on writings like *ma-al-ga* instead of *ḡalga*, in which /ḡ/ is replaced by /m/, which is one of the common correspondences between Emegir and Emesal. Since these deviations are attested mainly in place names and personal names, Bauer thought that the most likely explanation to account for their existence is that 'der Schreiber in Girsu schrieb z.B. das Formular einer Urkunde in der Hochsprache beließ aber die Eigennamen in ihrer heimischen Lautung' (1998:436). But probably the evidence is really too meagre for such a conclusion.

Westenholz (1975:8) observed that in certain Pre-Sargonic and Sargonic administrative texts verbal forms with an /a/ prefix should be translated as passives. These verbal forms therefore correspond functionally to verbal forms with the /ba/ prefix. He states 'that the a-forms were confined to a Central Babylonian dialect of Sumerian, and that its use corresponding to our passive was a regional specialization in the area of Nippur and Adab.'⁴⁰

The agreement of certain verbal prefixes in respect of vowel height with the vowel of the following syllable (the so-called 'vowel harmony' of the literature) was an isogloss dividing cities in southern Babylonia (Lagaš, Umma, Ur, and Uruk, which exhibit the agreement) from cities further north in Babylonia (Nippur, Adab, Šuruppak, and Isin) in the Early Dynastic and early Sargonic Periods (see Poebel 1931, Kramer 1936 and Krispijn in press). In subsequent periods the agreement disappeared.

Within the Early Dynastic Period, certain votive inscriptions from Nippur, Adab, and Umma use the case-marker /-da/ instead of the more widespread /-še/ in the expression meaning 'to dedicate / give as a gift for s.o.'s life'.⁴¹ Compare (a) with (b):

(a) *nam-til₃, dam dumu-na-da a mu-ru* (AnNip. 3 3'–4' [Nippur])⁴²
'He dedicated this object for the life of his wife and child'

(b) *nam-til₃, dam dumu-na-še₃, a mu-na-ru* (AnNip. 6 5–7 [Nippur])
'He (= the son of Adda) dedicated this object to them (= Ninlil and Enlil) for the life of his wife and child'.

⁴⁰ See also Krispijn in press, on the distribution of /a/ prefixes.

⁴¹ See Krecher 1993:192–193.

⁴² Cited after Steible 1982. See also Giššakidu (Umma) 1 8–9; Baraḡe-NI-du (Adab) 1 1–7; and Behrens and Steible 1983:9–10 (s.v. a — ru 4c) and 288 (s.v. sag — rig₉).

In later periods only the use of *-še/* is attested. The terminative function of the morpheme */da/* as case-marker and verbal prefix appears also to be attested in some incantations from the Fara Period.⁴³ On the basis of this evidence Krecher hypothesises that ‘die terminativische Funktion des *-da/* [gehörte] einer älteren Sprachschicht an, zumindest wohl in Mittelbabylonien. *-da/* wurde dann schon in der fröhdynastischen Weihinschriften durch *-še/* ersetzt doch wohl um der Aufhebung der Diskrepanz zwischen traditioneller und gegenwartssprachlicher Form willen: *-še/* war (inzwischen) das einzige in der Alltagssprache hier übliche Morphem’ (Krecher 1993:192–193).

Waetzoldt (1992) studied the verbal forms used with 3rd ps. pl. subjects in the *hamtu* construction in Ur III administrative and legal documents and letters from Lagaš and Umma. He observed that, of the alternating forms *-b/-base* and *-n/-base-eš/*, the former is much more common and the latter is used only exceptionally. He concludes ‘daß wir es bei */b/* vor der Verbalwurzel mit einer umgangssprachlichen Form zu tun haben, während in der Hochsprache und besonders in den literarischen Texten */n-V-eš/* benutzt wurde’ (1992:640).

4. The way forward

The above rather extensive catalogue of examples should leave no one in any doubt of the existence and the extent both of chronological change and of contemporaneous variation within the preserved sources of Sumerian, a legitimate and important dimension in study of the language. Sumerologists probably no longer need reminding that the corpora they work with are different in many respects from the corpora compiled by linguists working with living informants on contemporary languages, although there still remains a temptation to handle the Sumerian material as if it could be described using a single homogeneous model. It is encouraging that increasingly the study of Sumerian grammar is treated as within the purview of linguistics rather than as a mere department of Assyriology, and that references and explicatory examples are presented from other world languages. In any case an extensive linguistic literature exists on a range of features and constructions that may at first have appeared exotic to those whose route has been through the study of Akkadian or other Semitic or Indo-European languages. But there is hardly a single feature of Sumerian that is truly ‘unique’, in the sense that something comparable is not attested in some other world language.

A major problem remains that of statistically valid inference. The juxtaposition of individual examples from a personal collection of examples ought not to be considered satisfactory unless it is accompanied by proper contextualisation and assessment of the predictive value of such examples. To document change and variation precisely, there is an evident need for quantitative research, drawing on current developments in the extensive and growing discipline of corpus linguistics. A number of electronic corpora are now being developed for Sumerian: the Cuneiform Digital Library Initiative (a corpus of third-millennium materials) <<http://cdli.ucla.edu/>>, now incorporating the Sumerian Text Archive of Ur III and earlier material <<http://cdli.ucla.edu/Progress/leiden.html>>, as well as the Electronic Text Corpus of Sumerian Literature <<http://etcsl.orient.ox.ac.uk>>. Such electronically searchable corpora will facilitate study of the variations and change in grammatical patterns on a statistically significant scale. With concordance and collocation software as research tools, it will also be possible to plot the changes in the use of individual lexemes and idioms.

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⁴³ See Krebernik 1984:43, 218–219 and 310–311; Krebernik 1998:260.

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