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Title: The transmissional and functional context of the lexical lists from Hattusha and from the contemporaneous traditions in Late-Bronze-Age Syria

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Chapter 2: Lexical lists, their literary history, their structures and formats, and their functional contexts

The present chapter as a first point serves as an introduction to the literary genre of lexical lists. A good deal of the discussion thereby, is spent on the internal-structural aspects of those compositions (sect. 3.), as they have not yet been studied systematically. Adducing contrastive models from modern lexicographical research, the investigation attempts to provide a consistent theoretical framework for a structuralistic description of the lists. Aspects of the literary history (sect. 1.) and introductions to the individual lexical compositions (sect. 5.) are given in an abbreviated form only, as there are a number of previous studies which the present investigation can in this respect, build on and refer to.

As a second point, the chapter gives an overview of the functional contexts of the lists in the individual periods of attestation (sect. 4). As restoring the functional context of the LBA western peripheral traditions of lexical lists is one of the main goals of the present study, the functional contexts in which the lists were embedded in the periods previous and subsequent to the western LBA form indispensable comparative evidence.

1. [Lexical lists] Lexical lists are lists of cuneiform signs and/or Sumerian words composed in a meaningful order. They form one of the most productive genres of cuneiform literature, arising virtually simultaneously with the first administrative cuneiform records at the end of the 4th millennium BCE and remaining in use (almost) until the cuneiform scribal tradition finally disappeared in the 1st CE.¹ Their main functional context – from the very beginning of their attestation until its very end – seems to have been the context of scribal education. As the lists functioned as inventories of cuneiform signs, with all of their possible combinations, and with basic Sumerian expressions, they formed an essential tool to be studied by practically every would-be scribe.

This prominent usage means that the lists appear in almost every scribal center in which excavations have touched and brought to light the larger corpora of cuneiform texts. Their geographical diffusion includes sites not only in Mesopotamia proper, but also sites in Syria, Palestine, Egypt, Anatolia, and Iran. From the OB period forth, the lists appear more and more frequently appended with translations into additional languages, mostly Akkadian, and at western peripheral sites also into Hurrian, Hittite, and West Semitic idioms.

1 Thus the broadly accepted view, following the last available dated cuneiform tablet. New considerations put forward by M.J. Geller (1997) suggest an even later date, i.e., the middle of the 3rd century CE.

2. [Some aspects of the literary history] The literary history of lexical lists has been studied by various scholars.² In the following a few important points to be mentioned as presets for the present study:

(1) One may broadly differentiate a 3rd-millennium and a 2nd/1st-millennium tradition of lexical lists;³ the break between both traditions is to be sought somewhere in the Ur-III period or in the early Isin-Larsa period. Although one may find individual traces of continuity bridging both traditions, the changes are sufficiently considerable, thus it is better to regard both as independent entities. The texts treated in the present study exclusively belong to the 2nd/1st-millennium tradition. Also, the more general theoretical aspects discussed in the present chapter exclusively refer to the texts of this period.

(2) The 2nd/1st-millennium tradition can further be divided into two subperiods, the pre-canonical period and the post-canonical period.⁴ Mainly due to the scarcity of sources from Babylonia from the second half of the 2nd millennium, it is still a matter of dispute when exactly the process of canonization – a process which affects more or less all cuneiform literary genres, but apparently not all genres at the same point in time – set in and when it was completed. In any case it must be conceived of as a long-term development. Vaguely fixing its chronological corner posts, one may tentatively take the date 1300 BCE as the earliest possible starting and 1000 BCE as the latest possible terminal point. The lexical tablets investigated in the present study all stem from the 14th or 13th century BCE. They were produced, thus, in a period shortly before or shortly after the beginning of the canonization process.

(3) During the pre-canonical phase the individual lexical compositions underwent a steady process of extension and elaboration, a process that can also be observed with regard to most other literary genres of this period. This process mostly was a quantitative one. The majority of lexical compositions established at the beginning of the 2nd/1st-millennium tradition in the OB period remained in use until the canonization came to an end; there are a few changes only that affected their general structure and the categories of content they deal with (see also sect. 3.4.). A limited number of compositions fell out of use or underwent more considerable internal changes up until the end of the canonization process. Yet, in the 1st millennium, when the compositions appear more or less fixed through their canonization, more considerable variation among the individual sources of a composition is barely evident, regardless of their individual find spots or dates of production.

2 Cf. Civil 1975, Civil 1995, Cavigneaux 1980-83, Veldhuis 1998 12-84, Taylor 2007.

3 Respectively corresponding to period i and period ii, iii, & iv in the periodization given in Civil 1975: 127f.

4 As for a concise definition of the concept of canonization as applied to ANE literature, see Civil 1979: 168f. and, particularly with regard to lexical lists, Gesche 2000: 61f. Also cf. Hallo 1991 and the individual contributions in Dorleijn / Vanstiphout 2003.

This turn from a dynamic and flexible to a static and fixed tradition of lexical lists presumably went along with a development from their basically oral, memory-based transmission to a transmission which relied on written records.⁵

(4) As for developments and changes in the functional contexts, see sect. 4., particularly 4.3.

3.1.1. [Structures and formats – the model used – lexical lists as reference works] Apart from their literary history and functional embedding, the internal structure of the lexical lists is probably their most fascinating point to study. Formally, lexical lists appear as a simple grid of slots, made of rows and columns and filled in with signs and words. Yet, within closer inspection of the internal relations between these signs or words, cuneiform lexical lists emerge as a highly elaborate textual genre, and within parts, bearing extremely complex structures.

A decoding and description of these internal structures, as attempted in the following, is strongly influenced by the respective model the researcher will use. In the present investigation, a model developed by modern structuralistic lexicography will be employed as a kind of contrastive source against which the main structural characteristics of the ancient lists can be made transparent.⁶

Modern lexicographical works are commonly defined as *reference works*⁷, as compositions that link *information* to specific *reference items* (also called *lemmata* or *entries*) and that structure these reference items according to specific *organizational principles*. Lexical lists can be described in quite a similar fashion. Thus, they appear as lists of (Sumerian) words and signs that are organized according to specific principles and that are complemented (at least virtually, cf. sect. 3.3.3.) by various kinds of information referring to those key-words by translations, pronunciations glosses, description of sign forms (so-called sign names), or indications of semantic restrictions.

3.1.2. [Structures and formats – the model used – macro structure vs. micro structure] The structure by which the reference items are organized and embedded into the composition is referred to as *macro structure* in modern lexicography. Its function is to order the reference items into a shape most transparent and accessible for later retrieval. In contrast, the structure that shapes the specific information assigned to the reference items is defined as the *micro structure* of a composition. It serves to organize the information in a reasonable fashion, e.g., dividing lemmata into further sublemmata, ordering less specific information prior to more specific information, etc.⁸

5 Civil 1975 130f. and Veldhuis 1999 111-115.

6 An alternative theoretical semiotic, reference-based approach, which is also well applicable to lexical lists is Cancik / Mahr 2005. A post-structuralist approach is presented in Hilgert 2009.

7 As to references for the various lexicographical categories and concepts exposed in the following, if not otherwise indicated see Hartmann / James 1998.

8 Rey-Debove 1971 and 1989.

In lexical lists, the macro structure appears to be identical with the vertical structure, at least on first sight (cf. sect. 3.2.4.); the (Sumerian) ‘reference’ words are given in the left column, placed in succession from top to bottom. The micro structure of modern lexicographical works, in turn, corresponds to the horizontal organization of the lists, as the information referring to the Sumerian items is given in the column(s) on the right-hand side of the Sumerian column.

3.2.1. [Structures and formats – macro structure – the available modes of organization] Modern lexicographical works exhibit two dominant macro-structural modes of organization.⁹ They follow alphabetic or thematic principles or a combination of both. ‘Thematic’ thereby refers to all those cultural principles employed for ordering and conceptualizing the object world, which, of course can then be used to order the words that respectively refer to those objects. Terms denoting human actions may e.g., be categorized according to the parts of the body, whereas names of cities may be listed following a specific geographical direction.

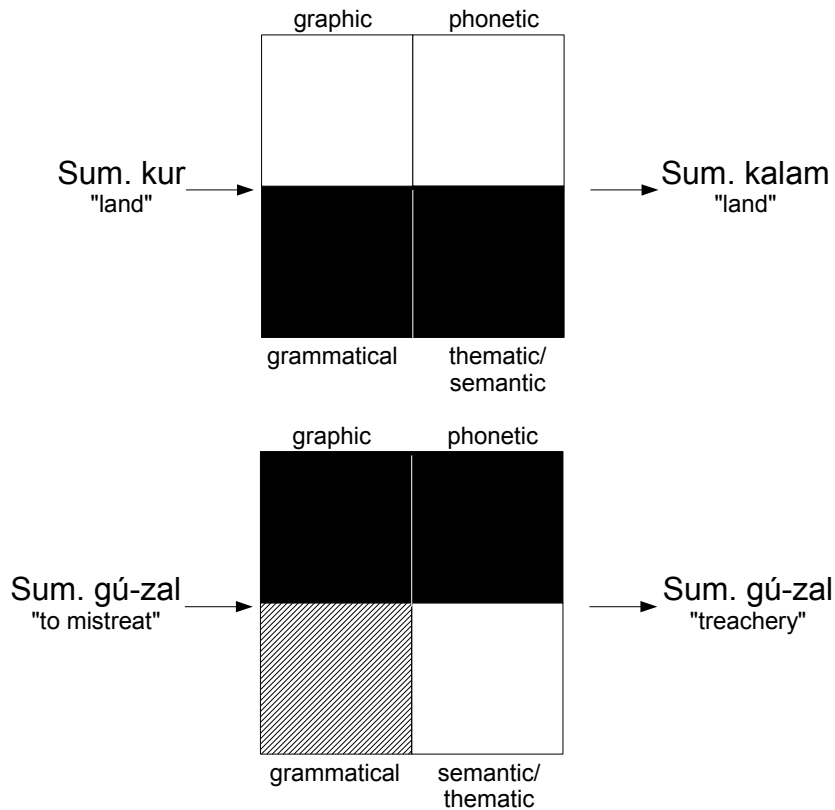
In this respect, it must be stressed that – at least in modern lexicographic works – the macro-structural principles employed in a given composition do by no means determine the kind of information it provides. Encyclopedias, i.e., lexicographic works dealing with things and concepts of the object-world, can be organized alphabetically, and dictionaries, dealing with linguistic information, can be organized thematically.¹⁰

Due to the combined logographic-syllabographic character of cuneiform writing and on account of its complexity – with several meanings and pronunciations linked to a single sign and with hundreds of signs making up the whole inventory – the organization of cuneiform lexical lists necessarily is more diverse and more ambiguous than that of modern lexicographical works. Additional to the various thematic principles, lexical lists include graphic, phonetic, semantic, and sometimes even grammatical relations organizing their contents. These relations manifest themselves in terms of identity, similarity, or dissimilarity. In the progress from one lexical entry to the next, specific graphic, phonetic, grammatical, and semantic/thematic features may remain identical or may change, either partially or completely, as illustrated by the following sketches (filled boxes thereby marking identity, hachured boxes marking similarity, and boxes left unfilled marking dissimilarity):¹¹

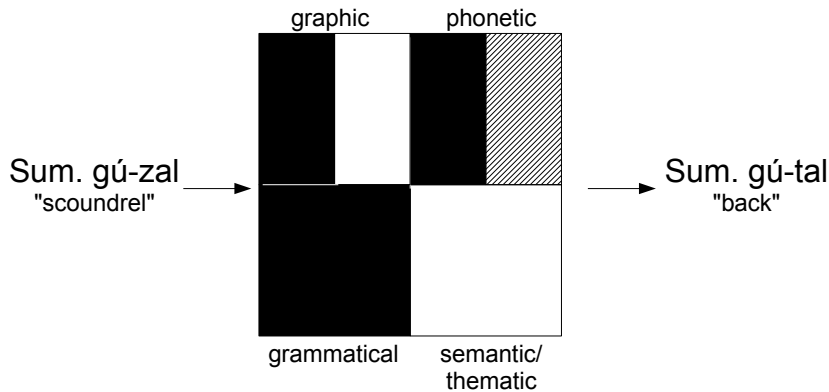
9 As for the following, especially McArthur 1994.

10 Ibid.

11 The category ‘grammatical’ here refers to specific parts of speech, to larger morphosyntactic units, or to morphological declination/conjugation patterns.



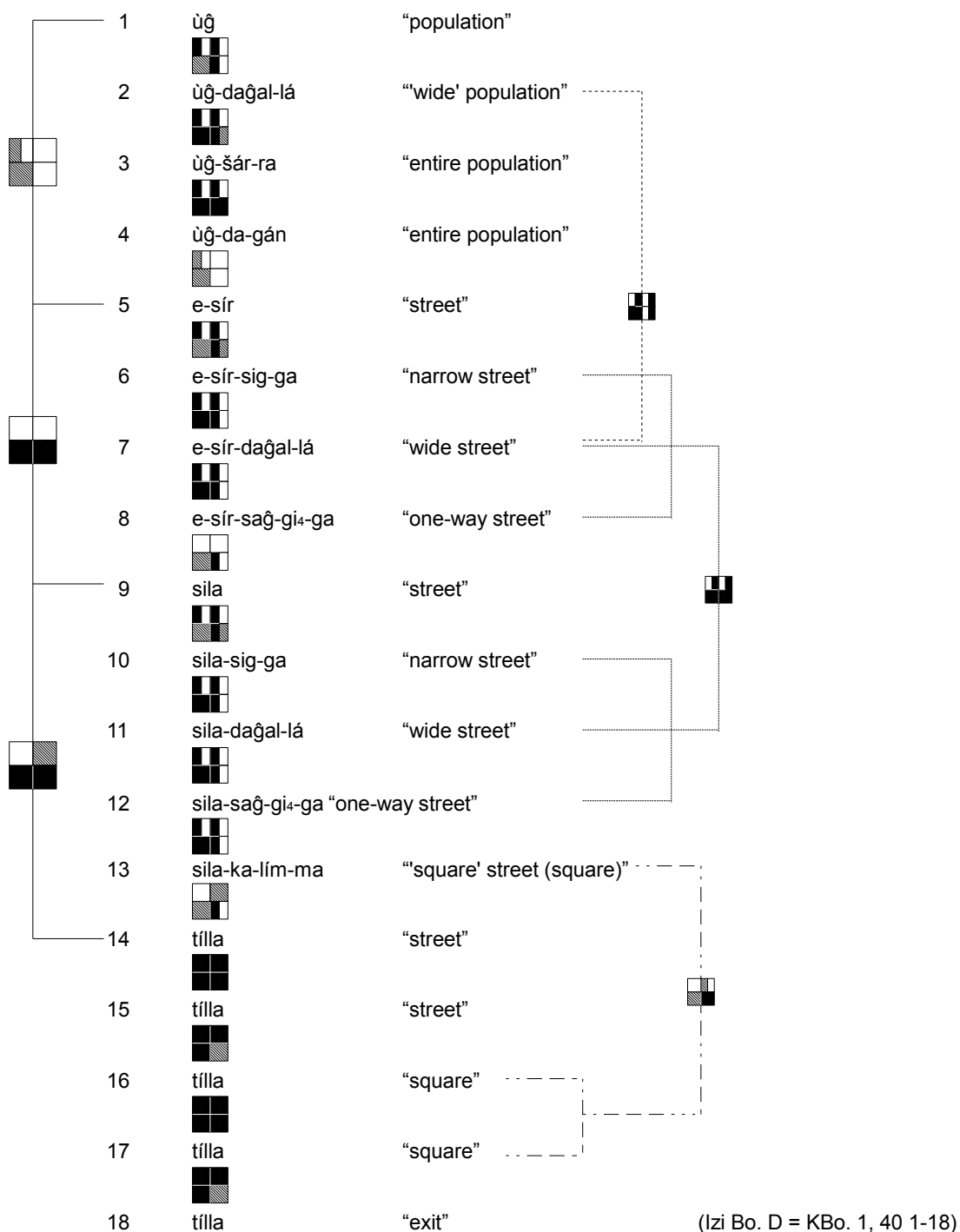
Since items often consist of several graphic and phonetic units, the identity/similarity/dissimilarity may refer to specific parts of the graphic/phonetic chain only. The term ‘acrography’, often mentioned as the dominant organizational principle of a number of lexical compositions, e.g., refers to the identity of the initial graphic unit of two or more items:



Due to the combined logographic-phonetic character of cuneiform writing that has been mentioned above, the four levels of association are often interdependent. Similarities at the graphic/phonetic level often entail further similarities at the semantic/thematic level and vice versa. It is often impossible to decide whether a given (passage of a) list is organized according to the identity of the initial signs or according to the concept denoted by the initial sign.¹²

¹² In this respect, it has to be stressed that the multi-dimensionality of the cuneiform signs is an entirely etic notion. The conceptual ambiguities arising from it in our modern perspective were not necessarily perceived as such by the ancient compilers.

3.2.2. [Structures and formats – macro structure – the overall structure: paradigmaticity, hierarchization] The patterns of macro-structural relations are more or less constant throughout longer sections of the lists. These sections of entries then appear as paradigms. Throughout paradigms, specific relational features (graphic, phonetic, grammatical, semantic/thematic) remain identical in all units, while others are modulated in terms of similarity or dissimilarity. A third group of features may be paradigmatically marginal, constantly varying in the degree of their relatedness. Compare to the following longer passage and its analysis:



There are four groups with relatively strong and constant relatedness, marked by the relatively 'dark' relational-pattern squares (middle column in the figure) among their members, with (part of) the graphic, phonetic and semantic features staying identical or similar: (1-4) modulating Sum. ùĝ "population" by various appended attributes, (5-8) and (9-13) modulating Sum. e-sír and sila "street" also by appending various attributes, as well as (14-18) modulating the semantic field of Sum. tilla "street" by contrasting Akkadian translations (which are not reproduced in the figure). The groups are separated from one another by entries with a relatively low grade of relatedness ('bright' relational-pattern squares).

The paradigmatic groups may be coordinated in parataxis, following each other serially, as it is the case for sections (1-4) and (5-8), which are related by the graphic similarity of their initial graphemes <UN> and <E>. Or they may again be parts of larger paradigms, following a more hypotactic and hierarchical organization; this is the case with the other three sections, which all refer to the semantic field <<street>>.

3.2.3. [Structures and formats – macro structure – 'structural inconsistencies'] Cuneiform lexical lists thus appear as sequences of interlocking and overlaying paradigms. Usually, the grade of hierarchization/hypotaxis that an individual lexical composition shows, remains largely constant throughout. This is usually true as well for the relational principles employed on the individual hierarchical levels. Yet, the coordination of the paradigms is never assuredly systematic and there is still some variation among the individual relational principles, so that the lists – at least to the modern perception – appear as somewhat structurally inconsistent.¹³ This is well demonstrated by the section given as example above. The macro-structural principles employed in it are never constant, which is true for those principles that group the entries into the paradigms as well as for those that coordinate the paradigms into larger units. Symmetrical structures and cross-references (indicated by the right-hand column in the figure) further interweave with the individual paradigms, yet in an unsystematic fashion.

Apart from inconsistent relational principles, there are two additional sources for structural inconsistencies: completely *unrelated entries* and so-called *attractive insertions*. Being mostly single entries, the latter occasionally interrupt the paradigmatic continuity of a given section. The specific relational principles they follow are different from the principles that dominate the larger paradigm to which they belong, they also frequently differ from the principles that dominate the whole composition; cf. the following example:

13 Yet, cf. the previous note

1	gú-zal	“to mistreat”	
2	gú-zal	“treachery”	
3	gú-zal	“scoundrel”	
4	gú-tal	“back”	
5	gú-gùn-na	“curse”	
6	gú-URU.GU	“to hate, dislike”	(Izi Bo. A = KBo. 1, 42 ii 22’-26’)

The passage is taken from a longer section that deals with the semantic field <<threatening actions>>, itself part of a larger section dealing with words with the initial sign <GÚ = “neck”>. Entry (4) apparently interrupts the primary chain of semantic congruity, attracted by the phonetic similarity between Sum. -zal and -tal (with /z/ possibly pronounced as an affricate).

Unrelatedness, i.e., total dissimilarity, between two entries forms a lexical relation seldom mentioned in studies because the primary focus is usually directed toward the detection and description of the individual aspects of relatedness. To be sure, unrelated entries shape the structure of cuneiform lexical lists to a considerable degree, reinforcing the impression of their structural inconsistency.

3.2.4. [Structures and formats – macro structure – the identification of lemmata and the limitations of the structural-lexicographic approach] A central aspect of the lists that arises from a comparison with modern lexicographical works, and which forms one of the main reasons why lexical lists appear to be so structurally inconsistent to the modern eye, concerns their basic units, i.e., the *reference items / lemmata* as they are termed in modern lexicography. These form the pivot point between the macro structure and micro structure, and the clearer they are defined the more transparent is the overall structure of the respective lexicographical work.

Identifying and describing lemmata in cuneiform lexical lists is a considerable problem, since, as it already appears from the examples given above, some entries seem to be more deeply related than others; cf. the following example

1	kur	“land”	
2	kur	“mountain”	
3	kur	“earth”	
4	kur-kur	“lands”	
5	kur-ú-sal-la	“pasture land”	
6	kalam	“land”	
7	kalam-dağal-la	“the wide land”	(OB Izi I 224-230) ¹⁴

14 The contrasting translations of 1-3 are according to Akkadian glosses, which are not reproduced here.

There are several possibilities of decoding the structure of this section. One may either extract seven, five, four, or two lemmata. The hierarchical structures reconstructed accordingly are completely different:

Analysis (a) (7 lemmata)	Analysis (b) (5 lemmata)	Analysis (c) (4 lemmata with 1 sublemma)	Analysis (d) (2 lemmata with 3 sublemmata)
kur	kur	kur	kur
kur	kur	kur	kur
kur	kur	kur	kur
kur-kur	kur-kur	kur-kur	kur-kur
kur-ú-sal-la	kur-ú-sal-la	kur-ú-sal-la	kur-ú-sal-la
kalam	kalam	kalam	kalam
kalam-daĝal-la	kalam-daĝal-la	kalam-daĝal-la	kalam-daĝal-la

In other words, it is not clear if, as initially suggested in sect. 3.1.2., the macro structure of the lexical lists really is identical with their vertical sequence of entries and, respectively, the micro structure with the sequence of horizontal references. The micro structure of a given lemma may extend itself over several lines/entries, thus including parts of the vertical organization. I.e., what has hitherto been treated as the organization of the lists may in fact be a part of the information it provides (also see sect. 3.3.4. in this respect). One may try and resolve this problem with arbitrary definitions, defining the lemma e.g., as including all successive entries that are identical to the Sumerian column (thus following analysis (b) in the above example). Yet, such definitions have a solely descriptive use. As for the emic structure of the lists, their relevance is nil.

3.2.5. [Structures and formats – macro structure – elements of the surface structure] The often complicated inner structure of the cuneiform lexical lists, as exposed in the preceding sections, is only marginally reflected in the layout of the writing surface. The lexical tablets appear as lists of words filled into a homogeneous grid of rows and columns. There are only a limited number of devices that are used to organize the writing surface into a more transparent and accessible shape.

These most prominently involve horizontal rulings as the markers of sections that interrupt the vertical chain of entries¹⁵ – a device well known from other genres of cuneiform literature – as well as empty slots that are mostly used in sign lists and that graphically result in indentions and thus may display hierarchical structures. Also meta-textual structures, such as the repetition mark <MIN>, can at least indirectly outline hierarchical relations. A frequently-used feature is the DIŠ-marker,

15 As for a more detailed description, cf. chapter 8, sect. 2.4.

a vertical wedge inserted at the beginning of an entry (also used almost exclusively in sign lists), which is also prominent in other kinds of cuneiform lists (e.g., the omen collections), but which is actually a redundant feature since, if used, it introduces every single entry.¹⁶

Visualizing the inner structure of the lists in a very superficial fashion only, these devices likely had practical aims, for e.g., to facilitate the retrieval of specific passages and entries and/or to divide the lists into handy chunks for memorization (further see chapter 13, sect. 2.1.6.3.).

3.3.1. [Structures and formats – micro structure – the specific kinds of information and the notation used] Cuneiform lexical lists are preserved in different formats, which do not only vary among the individual compositions and the individual periods of attestation, but also among the manuscripts of one and the same composition written in one and the same period of time. Those formats are defined by the number and contents of columns added to the basic Sumerian, i.e., by the horizontal organization of the lists. In terms of modern lexicography, they describe the micro structure by which the information is appended to the reference item.

One can basically distinguish three kinds of information that is more or less regularly given to Sumerian reference words: (1) phonetic information in the shape of syllabified pronunciations, (2) graphic information in the shape of syllabified descriptions of the forms of the individual signs (so-called sign names), and (3) semantic information in the shape of translations into Akkadian. These Akkadian translations can moreover be complemented by translations into other languages, into Hurrian, Hittite, or Ugaritic.

There are different systems of notation used in Assyriology to describe the formats of lexical lists. The present study bases its notation on the system developed by M. Civil (1975 & 1995), in which specific numbers correspond to the individual columns:

- 0 - DIŠ-marker (initial vertical wedge opening the entry)
- 1 - Pronunciation of the reference item in Syllabic Sumerian (phonetic information)
- 2 - Reference item in Orthographic Sumerian
- 3 - Sign name of the reference item (graphic information)
- 4 - Translation of the reference item into Akkadian (semantic information)
- 5 - Translation into additional languages

The present study moreover makes use of the following elaborations of Civil's notation system:

(1) Figures in parentheses refer to information that is only occasionally given, whereas unparenthesized numbers refer to information given regularly to all reference items.

(2) In some formats the Sumerian and/or the Akkadian columns are divided into additional

16 Also see Gantzert 2008: pt. 3 17f.

– usually two or three – subcolumns; these are indicated by the letters a, b, c, d, given in parentheses after the respective number.

(3) Dashes between the numbers indicate that the respective information is separated by column rulings on the writing surface; colons respectively indicate gloss wedges as separating markers.

3.3.2. [Structures and formats – micro structure – the sequence and hierarchy of columns] As mentioned above, not all kinds of information necessarily appear in the manuscript of a given list, and one may in this regard distinguish between unilingual, bilingual, and multilingual lists. Yet, there is a specific hierarchy and sequence regarding the kinds of information that is innate to all lexical compositions. The most common sequence is the one reflected in the numbers of the notation system. In the vast majority of manuscripts the positioning of a given column implies: the closer it is to the left margin, the lower its number in the notation system; thus Syllabic Sumerian precedes Orthographic Sumerian, which is followed by the sign name and the Akkadian translation. Exceptions to this sequence are rare and mostly restricted to some local traditions (among which the *Ḫattuša* tradition is the most prominent one; see chapter 11, sect. 2.9.).

However, the sequence of columns as it appears on the writing surface is not necessarily identical with its relational hierarchy. It is generally assumed that the Orthographic Sumerian, although not occupying the initial slot, (in the majority of cases), is the primary item in the structural hierarchy, i.e., in modern lexicographical terminology it is the actual reference item. This is clear for two reasons: (1) The Orthographic-Sumerian column is the only column that is invariably present in every manuscript. (2) Most relational principles within the macro structure only make sense in connection with the Orthographic Sumerian.¹⁷

Phonetic and semantic information can be appended to individual Orthographic-Sumerian reference items by means of glosses (with phonetic information usually given in front of it and semantic information behind it) or in a fixed column. If given in a fixed column, which is invariably to be filled in for every entry, the presence of the phonetic information (i.e., of the Syllabic-Sumerian column) is further bound to the presence of the semantic information (i.e., of the Akkadian column) in most types of lexical compositions, but not vice versa; i.e., in contrast to the formats <2 - 4> and <1 - 2 - 4>, the format <1 - 2> seems to be prohibited, except in some OB manuscripts of single-sign lists. Also, graphic information, be it in the shape of glosses or of a fully-established column, and translations in additional languages are almost invariably bound to the presence of the Sumerian *and* the Akkadian column.¹⁸

¹⁷ Only in some specific lexical compositions, i.e., in the so-called ‘group vocabularies’ *Erimḫuš*, *Antagal* and *Nabnītu*, the Akkadian occasionally gains a status independent from the Orthographic Sumerian and in some cases, superordinate to it. Some rarely used lexical compositions that arise during the MB period also show the (exceptional) complete lack of a Sumerian column (such as *Šarru - malku* or so-called practical vocabularies; see chapter 11, sect. 2.9.5.).

¹⁸ An exceptional manuscript, showing the format <2 - 5> is described in chapter 11, sect. 2.9.6.

3.3.3. [Structures and formats – micro structure – explicit and implicit information I: the oral and the written] As has already been noted, only the Orthographic-Sumerian column is obligate in every manuscript. The missing explicitation of additional columns, however, does not necessarily mean their factual absence; they may be implicitly present. The reason for this implicitness is the oral/memory-based transmissional background that accompanies the lists for long periods of their attestation; many elements apparently were not made explicit, as the scribes using the lists knew them by heart.

It is not sure whether all the kinds of information that are present in the most-explicit forms of the 1st-millennium-tradition lists (with their entirely literate transmission), were already present at the very beginning of their tradition in the initial 2nd millennium. However, the repetition of individual reference items in unilingual manuscripts that contain an Orthographic-Sumerian column only (cf. the example in sect. 3.2.3., with Sum. kur given three times), as it appears in OB manuscripts of single-sign lists like *Ea* or *S^a*, only makes sense if some additional differentiating information (phonetic or graphic) is assumed to have been virtually present.¹⁹ In this respect, also note the discussion of the concepts text and meta-text in oral and memory-based transmissional environments in chapter 3, sect. 4.1.

3.3.4. [Structures and formats – micro structure – explicit and implicit information II: item information and system information] Among the kinds of information appearing explicitly in the manuscripts of the cuneiform lexical lists, thematic or – to use a modern lexicographic term – encyclopedic information, i.e., information about the real-world objects or concepts denoted by the individual reference words, is notably absent; the information given to the individual reference words appears to be exclusively linguistic. This is also true for the 1st-millennium tradition, in which the lists had reached their most explicit written form. It seems unlikely in this respect that encyclopedic information was a very important part of the orally-transmitted context of the earlier, 2nd-millennium versions. In this case, one would expect it to have been explicitized – at least in the shape of traces – in the 1st-millennium versions.

The primary word-book character (as opposed to an encyclopedic character) of the lexical lists can be, for the most part, taken as assured.²⁰ Yet, it must be noted that at least indirectly, individual lexical compositions also provide and reproduce some kind of thematic-encyclopedic information. As noted in sect. 3.2.4., it is impossible to separate the macro structure and micro structure of

19 Civil 1974. Yet, there is no need to assume the virtual presence of Akkadian translations for the early versions of thematic lists like *Ur-ra*, which do not appear in bilingual formats before the end of the OB period.

20 Thus following Veldhuis 1997: 137-142 and Veldhuis 2004: 81-86, with a detailed reconstruction and discussion of the dispute around the long-presumed encyclopedic character of the lexical lists.

cuneiform lexical lists in a way that is as clear as the separation of modern lexicographical works. It seems that the vertical sequence of entries and the relations between them are not similarly arbitrary (i.e., established solely on practical grounds, in order to facilitate memorization and/or retrieval) as it is the case for their modern ‘successors’; it seems to be meaningful and can (or even must) be regarded as a source of information in its own right.

One may in this respect distinguish between *item information* given to the individual (single) reference words and *system information* emerging from the specific (paradigmatic) relations between the individual reference words. This probably marks the most important structural difference between the ancient lexical list and modern lexicographical work. The former combines item information with system information, which results in a non-arbitrary macro structure, while the macro structure of the latter is arbitrary, as its primary – and in most cases exclusive – purpose is the listing of item information.²¹

An apprentice scribe memorizing a lexical list that is organized according to certain thematic principles will – consciously or not – also interiorize the object-world concepts that lie at the root of these organizational principles, and he will reproduce them when performing or handing down the memorized.

3.3.5.1. [Structures and formats – micro structure – the relations between the Sumerian and the Akkadian column – polysemic differentiation and semantic restriction] Among the different kinds of information given to the Sumerian reference items, the semantic information requires some additional remarks.²² The semantic descriptions of the Sumerian reference items are not realized in the shape of paraphrases given in the same language; rather, they are made through (mostly single-word) translations into Akkadian. Since the semantic fields of both of these languages do not converge, as is the case for any two languages, one cannot conclude that, as already noted by A. Cavigneaux, “das Nebeneinander von einem sumerischen und einem akkadischen Wort ihre Gleichwertigkeit, ihre ‘Gleichung’ bedeutet.“ (1976: 23)

Instead, these divergences are a source for further semantic ambiguity, which is also an innate problem in modern dictionaries. They attempt to balance the ambiguities of meaning by designating a whole set of possible translations (so-called *polysemic differentiation*) together with the contextual (morphosyntactic, semantic and pragmatic) restrictions of these individual translations. While cuneiform lists make extensive use of polysemic differentiation to render the specific semantic

21 In this respect, completely (and not only virtually) unilingual lexical lists contain information which in modern lexicography would otherwise only appear as useless listings of key-words.

22 Chapter 9, sects. 3. & 4. as well as chapter 11, sects. 2.4. & 2.5. give a more detailed description of the Syllabic-Sumerian column and of the sign names as they appear in the äattuša material, wherein phonetic and graphic information play a very prominent role when compared with the simultaneous parallel traditions.

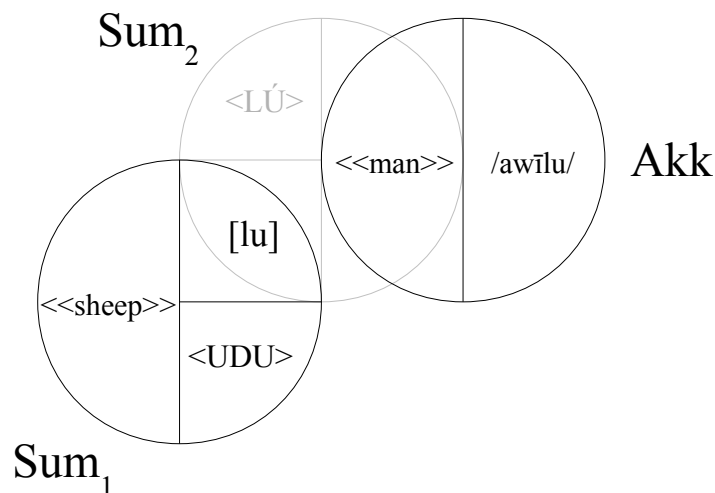
overlap between two corresponding Sumerian and Akkadian terms more precisely, remarks about contextual restrictions of the individual translations only appear sporadically in the Akkadian column and only from the MB period onwards; cf.

Sum./Akk. *diriĝ* = *izuzzu ša qanê* “to stand (said) of reed”
diriĝ = *qâpu ša igāri* “to cause to collapse (said) of a wall”

(Diri Ug. 1A = RS 25.434+ 17/19)

3.3.5.2. [Structures and formats – micro structure – the relations between the Sumerian and the Akkadian column – derivative entries: paralexis] Many ambiguities between the two columns also arise from the already mentioned multi-dimensionality of the cuneiform signs, which unite different phonetic, morphological, and semantic realizations within one and the same item. The resulting diversity is disambiguated by the added syllabified pronunciations, which fix the phonetic realization, and by the translations, which fix the semantic and grammatical realization of a given Sumerian item. Yet, since the end of the 3rd millennium, the multi-dimensionality of the cuneiform signs and the ambiguities arising from them also led to the creation of new, artificial and sophisticated phonetic or semantic realizations of given signs. Even if they are not attributed as a source for these sophisticated ‘readings’, lexical lists at least start to inventory them in the shape of *derivative entries*.

A. Cavigneaux (1976) differentiates three different types of derivative entries: *paralexis*, *taxilexis* and *metalexis*. Paralexis thereby implies the representational transfer between two signs that share a given feature. Thus, e.g., <UDU>, actually denoting the semantic field <<sheep>> and <<seizure>>, shares the phonemic realization Sum. /lu/ with the sign <LÚ>, and thus can take over the meaning <<man>> from the latter, which results in the artificial equation Sum./Akk. UDU = *awīlu* “man” (as found in SaV Bo. B = KBo. 1,45 rev. 18’). Cf. the figure reproduced overleaf:



In contrast to this phonetic paralexis, one can also find cases of transfer on grounds of graphic or semantic similarities,²³ as exemplified by the equations Sum./Akk. ZU = *šīru* “flesh” (SaV Ug. A₁ = RS 20.149+ ii 3’; based on the graphic similarity between <ZU = “to know”> and <KUSZ = “flesh”>) or Sum./Akk. UD = *šarru* “king” (SaV Bo. D = KBo. 1,34 obv. 2’; transferred from the semantic field <<bright, splendid>> as found in the original equation UD = *ellu*).

3.3.5.3. [Structures and formats – micro structure – the relations between the Sumerian and the Akkadian column – derivative entries: taxilexis and metalexis] In a second type of derivation the semantic specification given through the Akkadian translation is restricted to a specific syntagmatic context of the Sumerian item only, however without this context being specifically indicated. Cf. the equation Sum./Akk. *si* = *kanāšu* / *paḥāru* “to gather, assemble” (Izi Bo. A = KBo. 1,42 iii 48f.), the meaning assigned to Sum. *si* by the Akkadian translations is restricted to the larger syntagma Sum. *gú--si*. This type of derivation has been termed taxilexis by A. Cavigneaux (1976). Below the term metalexis he summarizes a wide variety of derivations, such as “linguistische Analyse[n]”, “künstliche Zeichenanalysen”, “Bildung von neuen Zeichen bzw. Zeichenfamilien”, or “Ausführungen über Götternamen” and the like. Cf. Sum./Akk. *a1* = *atta*, *anāku* “thou, I” (SaV Bo. H = KUB 3, 105 l. 9’f.), whereby the Akkadian translation must refer to the Sumerian verbal prefix *a1-*, which is indifferent as to the morphological category of person. Metalexis mainly is a phenomenon of the 1st-millennium tradition, rarely occurring in the corpora of the present study.

The phenomenon of derivative entries is primarily linked to (single-)sign lists and single-sign passages in other lexical (mainly in acrographic) compositions. In longer phrases the individual components are more strongly determined and disambiguated by the other items of the syntagma (e.g., in Sum. *gú-zal* the initial sign must be read [gu], since Sum. *-zal* only makes sense in combination with this specific ‘reading’). It seems, also, that due to this syntagmatic disambiguation, Syllabic-Sumerian pronunciations are mostly appended to sign lists only.

3.3.6. [Structures and formats – micro structure – elements of the surface structure] If the individual micro-structural elements of a given composition are listed in columns they are either marked off by vertical rulings or by zones of blank space. If some elements are inserted occasionally through glosses they are inserted into the column to which they refer (usually the Orthographic-Sumerian column), mostly introduced by so-called gloss wedges (two small oblique strokes placed above each other).

Deviations from these customs are very rare; for a notable exception, cf. the manuscripts Kagal Bo. B = KUB 30,8+ and C = KBo. 16,87+, which place the Syllabic-Sumerian and the Akkadian items

23 In Cavigneaux’s concept paralexis only includes cases that exhibit a phonetic transfer.

into the same column and separate them by gloss wedges in every line (further see chapter 11, sect. 2.9.4.). This peculiar format <2 - 1 : 4>, thus, is one of the rare examples in which hierarchical structures among the different kinds of information are apparently expressed in the layout, i.e., in that the Akkadian and the Syllabic-Sumerian – both subordinate to the Orthographic Sumerian – are grouped into the same column.

A practice evidenced by the great majority of pre-canonical manuscripts is the additional division of the Orthographic-Sumerian column, (and sometimes also of the Akkadian column), into a number of further subcolumns, here termed ‘grapho-analytic subcolumns’. They are used to split up individual entries into their graphemic components. The standard divisioning involves three subcolumns for the Orthographic-Sumerian column and two for the Akkadian column. Manuscripts with two or even four Orthographic-Sumerian grapho-analytic subcolumns and manuscripts with three Akkadian grapho-analytic subcolumns are also commonly found (for a more detailed description of this device, cf. chapter 8, sect. 2.2.4.).

3.4. [Structures and formats – historical developments / extension processes] In a structural perspective, the lists are subjected to continuous change resulting in considerable and long-term developments. On the way to their canonization, the lists tend to: (1) transpose formerly implicit, orally-transmitted micro-structural information into an explicit, written form,²⁴ and (2) level out structural inconsistencies by regrouping (or displacing) structurally alienate material, which sometimes leads to the merging of whole lexical compositions (e.g., the integration of most of the material from the series *Kagal*, *Nigga* and *Sag* into *Izi*; also see chapter 12, sect. 5.5.).²⁵

The first process mentioned is obviously a result of the vanishing oral background of the tradition. The second process is probably an effect of this development. Structural inconsistencies in a list would be less serious if the user knew the text by heart. The lists gradually becoming products of a literate tradition, would also need to be more systematic and transparent in their structure to remain easily accessible to the user, who would then consult them as a written reference work (also cf. chapter 3, sect. 5).

As already mentioned in sect. 2.3., the cuneiform lexical compositions of the 2nd/1st-millennium tradition along with these structural changes undergo a steady process of quantitative extension and elaboration. From their initial state in the OB period onwards until their fixation during the canonization at the end of the MB period, new entries were continuously added to the lists, the extension thus appearing mainly as an addition of new contents. Yet, one may also view this process from a structural perspective, regarding it as an expansion of the polysemic differentiation of the lists, for

24 Veldhuis 1998: 68.

25 Ibid. 82.

the great part of the newly inserted material consists of additional Akkadian translations to already-existing Sumerian entries. Parallel to the process of explication of (formerly oral) micro-structural elements as mentioned above, one may regard this process as one of explication as well (rather than as one of extension), i.e., as an explication of macro-structural elements that were hitherto part of the implicit and orally-transmitted context.

4.1. [The functional context – introductory remark] The function of the lexical lists, as a whole curriculum as well as with regard to the individual compositions, cannot be deduced from their mere contents or structure; as with all kinds of text, the function is always bound to the social context in which the texts and their usage are embedded. The only assured contexts of the lexical lists of the 2nd/1st-millennium tradition are the scribal schools of the 2nd and 1st millennium and the scholarly traditions of the 1st millennium. The function of the lists within these contexts seems to be clearly-defined. They provided information about the writing system of cuneiform and about the Sumerian language as the crucial language that shaped this system during its development. Naturally, their specific application varied between the both supposed contexts.

4.2.1. [The functional context – the OB *eduba* – the archaeological and archival context]²⁶ Archaeological works in OB strata brought four buildings to light where lexical tablets and other exercise tablets were found in situ,²⁷ the house called ‘No.7 Quiet Street’ in Ur,²⁸ House F in sector TM in Nippur,²⁹ the house in areal NO III South in Isin,³⁰ and the House of Inanna-Mansum, better known as the house of the Ur-Utu archive in Sippar-Amnānum.³¹ That scribal-training activities took place in these houses is beyond doubt.

‘No. 7 Quite Street (occupied from approximately 1820 to 1745 according to Middle Chronology), House F (app. 1800-1740) and House NO III South (at least from 1765-1740) are roughly contemporaneous, whereas the House of Inanna-mansum was erected approximately one hundred years later (1655-1630). The general impression raised by these buildings is notably uniform. All

26 For a general up-to-date summary of the OB school as it is preserved in the secondary narratives called ‘*Eduba* texts’, which, often ironically-toned, describe daily life in school, – in contrast to the archaeological evidence, cf. George 2005.

27 In contrast e.g., to house ‘No.1 Broad Street’ in Ur, which also brought considerable yields of school tablets to light, but as to which D. Charpin (1986: 482-485) was able to show that the tablets must have been filled into the basement by secondary activities, so it is totally uncertain where they originally stem from.

28 Charpin 1986: 27-93 and *ibid.*: 420-434; additional references given there.

29 Cf. Robson 2001; additional references given there.

30 Cf. Haussperger 1987: 32f.; as for the dating of the archive, cf. Wilcke 1987: 84.

31 Cf. Tanret 2002 additional references given there.

four houses were private, domestic buildings, located in residential quarters; their plans are of moderate size (45-50 m² as to ‘No.7 Quiet Street’, Houses F and NO III south; the House of Inanna-mansum is more sizable with at least 70 m²); and their owners – this is at least clear regarding Ur and Sippar – were high officials.

Private records found in the respective archives clearly document the activities of the *abarakku*-s Ku-Ningal and his sons Ešuluhuru and Enamtisud (owners of ‘No.7 Quiet Street’) and of the *galamahhu*-s Inanna-mansum and his son Ur-Utu (owner of the Sippar house; the profession of the owner of House NO III South, whose name probably was Sîn-rēmēnī, is unclear; for the almost complete lack of private documents in Nippur House F, the owner(s) remain(s) unknown). Whether or not the teachers who were active in those houses are to be identified with their owners cannot be said; as to the *abarakku*-s of ‘No.7 Quiet Street’, which were professionals in the administration, it is quite suggestive that they also engaged actively within the training of future scribes. As to the chief lamentation-priest, Inanna-mansum, who charged professional scribes with the maintenance of his archives, it seems more probable that – as suggested by M. Tanret (2002: 155f.) – it was these professional scribes who were responsible for the educational activities and not the owner of the house himself.

Among the archaeological remnants of House F and the House of Inanna-mansum are two bins made of baked bricks (one in each house), which served to recycle and to store the clay of those tablets that were no longer to be kept. House NO III South had a similar installation.³² In all three houses, by far the largest lots of exercise tablets were found in and around those recycling bins. This appears to be quite natural since most, if not all exercise tablets fell out of use shortly after their completion (see below, sect. 4.2.2.). Accordingly, the private letters and administrative documents, which were also among tablet findings of ‘No.7 Quiet Street’ and in the House of Inanna-mansum, were mostly discovered in other rooms of the houses, separated in location from the exercise tablets.

The texts found in the individual archives reflect different curricular stages within scribal education (also see below, sect. 4.2.2.): House F and House NO III South brought both lexical and literary texts to light, whereas the findings from the House of Inanna-mansum are lexical without exception; in contrast, the share of literary texts is considerably higher than that of lexical texts in ‘No.7 Quiet Street’.

4.2.2. [The functional context – the OB *eduba* – the training procedures] All evidence collected so far about OB lexical lists suggests that the texts were (to be) learned by heart by the

³² Recycling bins of this kind are also known from other OB and earlier sites. For an inventory, see Tanret 2002: 143-151. Regarding the general problem of tablet recycling, cf. Faivre 1995.

trainees. It may even turn out to be true that, as suggested by M. Civil (1979: 7), none of the tablet finds of the OB period were produced in order to be kept for later reference, but simply as aids memoires.

By means of a formal analysis of tablet types, N. Veldhuis (1997) was able to restore the principal lines of scribal education in the *eduba* of OB Nippur. According to that, one may distinguish two general formal tablet types: full-text tablets and excerpt tablets. OB full text tablets either appear as large rectangular tablets or as prisms (type I); they contain the whole of a lexical composition, and they are far less numerous than the excerpts (in this respect, see chapter 8., sect. 1.1.). OB excerpt tablets appear in three distinct forms: as teacher-pupil exercises (type II), with a small portion of a specific composition modeled by the teacher and copied by the pupil on the obverse and with part of a previously studied composition rehearsed by the pupil on the reverse; as simple excerpts (type III) corresponding or even originally identical to the right half of the obverse of type-II tablets; and as lentil-shaped exercises (type IV), with small bits of a composition modeled by the teacher on the obverse and repeated by the pupil on the reverse. It is generally assumed that pupils started studying and memorizing a given composition through excerpts until they were able to reproduce it in full length on a full-text tablet.

The compositions studied during scribal education belong to two successive groups: the first group making up lexical lists, model contracts, and proverbs; the second group containing literary texts of various kinds. The individual lexical compositions were studied in a fixed curricular order, following a specific didactic concept:³³

- | | |
|---|--|
| (1) Sign elements, Syllable Alphabet,
<i>Tu</i> , and name lists | basic signs and their simple application |
| (2) <i>Urra</i> | stock of vocabulary |
| (3) <i>Ea</i> | polyvalency of cuneiform signs |
| (4) <i>Lu</i> , <i>Izi</i> | additional vocabulary / incongruity of Sumerian and Akkadian |
| (5) <i>Kagal</i> , <i>Nigga</i> | incongruity of Sumerian and Akkadian |
| (6) <i>Diri</i> | rules of sign compounding |

4.2.3. [The functional context – the OB *edbu*a – the possible goals] It has often been stressed that to properly use cuneiform script it is necessary to know at least some basic Sumerian.³⁴ As for the Akkadian of the 2nd and of the 1st millennium, this does not appear to be the case. Old Babylonian and the later dialects of Akkadian as well as Hittite or Hurrian are written in a basically

³³ According to Veldhuis 1997: 41-63, Veldhuis 1998: 206f., and Gantzer 2008. Further see the resumption in sect. 5.

³⁴ E.g., see Vanstiphout 1995: 5f.

syllabographic script. Logograms are only used occasionally, and the individual logograms used in a specific tradition mostly belong to a more or less fixed standard inventory. To know a few dozens signs or combinations of signs that have a logographic meaning does not imply full knowledge of Sumerian. In this respect, N. Veldhuis rightly points out that “the [OB] *eduba* curriculum cannot fail to strike the observer as an amazingly overloaded program, teaching many rare cuneiform signs, obscure Sumerian words, and outdated grammatical constructions that had no relevance for future scribes of administrative documents” (2004: 66), while “written Akkadian is all but neglected in the *eduba*.” (1997: 82). Veldhuis concludes that “[scribal] education was not exclusively – perhaps not even mainly – the transmission of scribal craft.” (2004: 66)

Apart from the practical aspect of teaching the skills of writing, OB scribal education involved a good deal of knowledge that one might term ‘academic’ in the sense of that it did not have a direct technical or practical impact. Again referring to N. Veldhuis, one may define this academic lore as “the world of Sumerian writing, culture, and history” (2004: 66), a world that had ceased to exist with the beginning of the 2nd millennium and that was now preserved and recreated by the scribes as the cultural heritage of the time. From a sociological point of view, these scribes had access to a more or less exclusive knowledge, forming “an esprit du corps, a club of those who knew the literary, religious, and scholarly traditions, who acquired the cultural capital to gain legitimate access to the circles of the elite.” (ibid.)³⁵

4.3.1. [The functional context – the post-canonical period – scribal education] Scribal education also seems to be the basic field in which lexical lists were used after the period of canonization. A compendious study of the NB and LB scribal education, which in many methodological respects follows Veldhuis 1997 for the OB period, has been carried out by P. Gesche (2000). A corresponding study on the NA scribal education still belongs to the desiderata of Assyriology; yet, Gesche (2000), in excursus, also deals with NA materials.

In contrast to the OB period, the archaeological and archival context of the NB and LB scribal schools is mostly undocumented and irrecoverable. Only in case colophons mention the dedication of the tablet to a specific deity, the find spot can be restored with some likelihood as within the respective deity’s temple;³⁶ yet, in those cases, the place where the tablet was deposited very probably is not identical with the place where it was produced.

35 H.L.J. Vanstiphout (1995: 16) emphasizes the artificial character of this kind of heritage: “The Old Babylonian *Eduba* fulfilled a most important, even essential, role in the spread of literature and ordered knowledge, both of which were ‘invented’ at this institution and on its behalf.” (Italics mine).

36 See Gesche 2000: 38f.

The NB/LB curriculum apparently comprises two phases. The first phase includes the canonical lexical lists S^a, S^b, the ‘Weidner God List’ (WeidG), as well as the initial three tablets of *Urra*.³⁷ Apart from that, first-phase students were concerned with a variety of non-canonical lists including lists of personal names and geographical names, acrographic lists of conjugated verbal forms, (non-standard) lú-lists, as well as mathematical and numerical lists; those non-canonical lists were not standardized as to their contents and as to the sequence of entries.³⁸ The first phase moreover includes (prototypical) administrative texts and letters, aphorisms, historical, and literary texts. The compositions were either practiced on large multi-columned tablets, which could contain complete compositions or a combination of excerpts, almost exclusively of lists (type-I tablets); or on small single-columned or two-columned tablets with excerpts (type-II tablets).³⁹

Compositions of the second phase were almost exclusively studied on type-II tablets. They comprise the series *Urra* (all 24 tablets), lú = *ša, An, Ea, Diri, Erimḫuš, and Malku*. Other compositions like *Aa, Izi, or Nabnītu* were not an integral part of the scribal curriculum. However, second-phase students were primarily concerned with magic, religious, and literary texts that are situated around the domain of *āšipūtu*, the profession of magic and exorcism. While the goal of the first phase of education was to provide the scribal apprentice with the basic skills of reading and writing, the second phase aimed at making him familiar with the Babylonian cultural heritage and with some basic knowledge of *āšipūtu*.⁴⁰

A number of features that the exercise tablets exhibit can be taken as serious indications that the texts – at least those of the first phase – were studied with the final intention of memorizing them.⁴¹

4.3.2. [The functional context – the post-canonical period – a learned philological-exegetic tradition] Apart from their central role within scribal education, lexical lists in the post-canonical period also served as important tools in the preservation and interpretation of the Sumerian literary texts that survived up until that time.

This field of philological exegesis, like that of scribal education (see previous section), was apparently strongly related to the field of *āšipūtu*. A large selection of Sumerian literary compositions that were still in use in the 1st millennium were a part of the *āšipū*’s magic instruments, i.e., mostly including incantations, prayers, songs, and medical texts. In order to keep those instruments

37 Ibid. 66ff.

38 Ibid. 81ff.

39 Ibid. 44f.

40 Ibid. 172f.

41 Ibid. 169

in good working condition, the *āšipū*-s who were using these texts apparently felt the need to provide them with translations, interpretations, and commentaries. It is therefore no surprise that the *āšipū*-s' private libraries, as they have been unearthed in Uruk, Babylon, or Assur, contained considerable amounts of tablets with lexical compositions. Lexical lists, with the abundant pool of Sumerian-Akkadian lexical equations they provide, apparently formed the basic tools in this process of textual exegesis.

St. Maul (1997) has pointed out some of the interpretative procedures that *āšipū*-s carried out on Emesal texts, also draw their hermeneutic context from lexical lists. Thus, besides the mere lexical interpretations on the literal level of meaning, scribes also attempted to disclose a 'deeper' level of theological and mystical meaning by finding alternative interpretations of individual signs or words, thus creating a kind of sub-text. In many cases, this deeper sub-text that the scribes established thoroughly underpins the original literal meaning of the text.

Within this learned scholarly tradition, lexical lists did not only form the tools of exegesis, but, probably because of this prominent position, were the objects of philological interpretation themselves. Thus, in order to make them more accessible, scribes also created commentaries on lexical compositions, particularly on *Urra* with its – in parts – highly specific vocabulary, or they established counter-indices, as represented by so-called 'reciprocal *Ea*'.

4.4. [The functional context – the MB period in Babylonia proper] As with the whole cuneiform tradition, lexical lists, other scholarly texts, and exercise texts have been sparsely excavated at Babylonian sites of the MB period, i.e., at sites roughly contemporaneous with the corpora addressed in the present study. Their scarcity prohibits more far-flung conclusions about their specific functional context. Manuscripts largely stem from Nippur and Babylon, individual pieces also from Ur, Kiš, Sippar, and Qala'at al-Baḥrain.⁴² The archaeological context of the Nippur manuscripts is largely undocumented; documented manuscripts stem from secondary contexts. The Babylon manuscripts, though largely unpublished, stem from the well-documented archive 'Merkes 25n1' containing at least 154 manuscripts, with the majority inscribed with pupil exercises.⁴³ The building that housed the archive apparently was of private, domestic character; the owner or the teacher(s), however, are not identifiable in the manuscripts. Due to the similarity of the clay of the tablets with the clay of the stratum, the excavators suggested that the tablets found were to be recycled before the archival activities came to an end.⁴⁴ The archaeological context of the school tablets, thus, is quite similar to those documented as OB school tablets (see sect. 4.2.1.).

42 As for a concise overview of large sections of the material, cf. Veldhuis 2000.

43 Cf. Pedersén 2005: 85-92; disregarded are the hundreds of small fragments also found in that archive.

44 Following Pedersén 2000: 86.

Regarding the manuscripts and texts it is no surprise that the MB tradition takes an intermediate position between the OB (pre-canonical) and the post-canonical tradition with features anticipating the later, post-canonical tradition, but also with features that mark a continuity with the earlier, OB tradition. Thus, apart from the regular full-text tablets common to all periods, lexical lists are found on excerpt tablets which clearly reflect the inscriptional practice of the post-canonical period, with an excerpt of literary text on the obverse and an excerpt from a lexical list on the reverse (however, with the tablets inscribed cross-wise, obverse in landscape and reverse in portrait format). The compositions studied on these tablets also appear closer to the post-canonical period, however with compositions still studied in unilingual side-by-side with the bilingual versions.⁴⁵

For a reconstruction of the educational practices the amount of materials preserved and published is insufficient. Nonetheless, the re-translation of Akkadian texts into Sumerian is (compositional) evidence that some scribes had already engaged in philological-exegetic practices similar to those in the post-canonical period.⁴⁶ That lexical lists also formed the tools – if not the objects – for these practices, is however not evidenced by the material.

4.5. [The functional context – the LBA periphery] As noted by N. Veldhuis (1997: 67) the MB lexical tradition in Babylonia proper and the lexical tradition of LBA Syria and Anatolia, though roughly contemporaneous, have to be treated separately, since they represent “two geographically and historically distinguished traditions”. As will be seen, the LBA tradition formally stands in close continuity to the OB tradition, i.e., as far as aspects of the curriculum or the tablet layout are concerned, and they only show minor agreements with the later post-canonical tradition in this respect. This stands in direct contrast to the MB tradition of Babylonia proper (see previous section).

That said, it is correct to assume that the functional context of the LBA traditions and – as a part of it – the Ḫattuša tradition, is largely in agreement with that of the OB *eduba*. Yet, anticipations of the later, post-canonical tradition, that are also observable for these traditions, should not be disregarded. In a fashion similar to the scribes of the post-canonical period, the LBA peripheral scribes also had to deal with textual materials in foreign and/or long-extinct languages and may well have felt a need for interpretation and exegesis. If they attempted to overcome the interpretative problems by philology, it seems quite natural that they fell back on the lexical lists as very suitable sources of philological knowledge. Apart from the central role within scribal education, lexical lists in the LBA periphery may also have been a part of a philological-exegetic context (see chapter 12).

45 Veldhuis 2000: 81f.

46 Ibid. 82.

5.1. [The most important lexical series of the 2nd/1st-millennium tradition – the concept of ‘series’] In principle, the concept of a ‘*lexical series*’ is based on a combination of several, heterogeneous criteria:⁴⁷

(1) The standardization of contents and item sequences, which is evident through the presence of parallel versions (from different sites): Yet, envisaging the long textual tradition of individual compositions, the autonomy of local traditions as well as the consequences of oral transmission, and general characteristics of the cuneiform tradition, minor and even major departures can be considerable among individual pre-canonical versions of a specific series.

(2) The standardization of the organizational structure that is a natural consequence of the standardization of item sequence (if the items appear in the same sequence the internal relations between them remain constant as well).

(3) The standardization of the number of tablets and of the ‘pagination’. Most series are known to cover a specific number of tablets, e.g., OB *Urra* with six or OB *Izi* with two tablets, and the breaks between these tablets are well-defined. Again, it is not necessarily implied that all sources follow the characteristic arrangement; exceptions are well-known.

(4) The standardization of the title of the composition, which is identical to the incipit and may remain unchanged for centuries: Colophons usually give the name of the series and the number of the current tablet.

Criteria (1) and (4) are to be regarded as more significant than criteria (2) and (3). Accordingly, a good deal of the lexical compositions known from the various sites and periods can be assigned to a specific lexical series. Yet, note that there is still a considerable share of compositions from the OB and the MB period as well as of the non-canonical school exercises of the 1st-millennium tradition that are of non-standardized character and that apparently do not belong to any of the known series. As for Ḫattuša e.g., the share of assignable as opposed to non-assignable manuscripts is 3.75 : 1.0 (calculated according to the number of lexical entries) or 2.0 : 1.0 (calculated according to the number of manuscripts; also see chapter 11, sect. 1.2.).

5.2. [The most important lexical series of the 2nd/1st-millennium tradition – brief description of the individual series preserved] The individual lexical compositions or ‘series’ have been sufficiently described in other places.⁴⁸ The following section resumes some basic features of the compositions, adding some remarks to hitherto less-regarded aspects. It thereby limits itself to the series that are attested within the corpora of the present study and concentrates on the aspects

47 In this respect also cf. the notes on ‘canonization’ by Gesche 2000: 61f.

48 Cf. the studies mentioned in note 1. A detailed structural and functional analysis of the lexical compositions that are preserved in Emar is given by M. Gantzert (2008: III)

of their content, structure, and their possible function within scribal education.⁴⁹ The sequence thereby corresponds to the supposed curricular order in the scribal schools of the pre-canonical period.

Tu-ta-ti (Tu): Listing the most important syllables, invariably in the sequence (C)u(C)-(C)a(C)-(C)i(C), and thereby making the student familiar with the basic cuneiform syllabary. In the OB period, every sign of a given *u-a-i* sequence is placed in a single line, the whole sequence being repeated in a fourth line; post-OB manuscripts do not show such repetitions, but place all three syllables of the sequence immediately into one line. It has an appendix with personal names treated in the same way as the syllable sequences; the contents of this appendix seem to vary from tradition to tradition. Only treating syllables, *Tu* actually is not a lexical list in the strict sense. Entries are mostly associated according to phonetic and graphic similarities.

Silbenalphabet B (SAI) / Silbenvokabular (SVo): SAI lists more or less playful combinations of syllables; the combinations mostly lack a concrete semantic meaning and the Akkadian ‘translations’ added in SVo, the ‘vocabulary version’ of SAI, are thus mainly artificial. In this respect, the list is pseudo-lexical. The macro structure is hierarchical: at the subordinate level grouping entries according to (Sumerian) pseudo-grammatical schemes (reduplication, attribution), and at the superordinate level connecting these groups predominantly according to graphic similarity. In post-OB manuscripts, the Akkadian translations occasionally appear organized in two columns. Probably forming a (playful) introduction into the euphonic and morphological principles of Sumerian.

Ea/Aa + Syllabary A (SaS)/Syllabary A Vocabulary (SaV): Treating simple signs with their pronunciations (*Ea* and SaS), and the pronunciations remaining implicit until the Late-OB period. *Aa* and SaV add Akkadian translations. Sections are connected serially, mostly without further hierarchization and mostly according to phonetic or graphic similarity. Due to the wide semantic range of most single-signs, there exist very high grades of polysemic differentiation.

In the OB period *Ea/Aa* is attested in the southern scribal centers of Babylonia only, while SaS only appears in the northern centers of this period. In the MB period, SaS turns up again in Assur and in the western periphery, and only there is it accompanied by its vocabulary version SaV, while *Ea/Aa* seems to be preserved in Mesopotamia only. In the 1st-millennium tradition, SaS, together with Syllabary B (S^b), is a basic school exercise, while *Ea/Aa* has been integrated into the scholarly tradition of philological exegesis, including Akkadian translations in high numbers (with *Ea* as a sort of concise, abbreviated version of *Aa*) and, often, an additional column with sign names; SaV, except one possible NA manuscript from Assur, has disappeared before the 1st millennium.

Studying the single-sign lists, students were provided with the most important pronunciations and meanings of the most relevant simple signs and with the principle of their polyvalency.

The textual history of SaV is specifically treated in chapter 12, sect. 5.2.

49 That the individual lexical series are functional in terms of the specific contents they include/exclude and of the structure in which they arrange these contents, is almost self-evident and was recognized in relatively early studies. That they also possess an individual didactic purpose was first substantiated by N. Veldhuis (1997) who approaches the lists systematically in their educational context.

Grammatical texts (OBGT / MBGT / RSGT / NBGT): Listing (prototypical) grammatical paradigms (verbal and pronominal) and adverbs, since the MB period also in the shape of lists of isolated, decontextualized grammatical morphemes, and in the 1st-millennium manuscripts with traces of an elaborated meta-language. The OB and MB compositions, especially RSGT (Ugarit), also insert non-grammatical contents, which in case of the RSGT could be explained in connection with its possible didactic function as providing the basic skills for the formulation of colophons. The original curricular position is unclear.

‘Weidner God List (WeidG) / An: Listing deities in entirely thematic organization, according to kinship relations (lower organizational level) and geographical regions (higher level). WeidG is attested in the pre- and post-canonical period, while *An* apparently was established during the MB period.

Urra: Extensive list dealing with real-world objects and related concepts in highly hierarchical organization, almost exclusively according to thematic principles, and with partially extremely long paradigms. Due to the very specific vocabulary, the list shows a very low grade of polysemic differentiation. *Urra* is the last chronologically among the lexical compositions that is explicitly appended with an Akkadian column. Providing the student with a large part of the Sumerian lexicon and sign inventory (but also cf. 3.3.4.).

The textual history of *Urra* is specifically treated in chapter 12, sect. 5.3. & 5.4.

Iú = Ša: Treating kinship terms and professions in medium grade of hierarchization and with mostly thematic and semantic, on the lower hierarchical level also acrographic organization. Comparably many and mostly graphically-motivated, attractive insertions. Due to the highly specific vocabulary, there is a low grade of polysemic differentiation. During the extension processes in the MB period exchanging some material with *Izi*. Almost same functional range as *Urra*.

Izi: The often-mentioned acrographic character of that composition actually forms a redundant feature; the actual relations are either primarily thematic/semantic or, if graphical in nature, concern the second sign of the items. Showing a medium grade of hierarchization and polysemic differentiation as well as many attractive insertions. Listing single-sign and so-called *Izi*-compounds (i.e., compounds the pronunciation of which can be recovered from the pronunciation of the components; as opposed to the pronunciation of so-called *Diri*-compounds, which is arbitrary and can not be deduced from the pronunciation of the components). It develops from a shorter list with rather inconsistent organization in the OB period into one of the most important lists of the 1st-millennium tradition, with then highly consistent, mostly graphic/phonetic organization and with a length almost equal to *Urra*. The other ‘acrographic’ lists: *Kagal*, *Nigga* and *Sag* apparently merge into *Izi* shortly before or during the canonization; further see chapter 12, sect. 5.5. Besides the lexical aspects they treat, it has been suggested to make the student familiar with structural incongruity of Sumerian (writing) and Akkadian.⁵⁰

The textual history of *Izi* and the other acrographic series is specifically treated in chapter 12, sect. 5.5.

Kagal / Nigga / Sag: Acrographic lists which are very similar to each other regarding their highly systematic organization, with large unrelated key-sign sections that are in themselves structured according to semantic or graphical similarity (again of the 2nd sign in the chain, like in *Izi*). The first half of *Kagal*, dealing with ceremonial-temple names and profane buildings, thereby forms an exception with its thematic, *Urra*-

50 Veldhuis 1998: 206f.

like organization. There exists a high grade of polysemic differentiation. Shortly before or during the canonization all three lists disappear, probably transferring their contents to *Izi*. Similar in function to *Izi*.

The textual history of *Izi* and the other acrographic series is specifically treated in chapter 12, sect. 5.5.

^{lu}**azlág** = *ašlaqu*: Only attested in the OB period and in LBA Ḫattuša and Ugarit (often designated as ‘OB Lu’). Dealing with various (anormal) human conditions and with designations and professions of social outsiders. Probably the list with the lowest grade of systematical organization. Almost no structural hierarchy, with thematic, semantic and graphic relations dominating and with an extreme number of short and unrelated paradigms; medium grade of polysemic differentiation. From the very beginning always with Akkadian translation.

Besides the lexical aspect, may have trained its students in complicated substantive-attribute constructions and their translation into Akkadian; thus similar in function to *Izi* and the other acrographic lists, with which it also shares the (superficial and redundant) acrographic organization. The exact curricular position is unknown; an analysis of OB type-II exercise tablets suggests that its position is somewhere after *Izi*, if not even later.⁵¹

Diri: Treating compound signs, the pronunciation of which can not be deduced from the pronunciation of individual components (so called *Diri*-compounds; as opposed to *Izi*-compounds). Grouping the sections in a similar fashion as the acrographic lists, i.e., arbitrarily according key-signs, and in a medium grade of hierarchization. There are varying grades of polysemic differentiation. Since the very beginning, it is always explicitly appended with an Akkadian column.

Erimhuš (Erim): Composition appearing in the MB period with, at the lower organizational level, groups of two to four entries that mostly show semantic (particularly synonymous), but also thematic and grammatical relation. Those groups may join to larger units according to various principles in medium grade hierarchization. The Akkadian column plays an important role, being mostly equal to the Sumerian column in the micro-structural hierarchy, sometimes even primary; due to that, *Erim* completely lacks polysemic differentiation. The vocabulary treated mostly belongs to the lexicon of Sumerian heroic narratives, so besides explaining the various phenomena of overlap and divergence between semantic fields of the Sumerian and Akkadian language, the list may have served as a kind of glossary to this literary genre. The curricular position of *Erim* is unknown.

According to their basic structural and functional characteristics, *Tu* and SAI/SVo may be grouped under the label ‘basic exercises’, *Ea/Aa*, SaS/SaV and *Diri* may be termed ‘sign lists’, WeidG, *An*, *Urra* and *lú = ša* ‘thematic lists’, *Izi*, *Kagal*, *Nigga*, and *Sag* ‘acrographic lists’, while *Erim*, together with the 1st-millennium compositions *Antagal* and *Nabnītu*, would belong to the category ‘group vocabularies’.

51 As for the method, see Veldhuis 1997: 35 et passim. The type-II exercise tablets with ^{lu}azlág = *ašlaqu* on the obverse listed in the edition in Civil 1969 show the compositions *lú = ša*, *Izi* and a mathematical exercise, each twice, on the reverse.

