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Elementary education at Nippur. The lists of trees and wooden objects

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Chapter 1 Introduction

By the end of the fourth millennium BC the administrators of Uruk, a city located in the very south of present-day Iraq, invented a new device to record their transactions. They created a system of symbols for numbers, commodities, and professions. These symbols were drawn with a stylus in moistened tablets of clay¹. This system of symbols is called archaic cuneiform and was the earliest form of writing. The Urukeans not only created this writing system, but also devised the tools to transmit it to a future generation. These tools consist of lexical lists. In addition to administrative texts the corpus of archaic texts contains lists of trees, domestic animals, fish, birds, professions, vessels, and so on.

The writing system was most probably invented by a Sumerian-speaking group. Sumerian is an agglutinative language, for which no cognate has been identified. Over the course of time cuneiform was adapted to record a variety of other languages. The most important of these was Akkadian, a Semitic language. Akkadian and Sumerian were probably spoken side by side throughout most of the third millennium in Southern Mesopotamia. By the end of this millennium Sumerian ceased to exist as a spoken language². It was retained for scribal and cultic purposes up to the end of the first millennium.

Lexical lists and bilingualism were to become two characteristic features of Mesopotamian written culture in the second and first millennia. Sumerian lexical lists were provided with Akkadian translations in order to preserve the knowledge of the now-dead language. In the second half of the second millennium BC the spread of cuneiform writing over much of the Ancient Near East coincided with the spread of Sumerian-Akkadian lexical lists³. In order to learn how to write, the scribal pupils of these peripheral regions had to master two foreign languages. They learned Akkadian cuneiform for their international correspondence, but the traditional connection between cuneiform and the bilingual lists was so strong that they could not do so without encountering Sumerian. In Mesopotamia proper in the first millennium the gradual rise of Aramaic, and later Greek, for both written and oral communication did not put an end to the transmission of Sumerian-Akkadian lists. At the very end of this history, in the Hellenistic period, Greek transcriptions were sometimes added to indicate the pronunciation of the ancient Sumerian words.

Over the millennia a wide variety of lexical lists had been created. The earliest examples were

¹ An excellent introduction to the archaic writing system and its uses is found in Nissen, Damerow, and Englund 1990. It has been argued by D. Schmandt-Besserat that writing had a forerunner in tokens: small clay objects, impressed with what appear to be numerical signs or other symbols. Michalowski (1993, 1994) has rightly argued that the novelty of archaic writing is its character as a fully fledged system. The inventors may have borrowed a few isolated symbols from their use on tokens; as a system archaic cuneiform was a new invention.

² The exact period in which spoken Sumerian ceased to exist is much debated. For this study the question is immaterial. It is important that it happened well before the Old Babylonian period.

³ A number of these lists are in fact unilingual Sumerian in their written format. It will be argued in subsequent chapters that the Akkadian translations were learned by heart.

thematically arranged. Other lists are arranged by sign form, or by phonemic principles, or they give synonyms in groups of three. The list format was also used to organize other kinds of knowledge, such as grammar paradigms and mathematics.

These lexical lists, in all their variety, have aroused interest on various sides. For lexicographers the value of these texts cannot be overestimated. The bilingual lists in particular (with occasionally a third, or even a fourth language added) are of direct relevance for semantic research. But the lists also drew the attention of students of intellectual history. Bilingual lists were interpreted as the oldest dictionaries; the oldest evidence of lexicographical interest. Grammatical lists have been described as the earliest documents of linguistics. Other scholars used lexical lists as evidence for Sumerian psychology. From an anthropological point of view the Mesopotamian lists were given pride of place in the contrast between oral and literate cultures.

Research into Mesopotamian lexical lists covers a long period of time, a wide variety of texts, and a whole spectrum of interpretative questions. This study will concentrate on Old Babylonian unilingual lists, as exemplified by the lists of trees and wooden objects. In this period (around 1700 BC) lexical lists are generally found on exercise tablets; they were part of the scribal education of the time. The educational function of the list will be a leading perspective of my investigations. In the present chapter I will briefly discuss the history of research (§1.1), the better to define my own approach and the questions I want to ask (§1.2). This will lead to some theoretical and terminological preliminaries. The final section of this chapter provides an overview of the structure of the study (§1.3).

1.1 History of Research

The history of research into Mesopotamian lexical texts may be roughly distinguished into two approaches: the dictionary approach, and the cultural history approach. The dictionary approach treats the ancient lexical texts as sources for our understanding of Sumerian, Akkadian, or the other languages included. The cultural history approach is interested in the uses of the lists, and their intellectual background. The dictionary approach has inspired the publication of editions of the most important lexical series, providing indispensable tools for Assyriological research. These editions have been used extensively by almost every Assyriologist to determine the meaning of individual words or expressions. The cultural history approach ranges from the analysis of the structure of a single lexical composition to the overall characterization of the Sumerian mind through their lexical writings. Some of its most important studies have not escaped controversy. The two approaches are not linked to stages in the history of Assyriology. In fact both have been practised side by side, often by one and the same scholar. In the following I will discuss the most important and most representative studies that have appeared so far.

1.1.1 Lexical Lists as Ancient Dictionaries

By around the middle of the nineteenth century the basics of the Akkadian writing system were

understood. The largest corpus of texts available to scholars was the so-called library of Assurbanipal, found in the ancient city of Nineveh. It was soon realized that another, still undeciphered, language was to be found among the extant tablets. This language proved to be Sumerian⁴. The reconstruction of Sumerian was, and still is, greatly hampered by the absence of any known cognate. The only access was provided by a number of bilingual incantations and other religious texts and by lexical lists. The latter were seen and used as ancient dictionaries, preserving the meaning of the Sumerian words and phrases for whoever was able to read Akkadian. Poebel, who wrote one of the earliest relatively complete and systematic Sumerian grammars (*Grundzüge der Sumerische Grammatik*, 1923) duly acknowledged his dependence upon what he called 'Von den Babyloniern selbst geschaffene Hilfsmittel zum Studium der sumerischen Sprache' (p.7). Having acquired a basic understanding of Sumerian through the lists, the early Sumerologists were able to apply and improve their knowledge of Sumerian with other texts. This development by no means diminished the importance of the lists for Sumerian lexicography. To the present day semantic studies of Sumerian (and, indeed, of Akkadian) invariably cite the evidence from lexical texts as a major source.

The material available in the lists was collected and rearranged for research purposes in A. Deimel's *Šumerisches Lexikon* (1928-1933). Reconstructions of individual lists were published by Meissner, Zimmern, and Landsberger. Matouš (1933) published a collection of lexical tablets in the Berlin Museum. In the introduction he discussed the first millennium version of the thematic lexical series *ur₅-ra = hubullu*. He gave an overview of the series and the *incipits* of its 24 tablets. The Finnish scholars Armas Salonen and Erkki Salonen utilized lexical lists as one of the main sources for their long series of semantic studies, covering such variegated fields as fishing, household utensils, weapons, boats, doors, and many other subjects. In some of these volumes partial reconstructions of lexical lists appeared. It was B. Landsberger who saw the importance of reconstructing all lexical lists in their entirety. In 1937 the first volume of *Materialien zum sumerischen Lexikon (MSL)* appeared. At this moment 16 of a projected 18 volumes are available (volumes 15 and 18 are still unpublished). In a Supplementary Series additional texts and editions are made public. The series has become a monument of Assyriology and an invaluable tool for every researcher.

Today, *MSL* is the main and most important example of the dictionary approach to the lists. The earlier volumes of *MSL* pay little attention to tablet types, regional variation, or context. The editions are mostly compounded from tablets of various origins and types, and it is no easy task to find out what is on an individual tablet. Neo-Babylonian exercise tablets generally combine extracts from lexical compositions and literary texts in a fixed sequence. One searches in vain for such information in the early volumes of *MSL*. Not the tablet, but the text was the main interest. The relevant passage was simply incorporated in the eclectic text, regardless of the context in which it appeared. Without exaggeration, therefore, one can say that *MSL* was designed to provide as many lexical Sumerian-Akkadian equivalences as could be found. The reconstruction of the lexical series was a method, not an aim. From a modern point of view it is easy to criticize this basically a-historical approach. Such criticism, however, is a-historical in itself, since the series was started in another time, with other scholarly needs and questions. In more recent

⁴ The existence of Sumerian as a language independent of Akkadian has long been controversial. The history of this controversy may be found in Weissbach (1898) and Jones (1969). For one of the main protagonists, Joseph Halévy, see Cooper 1991 and 1993a.

volumes of the series the shortcomings of the original format have been recognized. Beginning with volume 12, the editions are preceded by very informative introductions on the history of the composition edited and on the tablets and tablet types on which it is found. It is important when using *MSL* to realize its nature, and to appreciate the strengths and weaknesses of the individual volumes. This is particularly true for research asking questions of cultural history; the kind of questions for which *MSL* was not originally designed.

At the present moment nearly all first millennium lexical texts have been edited in one of the volumes of *MSL*⁵. This is not the case for the unilingual Old Babylonian versions of these same lists. From volume 7 on these versions are systematically included. So far no edition has appeared of the Old Babylonian counterpart to the list of legal phrases *ki-ulutin-bi-še₃ = ana ittišu* (see §2.4.1.3), nor of the 'forerunners' of the list of birds and fish and the list of wild animals. The latter two were to appear in *MSL* 8/3, which never appeared. For the list of trees and wooden objects selected passages were edited in *MSL* 4 and 5, but no systematic reconstruction of the whole composition was attempted.

The earliest lists from Uruk in archaic cuneiform have recently been published in *Archaische Texte aus Uruk*, Volume 3 (Englund and Nissen 1993). The volume is the first in a series of text volumes, intended to cover the whole corpus of archaic cuneiform from Uruk. The lexical lists were given priority, in the expectation that they would prove helpful in the decipherment of contemporary administrative texts. For this reason the volume may be regarded as an example of the dictionary approach. However, the authors provide the reader with all the information needed for an evaluation of the texts from other points of view. There is the necessary information on tablet types, archaeological context, relations with later versions, and the amount of variability found in various compositions. Thus *ATU* 3 marks a new standard in the publication of lexical texts.

1.1.2 Lexical Lists as Evidence for Cultural History

The cultural history approach has always accompanied the use of lexical lists as a dictionary. Within this approach three complexes of questions may be distinguished: the history of the lexical tradition, the uses of lexical texts, and their intellectual background.

1) An early overview of the lexical corpus is found in Meissner's *Babylonien und Assyrien* II (1925). This volume was entirely devoted to Mesopotamian science. This science, according to Meissner, was basically a theology (p.1). All other sciences were subordinate to religious knowledge, including, for instance, cosmology, magic, and mantics. Philology, history, mathematics, and astronomy existed but were not dealt with in a scholarly fashion. Their treatment, according to Meissner, was restricted to areas of practical interest. Against this background he interpreted a wide range of lexical lists as philological tools. Though partly obsolete, his discussion is still well worth reading, not least because of the illustrative quotations from

⁵ The most important exception is Diri, the list of complex signs, which is planned for *MSL* 15. First millennium Akkadian synonym lists (such as *malku = šarru*) fall outside the scope of *MSL*.

a wide range of lexical compositions.

More recent histories of the lexical tradition have been written by Civil (1975a; 1995) and Cavigneaux (1983). Both of Civil's articles are short but very informative. Cavigneaux's lengthy article in the *Reallexikon der Assyriologie* contains references to all lexical texts known by that time. By its nature this article is more a bibliography than a history in the strict sense of the word.

2) The uses of lexical texts are primarily studied by means of the tablet types on which the texts are found. The details of such a typology can inform us whether a lexical text was written for subsequent storage in a library, or rather as an exercise to be discarded when the work was done. The typology has been studied most extensively for the Old Babylonian period. One of the most important - and almost forgotten - studies is Chiera's introduction to his edition of the Old Babylonian lists of personal names from Nippur in *PBS* 11/1 (1916). Though lists of personal names are not lexical by modern standards, they belong to the same corpus of school texts, and exhibit the same formal features. Chiera's discussion of tablet types, and of various details demonstrating how such tablets were inscribed, is still useful and has not in fact been superseded. The discussion of Old Babylonian tablet types was not taken any further until the seventies. Civil then not only gave each tablet type a formal label, now generally accepted, but also discussed the relative reliability of the various types for a reconstruction of Old Babylonian lexical lists⁶. Falkowitz planned to devote separate studies to the exercise types found in Old Babylonian Nippur. Regrettably, only one such study appeared, discussing the round, lentil-shaped school tablets (Falkowitz 1984). No attempt has been made so far to study the tablet types as a functional system. For other periods tablet typology has received even less attention. Van Soldt (1991 and 1995) dealt with the typology of Middle Babylonian lexical tablets from Ugarit and Emar. He was able to reconstruct the curricular order of the exercises, and to determine the function of each of the tablet types. Kassite school tablets still await systematic treatment (see, however, Civil 1995). Neo-Babylonian school tablets have been discussed briefly by Maul (1991) and by Cavigneaux (1981). A comprehensive account of Neo-Babylonian school texts from Sippar in the British Museum is being prepared by Petra Gesche.

Another way to approach the use of lexical texts is by an analysis of their contents. To some extent this question was treated by Çiğ, Kizilyay, and Landsberger (1959) in their edition of two Old Babylonian lists of signs, labelled TU-TA-TI and Syllable Alphabet B⁷. The authors demonstrated that these texts were meant for beginners. Most treatments of the contents of the Old Babylonian curriculum, however, are not based upon the evidence of extant exercise tablets, but depend on Sjöberg's classic article on the Old Babylonian school (Sjöberg 1975). Sjöberg's most important sources were the so-called Eduba texts. The eduba is the Old Babylonian scribal school. Eduba texts are literary texts which have as their main theme the school and school life. They depict a school where writing, language, mathematics, and music belong to the main subjects.

3) The intellectual background of the lexical tradition may be studied by analyzing the

⁶ These discussions are found in the introductory sections to the Old Babylonian versions in *MSL* 10-14. Civil's tablet typology is now most conveniently summarized in Civil 1995.

⁷ Both compositions will be treated in §2.4.1.1.

organization of the texts. An important early contribution to this line of research was Schuster's article 'Die nach Zeichen geordneten sumerisch-akkadischen Vokabulare' (Schuster 1938) In this contribution Schuster's first concern was the reconstruction of the first millennium sign lists S^a, S^b, and Aa/Ea⁸. As Schuster perceived,, these series are somehow related. In sign lists of this period a sign is linked to a Sumerian pronunciation gloss, an Akkadian translation and in some cases a sign-name. In addition to this horizontal organization the lists have a vertical organization in the succession of signs treated. For the vertical organization Schuster identified a number of principles, including sign form, sign value (sequence according to the vowels u-a-i), and meaning. It was only in 1976 that Cavigneaux, in his unpublished dissertation, made the next serious step. His work concentrated on the horizontal aspect of the bilingual sign list Ea. Some entries are rather far removed from our idea of translation or dictionary, and can only be understood from the reconstruction of complicated lines of reasoning.

Grammatical lists have been studied as a source for understanding ancient linguistics (Jacobsen 1974). Jeremy Black studied the system behind verbal and other paradigms in his *Sumerian Grammar in Babylonian Theory* (1984)⁹. For the understanding of these lists the sequential principles are of vital importance. Much of the information is not found in the single entries, but only in their serialization. The Babylonian scribes sometimes invented impossible Babylonian forms, in order to illustrate the system behind the Sumerian verbal paradigm.

Quite another approach to the intellectual background of the lists is von Soden's essay 'Leistung und Grenze sumerischer und babylonischer Wissenschaft', originally published in 1936. The author's intention was to understand the lists as products of the nature of the Babylonian and Sumerian races. He put a great deal of effort into differentiating between Sumerian and Babylonian contributions to the growth and development of the lexical tradition (pp.413-415; and *passim*). The Sumerian component was most importantly 'Ordnungswille', a driving force that the author saw expressed everywhere in Sumerian culture, from political organization to religion. The Babylonian reinterpretation of the lexical tradition was of a much more practical character. The theological concept of 'Ordnung' was unknown to them, and so they misunderstood the deeper significance of the lists. According to von Soden the Babylonians redefined the lists as dictionaries, even though the format was hardly appropriate for this use (see pp.427-432).

Von Soden's essay contains a comprehensive overview of the Mesopotamian lexical tradition. In a time when the reconstruction of the lists had only begun in a piecemeal fashion this was an ambitious undertaking. His theoretical assumptions are clearly inspired by the racist politics of the time which made the definition of the nature of the Sumerian and Babylonian races an important topic. The failure of both to reach a level of scholarship comparable to that of the ancient Greeks and Indians is finally explained by racial differences. Real scholarship belongs to the nature of the Aryan or Indogermanic race (pp.555-557). In this approach von Soden was not alone. Becker (1985) has demonstrated the racist background of the assumed Sumerian-Semitic conflict which figures as a taken-for-granted historical fact in research and terminology down to the present day. In post-World War II publications the topic was divorced from its anti-semitic

⁸ Lists treated briefly by Schuster are S^c, Diri, Izi, and Kagal. All these compositions will be discussed in Chapter 2 of the present study.

⁹ See also Civil 1994a and Reiner 1994.

and racist overtones, but did not lose its significance¹⁰. In later publications von Soden slightly modified his theses, disposing of the original racist elements, but without altering the basic assumptions that justified them. His explanation of the lists as being founded in the Sumerian 'Ordnungswille' was retained, as well as the intention to differentiate between Sumerian and Babylonian contributions¹¹. That his openly racist original thesis was reprinted twice - adjusted with some bibliographical addenda, but otherwise unmodified - is a black page in the history of Assyriology.

Oppenheim forcefully rejects the naive identification of linguistic, ethnic, and racial categories (Oppenheim 1977, p.48). He dismisses the term 'Ordnungswille' as a quasi-mythological concept. To this critique Larsen rightly adds that 'Ordnungswille' is hardly unique to Sumerian thinking, but rather represents a universal human trait (1987, p.210). Oppenheim stresses what he calls the operational element in the history of the lists. The lists do not coerce the contents of what is written or the thinking of the scribes. They provide a format that is ready for use for all kinds of contents (Oppenheim 1977, p.248f.)¹².

Mesopotamian lexical lists play a prominent role in the theories of literacy by the anthropologist J. Goody¹³. The problem with which his argument starts is the Great Dichotomy: anthropologists and philosophers have proposed numerous explanations to account for the differences in cognitive styles between 'primitives' and modern men. The difference was formulated in evolutionary terms (social Darwinism), or as a difference between 'hot' and 'cold' societies (Lévi-Strauss). Goody argued that the introduction of new technologies of communication may at least partially account for changes in modes of thought. Such changes include the invention of writing, the invention of the alphabet, and printing. Writing is not the mere recording of speech. Writing introduces new textual formats, with new requirements. One example is the list. In a list the words or names are decontextualized, and therefore allow for kinds of analysis that do not come to mind as easily in oral situations. The technique of writing provides new possibilities for the organization and retrieval of data. Among the examples Mesopotamian lexical lists play a prominent role. Goody's theory and the criticisms it has provoked will be discussed more fully in §4.2. Unfortunately, Larsen's complaint that in Assyriology Goody's challenge has generally been met with silence, and that literacy in Mesopotamian society is too much taken for granted (Larsen 1987, p.218), has lost none of its relevance.

1.2 Research Questions

Put in the most general terms, the question that this study seeks to answer is: what is a lexical

¹⁰ The idea of a Sumerian-Semitic conflict was recently revived by A. Westenholz (1993). The conflict is one of the main ingredients in Volk's historical-political analysis of Inanna and Šukaletuda (Volk 1995, especially pp.25-40).

¹¹ See von Soden 1960; 1973; and 1985, pp.138-164. For a critique of von Soden's concept 'Listenwissenschaft' see §4.1.

¹² See also Oppenheim 1978, and §4.1 of the present study.

¹³ The most elaborate version of his thesis is found in Goody 1977.

tablet? Most commentators so far have concentrated on reconstructions of lexical compositions, rather than on the clay tablets on which they are preserved. The first step in all research has been the reconstruction of the composition at hand from the bits and pieces kept in museums all over the world. The second step, if a second step was carried out at all, was the interpretation of the composition thus obtained. However, to understand the actual use of the lexical tradition we need to complete the circle and go back to the physical objects upon which this tradition came down to us. We need to understand why and in what context the text was put into writing. The use of lexical compositions is not a matter of mere speculation. We have first-hand evidence in the actual tablets on which contemporaries copied them. These tablets prove to be exercise tablets, used in the scribal school. Our question will lead us, therefore, to the organization and identity of Old Babylonian education. What can the tablets tell us about the Old Babylonian school, about its methods and the subjects taught? What kind of education is represented by the corpus of school tablets? What did the Old Babylonian teacher try to convey when he instructed his pupils to copy a lexical extract? Mesopotamian lexical texts are usually described as Mesopotamian science. Is this description correct, and what does it mean in the context of the scribal school? The answers to such questions are not found by minute investigations of small details alone. Nor are they revealed by merely sketching the broad outlines of the curriculum or the compositions involved. It is only from a combination of both approaches that a picture emerges which may profitably be interpreted by means of models developed in the social sciences.

I have selected as the focus of my research the Old Babylonian list of trees and wooden objects from Nippur. The concentration on this particular list is inspired by two considerations. In the first place the Old Babylonian period represents a new beginning in the history of the lexical tradition. There is a clear break in the lexical tradition between the end of the third and the beginning of the second millennium. The new tradition that was created has an unbroken transmission until the end of cuneiform civilization. It has been customary in Assyriological publications to label the Old Babylonian versions as 'forerunners' of their first millennium counterparts¹⁴. In the Old Babylonian period thematic lists are always unilingual Sumerian. Implicitly this format is conceived of as an imperfect preliminary stage of the impressive first millennium Sumerian-Babylonian dictionary. The form and function of the Old Babylonian text has, therefore, only occasionally been the object of serious reflection. Due to this perspective, Old Babylonian texts have been edited in *MSL* according to the tablet division in their first millennium counterparts. Thus the edition of the late list of domestic animals is followed by the edition of the corresponding Old Babylonian list (*MSL* 8/1). This obscures the fact that in Old Babylonian Nippur the list of domestic animals represents only the first section of a text that continued with wild animals and meat cuts (see §2.4.1.2). From an Old Babylonian perspective the first millennium versions appear as late descendants, sometimes as deformations of an original creation of the Old Babylonian scribes. Taking a point of departure in this period promises to provide a fresh look at the history of the lexical tradition. The second reason to concentrate on the Old Babylonian list of trees and wooden objects is that this composition has remained unpublished so far. Making an edition of this list is a direct way of becoming familiar with the corpus and its problems.

¹⁴ For a critical discussion of the term 'forerunner' see Farber 1993. Curiously, the only text type for which he finds the term justified is the Old Babylonian lexical list.

The intention of this study is to combine a variety of approaches and questions, to understand the organization, use, and function of a single lexical composition as an example of the lexical tradition in Mesopotamia. In order to understand the Old Babylonian lists of trees and wooden objects we will broaden our scope to the scribal school. We will locate the list in the scribal curriculum, and define its function among other exercises. At the same time we will narrow our scope to the individual tablets on which the composition is found. The educational unit in the school is not in the first place the lexical composition but the extract tablet. The relation between extract and composition will be one of the main points of interest. Variants found in the individual tablets will have the status of major witnesses.

This approach has not been attempted before, and poses a number of new or relatively new methodological problems. In the first place the focus on the tablet rather than on the reconstructed text seems to be contradicted by the effort put into the reconstruction of the list of trees and wooden objects in Chapter 5. In fact, such a reconstruction is inevitable. Unlike most Medieval or classical Greek and Roman compositions, we never have a single manuscript which may be regarded as the 'best' manuscript by whatever criterion, and which can be used as the main text. Most of our manuscripts were inscribed with no more than an extract of 2, 10, or 150 lines. Moreover, all or nearly all of them are broken; a small fragment is usually all that remains. It is a matter of practical necessity to reconstruct a composite text from the shattered fragments. This is often the only way that fragmented or half-erased tablets become legible. The methodological focus on the tablet rather than on the reconstructed text must not be taken to imply that each tablet has to be studied as an isolated piece of evidence. Furthermore, the reconstructed text has an important function as a frame of reference. An extract is always an extract from something, and implicitly refers to the entire composition from which it is taken. In our discussion of the organization of the list of trees and wooden objects the point of departure is the composite text. However, wherever variants are encountered the evidence is traced back to the individual tablets. For this approach the edition has to comply with specific requirements. It must be possible to examine the reconstructed text as easily as the individual tablets. The methodological questions concerned and the editorial techniques used are discussed in more detail in the introduction to the edition in Chapter 5.

The second methodological problem is inherent to the matter of the representativeness or non-representativeness of the list of trees and wooden objects. In analyzing the organization of this list, do we learn anything about other Old Babylonian lexical compositions? The organization of the list is uncovered by analyzing sequences, and by identifying the principles that govern such sequences. If, however, the principles identified turn out to be specific for this single list, their existence as principles may well be doubted. They may be due to sheer chance. As a matter of fact this possibility can never be completely excluded. The problem of representativeness cannot be definitely solved. It may be accounted for, however, by referring to other lexical compositions whenever relevant. It turns out that the list of trees and wooden objects is representative in some aspects, but not in all. It differs significantly on a number of points from other contemporary lexical texts. Both the unique and the common features will be discussed, so as to obtain a differentiated picture of the Old Babylonian lexical corpus.

The third methodological problem may be summarized under the heading 'knowledge and literacy'. Our evidence for Mesopotamian society and culture is restricted to those material objects which have survived the centuries. Clay tablets with writing happen to be among such

objects in great numbers. It would be a great mistake, however, to extrapolate from these inscribed objects directly to Mesopotamian thinking or mentality. Writing is a technique that may be put to different uses. Cultures vary enormously in these uses. In Mesopotamian culture the uses of literacy vary over time and place. The totality of what is put into writing is not equivalent to the totality of the knowledge available at a given point in time. It will be necessary to analyze the reason why something was written down to understand what the relation is between a text and the culture that produced this text. To understand the intellectual background of lexical lists we need to understand the uses of literacy in the period under consideration, and how these uses apply to lexical tablets. The written corpus has a context in an intellectual environment which is in all probability much wider in content and method, and may be considerably more variegated. The term oral tradition is hardly suitable to refer to this wider circle because it not only includes compositions transmitted orally, but also ways of reasoning and interacting intellectually, which are institutionalized in the sense that they obey standardized patterns. Precisely because such matters leave little or no trace in the written documents, there is little hope of being able to reconstruct the wider intellectual environment of the lexical lists to any degree of completeness. The awareness of the limited nature of our corpus may sharpen our eyes for whatever traces the texts yield of this 'unwritten' intellectual context.

These methodological issues will be taken up again in the appropriate chapters. The relation between reconstructed text and individual tablet may be reduced in the main to a technical problem, which may be solved by technical means. The other two points, however, touch upon matters of a more principled nature and show some of the fundamental limitations to our knowledge of the past.

1.3 Structure of the Present Study

The argumentative part of this study is divided over three chapters. Chapter 2 deals with the Old Babylonian lexical tradition. The corpus is described principally as an educational corpus. The primary aim is the reconstruction of the sequence in which the scholastic compositions were taught. This reconstruction is based upon the analysis of the co-occurrence of different exercises on the same tablet. This will lead to a new picture of the scribal curriculum. The compilers of the Old Babylonian lists did not start from scratch. The description of the Old Babylonian school and its curriculum is therefore preceded by a short treatment of third millennium lexical lists. The chapter is concluded with a discussion of the transmission of the lexical corpus to later periods.

In Chapter 3 the focus will be narrowed to one lexical composition: the Old Babylonian list of trees and wooden objects from Nippur. We will investigate the organization of this list on different levels of analysis. It will turn out that some of the organizational principles identified in the Old Babylonian text are, at the same time, generative principles, governing the development of passages over time and the production of new items. The comparison of the Nippur text with later versions of the list is, therefore, an essential part of the analysis. Moreover, the relations with other lists and with literary texts are discussed. By doing so, the focus is widened again to investigate the place of the thematic lists in the Stream of Tradition.

In Chapter 4 the results of our investigations are used for a more theoretical evaluation. We will introduce the concept Science of Writing, and defend its plausibility by referring to theories on

the sociology and history of knowledge. By necessity Chapter 4 is the most speculative part of our inquiry. It tries to make sense of the data discovered by comparing them with models developed in other disciplines.

Chapter 5 provides the textual basis for our discussions. It contains an edition of the Old Babylonian lists of trees and wooden objects, with a philological commentary and a tablet catalogue. The Nippur version constitutes the core of this edition. A number of non-Nippur tablets are edited separately. The reconstruction of the Nippur version is based upon more than 350 tablets and fragments mainly from the museums in Philadelphia, Jena, and Chicago, nearly all of which have been examined by autopsy. These fragments allow for an almost complete reconstruction of the roughly 700 lines of the list. As argued above the reconstruction is a modern reconstruction which does not and cannot truly reflect a text that existed in antiquity. It is, therefore, of prime importance to be able to switch from the reconstruction to a single tablet, and *vice versa*. For that reason the edition is also provided in a digitalized version, in the form of a database. In the database the text may be approached in different ways, simply by changing the active index.

Chapter 5 is followed by two appendices. The more important of these is the description of the Catalogue of Nippur Lexical Texts in Appendix 1. This catalogue is the main corpus of data on which the description of the Old Babylonian curriculum is built, and is therefore of prime importance to the argument in Chapter 2. Appendix 1 describes the contents of this database, and gives an impression of its reliability and its relative completeness. Appendix 2 contains two concordances of the sigla used in this study (museum number - siglum and previous publication - siglum). The study concludes with a number of plates with handcopies of some of the cuneiform tablets edited in Chapter 5.