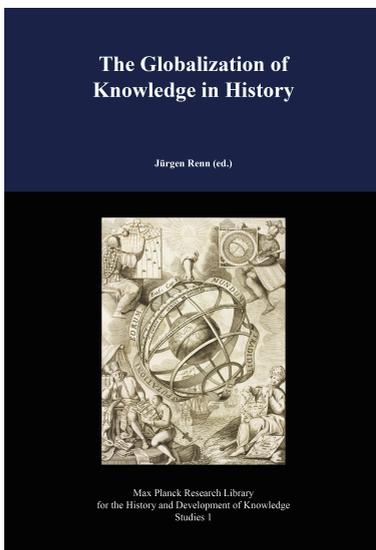


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## Studies 1

*Eva Cancik-Kirschbaum:*

Writing, Language and Textuality: Conditions for the Transmission of Knowledge in the Ancient Near East



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## Chapter 5

# Writing, Language and Textuality: Conditions for the Transmission of Knowledge in the Ancient Near East

*Eva Cancik-Kirschbaum*

### 5.1 Introduction

Among the means of symbolic representation writing is a relatively late achievement in the history of mankind.<sup>1</sup> Its direct and indirect relations to knowledge are beyond doubt. But especially with regard to the principal cultural manifestations of knowledge—namely forms, representational structures, transfer processes and their societal implementation—the prominent place of writing is manifest: bound to knowledge, writing may come to play a role in nearly all dimensions of social life. In order to analyze this situation the concept of *Kulturtechnik*<sup>2</sup> may prove useful as it refers not only to the language-related aspects of notational systems, but also to the diagrammatic, iconic, and operative features of the textual artifact. Of particular interest is the role of writing in the *transmission of knowledge*, not only as a recurring field of application in all the dimensions named above, but also in terms of *langue* (in the double sense of *langue* and *parole*) as subject to and object of *writing* within the processes involved.

In the context of this paper some of the effects and consequences of notational systems as *Kulturtechnik* are looked at against the historical background of the Ancient Near East—well known as the realm of the cuneiform script as well as the cradle of the alphabetic writing systems.<sup>3</sup> In the following, I adopt a broader perspective in the hope of contributing to questions such as: What terms and concepts are useful in evaluating the role of writing for the emergence and development, production and accumulation, diffusion and concealment, detachment

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<sup>1</sup>This chapter has benefited from the critical comments of P. Damerow, M. Hyman, J.C. Johnson, M. Krebernik and G. Selz.

<sup>2</sup>The notions of the term *Kulturtechnik* adopted here are based on a concept, which guides the research of the Hermann von Helmholtz-Zentrum für Kulturtechnik at Humboldt-University, Berlin, especially the DFG-funded research-group “Bild – Schrift – Zahl” (2001–2007). See (Krämer and Bredekamp 2003), esp. the introduction; furthermore (Grube et al. 2005).

<sup>3</sup>A sound overview of the repeated incidences of invention can be found in (Houston 2004), for general information, see (Raible 1991b). For an interesting new empirical wrinkle vis-à-vis the early transmission toward the Eastern Aegean, see (DeVries 2007, 96–98); the date of transmission is discussed controversially in (Sass 2005).

and re-implementation, destruction and loss of knowledge? How can the process of “text-artifactualization” be related to the process of globalization of knowledge?<sup>4</sup>

Since the beginning of the Neolithic the vast landmass situated at the intersection of Africa, Asia and Europe has seen important cultural innovations, such as agriculture and the domestication of animals, settled communities, long-distance trade, urban life, and the early state. Among the many technologies would constantly transform these societies, from the simplest to the most complex crafts, the invention of several systems of graphic and/or object-based mnemonic devices, which allowed for depersonalized communication, led to the invention of a notational system. Toward the end of the fourth millennium BCE the successful conception and implementation of a coherent writing system, a script, can be observed. The technique first used was incising; later a reed-stylus was impressed into tablet-shaped pieces of moist clay. Due to the nail-shaped impressions characteristic of the later phases of this writing system, the term cunei-form (from Neo-Latin *cuneus*) was coined in eighteenth-century Europe.

Initially this system reproduced with a limited set of signs *clusters of information*, namely the primary significant of the message (not the actual speech-act) to be conveyed. Over time it underwent a process of controlled intrinsic (internal) extension and modification, aimed at adapting the tool to the ever-changing needs of different cultures and societies. Parameters such as ergonomics, the avoidance of ambiguity and velocity, among others, must have played an important role in this process. Whereas these parameters are difficult to assess, another parameter’s consequences were more straightforward: “phonetization,”<sup>5</sup> a term referring to the moulding of the writing system to better reproduce the elements of speech, led to substantial changes in the structure of the notational system. The quantity and the quality of written records multiplied, allowing for broader patterns with regard to form and content. The cuneiform script was adapted to various linguistic contexts, as ethnically heterogeneous cultures with their different languages made use of the writing system. This not only resulted in the diffusion of a useful technical tool and the further development of its structural and functional components, but also allowed for the controlled (and often not so controlled) diffusion, dissemination, detachment, and reimplementation of knowledge stored in writing. Thus knowledge could be detached from its original context and travel in space

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<sup>4</sup>The term “globalization” does not lend itself easily to premodern societies and early civilizations. However, the notion of “global” is relative, to be looked at under the particular emic perspective of a given society. Thus the kings of Sumer and Akkad assumed the titles “king of wholeness, king of the four quarters of the world,” emphasizing their sovereignty as “global.” Moreover, if related to this “scaled globality” the conditions in the Ancient Near East meet in a correspondingly scaled modification the definition in Blossfeld and Hofmeister (2006, 8): “We define globalization by four interrelated structural shifts: (1) the internationalization of markets in terms of labor, capital and goods and decline of national borders (2) intensified competition through deregulation, privatization and liberalization (3) accelerated spread of networks and knowledge via new communication and information (4) the rising importance of world markets and their increasing dependency on random shocks.”

<sup>5</sup>For a critical view, cf. (Whittaker 2001).

and time encoded in a particular means, namely writing. However, it must not be forgotten that encoding has its counterpart in decoding. Access to knowledge stored in writing requires a host of techniques for unpacking its content: apart from physical access, which might be limited to elites, initiates, and the like, these would include first of all reading, but also the mastering of language and terminology. And last but not least the general conditions of historical contingency are a major aspect of writing. Writing systems are part of a given cultural continuum. Societal and institutional derivatives such as literacy and education, as well as their epistemological consequences, for example, the differentiation of knowledge and the formation of scientific activities, are to be seen as closely related phenomena.

## 5.2 Writing, Language, and *Kulturtechnik*

From a present-day perspective the impact of writing on the history of knowledge seems fairly obvious: literacy is considered a basic feature of modern knowledge-based society. Indeed, the degree of alphabetization within a given society defines a meaningful parameter regard to its prospects for future development. In the sciences an important segment of knowledge relies heavily on written records and documentation. And, last but not least, writing has come to serve as a powerful paper-tool, see, for example, chemical formula. However, at the same time, the end of an era has been announced; the Gutenberg-galaxy is fading away due to the accelerated growth of integrated means communication, as for example, the IT-based technologies. These new technologies are not only dependent to a high degree upon writing as a tool, but also the complex nature of the epistemological technique encoded in the mechanics (and the grammar) of *writing*, which, together with other techniques, enabled their very development. The transformation of an old-fashioned tool and its derivatives into these new forms and media will undoubtedly affect the nature of *writing*, but the extent of this transformation on *writing* itself remains an open question. Yet the characteristic ambiguity of *writing*, its Janus-nature, namely as both “means” and “media” at the same time, has been part of its history from the very beginning.

Within Mediterranean antiquity and even beyond, two more-or-less opposed attitudes toward writing and literacy can be observed. “Language” as well as “writing” have each been a subject of interest in the Greek tradition, for example, mirrored in an extensive philosophical, grammatical, and linguistic discourse (Frede and Inwood 2005). On the one hand, writing is often depicted as a divine gift of dubious value, leading to the degeneration of mind and brain. On the other hand, it is considered an instrument of power, access to which was restricted to few and its use highly esteemed. These at first glance competing assumptions interact in the concept of writing, enabling the representation of speech. The high value of the spoken word, its creative, and even magical force is fused with the binding force of the written word. In terms of a one-to-one relation of *phonê* “sound” and

*graphê* “symbol,” script came to be understood primarily as a *representation* of the spoken utterance, a vehicle or container for speech. This emphasis on the language-related attitudes toward writing, as seen in the Greek tradition, reflects to a certain extent one of the most prominent discourses on writing and its use (Villers 2005).<sup>6</sup> Due most probably to the impact of the (partly misunderstood) Aristotelian legacy on European grammatological thought, this particular strategy of certain writing systems, namely the transcription of *speech*, has been given particular attention (Trabant 2006). Together with the no less influential assumption of a superior position for alphabetic writing as developed in rabbinic as well as in Christian religious thought, a general tendency toward a phonocentric as well as alphabetocentric bias characterizes European attitudes toward writing systems in general (Busi 2001; Bandt 2007).

Another assumption, which has had a strong influence on the analytic perspective adopted in most investigations of writing, is the idea that literacy is closely linked to cultural evolution in one form or another.<sup>7</sup> This notion can also be traced back not only to classical antiquity, but even beyond, becoming an increasingly attractive model since the eighteenth century. For instance, Rousseau claimed in his *Essay on the Origin of Language* that the three main stages of human evolution are paralleled in the evolution of writing systems:

These three ways of writing [i.e. logographic, syllabic, alphabetic, ECK] correspond almost exactly to three different stages according to which one can consider men gathered into nation. The depicting of objects is appropriate to a savage people; signs of words and of propositions, to a barbaric people, and the alphabet to civilized people. (Rousseau 1966, 17)

The claimed relation between literacy and culture has led to a vast literature, with the primacy of the alphabet (particularly in terms of its supposedly Greek origin) as a major focus.<sup>8</sup> The consequences of this model did lead to some interesting hypotheses: not only has alphabetic literacy been credited with the genesis of

<sup>6</sup>With regards to the overall success of the technique, this aspect of writing is certainly of utmost relevance. Indeed, linguistic knowledge as most relevant for the creation of a writing system as such is perhaps the earliest form of systematically, but indirectly encoded, knowledge. This holds especially true with regard to early forms of linguistic thought, which become visible in the organizational mode of writing systems (Cavigneaux 1989). A typical feature is, for example, the systematics of sign encoding: primary objects (such as animals, goods, and so forth), actions (encoded in verbs such as “to deliver”) and actors (names, titles, functions) vs. less relevant parameters such as modality or aspect. For a (debated) systematic approach as regards Egyptian hieroglyphs, see (Goldwasser 1995).

<sup>7</sup>Examples given typically relate to the East Asian and European traditions, but similar concepts can be found in other cultural contexts.

<sup>8</sup>See (Diringer 1948; Gelb 1963, 201; Havelock 1982, 11). The effects and outcomes of other successful solutions in the history of writing were generally left aside, or judged to be incomplete forerunners or precursors. With regard to the history of Ancient Near Eastern writing systems, see (Michalowski 1990, 57–59; Cancik-Kirschbaum 2005, 2006; Cancik-Kirschbaum and Chambon 2006); see also (Cancik-Kirschbaum and Chambon forthcoming).

democracy, it has been argued that the advancement of modern scientific thought is a particular result of the alphabetic mode.<sup>9</sup> Last but not least, writing and literacy have played a central role in twentieth-century theories, explaining social and cultural change as either linked to cognitive attitude and mentality<sup>10</sup> or to the evolution in technologies of communication<sup>11</sup>. These ideas have certainly stimulated a great deal of discussion, but they have also been subject to particularly detailed and heavy criticism (Halverson 1992).<sup>12</sup> Thus, occidental alphabetocentrism has not only prejudiced theories of language and culture in the past, it continues to leave its stamp on the philosophy of language and on the archaeology of media, even when systematic research in non-European writing systems clearly points to approaches that recognize the internal principles of each kind of writing system rather than fitting them into a single evolutionary sequence.<sup>13</sup>

Meanwhile the rather limited perception of writing as a system confined to the encoding of phonological strings<sup>14</sup> is intensively discussed and a significantly broader perspective on the relation(s) between speech and writing has been developed. The rather narrow analytical framework of earlier investigations, focusing mainly on encoding (rather than decoding) has been significantly enlarged by shifting focus to the aspect of “reading” as an important, or even the most significant access to the parameters governing writing systems of all kinds (Olson 1996). David R. Olson summarizes these outcomes as follows:

First, writing is not the transcription of speech but rather provides a conceptual model for that speech. [...] Second, the history of scripts is not, contrary to the common view, the history of failed attempts and partial successes toward the invention of the alphabet, but rather the by-product of attempts to use a script for a language for which it is ill suited. Third, the models of language provided by our scripts are both what is acquired in the process of learning to read and write and what is employed in thinking about language; writing is in principle metalinguistics.<sup>15</sup>

I will be returning to the issue of metalinguistics and later, primarily in terms of text as a model for language.<sup>16</sup>

The perspective that Olson and others have adopted here was reinforced when the semantic range of the term “writing” itself came under discussion. The so-called non-linguistic, second-order aspects have been recognized as central to the

<sup>9</sup>With varying shifts of emphasis, among others, (McLuhan 1962; Goody and Watt 1963; Havelock 1976, 1982; Ong 1982; Goody 1986; Halverson 1992).

<sup>10</sup>Such as (Lévy-Bruhl 1923; Lloyd 1983; Tambiah 1990).

<sup>11</sup>See (Innis 1950; McLuhan 1962; Havelock 1982).

<sup>12</sup>A sound overview is given in (Olson 1996, chap. 3).

<sup>13</sup>See (DeFrancis 1989; Harris 1989; Koch and Oesterreicher 1996; Olson 1996; Petterson 1996; Krämer 1997; Stetter 1997; Mersch 2000, 2002).

<sup>14</sup>See, for example, (Gaur 1987; Harris 1989).

<sup>15</sup>See (Olson 1996, 89); see furthermore (Herriman 1986; Astington and Olson 1990).

<sup>16</sup>See further (Selz 2000).

operative potential of writing. Consequently language-neutral and iconographic aspects have complemented the language-based concept of writing. Aesthetic and perceptual aspects came into focus. The capability of (any) writing system to record speech more or less adequately is but one perspective to be looked at. In addition to transcribing speech, several other aspects of writing systems can be delineated as follows: (1) The iconicity of writing, namely techniques of displaying information in the form of graphs, diagrams, tables, that is, the foremost visual level of written communication that extends largely beyond verbalized narrative. (2) As a more general (but not identical) category here the textual layout as such has to be taken into account. Within the facture (the elements of external formal appearance) of a given text a particular type of information is encoded, which partly coincides with the content of written text, and partly supersedes it. As an example, just compare from this perspective a bilingual dictionary with the instructions manual for an electronic device. As regards the operating principles, the dictionary gives a horizontal layer (translating a lexeme from one language into the other language) and a vertical layer (e.g., multiple semantic contexts). Referentiality is mainly intrinsic, that is, within the dictionary, one term has one (or multiple) equivalent(s). Yet the instructions refer directly to the device, its operating mode is principally unidimensional (except perhaps for special cases), referentiality is mainly extrinsic, that is, from the text toward the external device. (3) The *dynamics* is not only inherent in the textual content itself, but actually evident by the use of writing as such. These so-called operative potentials come into being if the text provokes a reaction and stimulates new insights (Gramelsberger 2001). In a more indirect form, they are active when, for example, *writing* serves as a model to describe or understand formerly unrelated phenomena, for example, when writing is used as a metaphor to explain the patterns of the heavenly bodies (“celestial writing”), or when divination is perceived as a communicative system operating with a scriptural terminology, for instance, the gods writing in the liver of the sacrificial animal (Cancik-Kirschbaum 2005). At one (unknown) moment Mesopotamian scholars were even aware of the hermeneutic potentials of writing: the shape of a cuneiform sign (sign-iconsim) was loaded with meaning relating to its denotational reference. In its most elaborate form, this theory gave access to universal understanding: world and cosmos became represented in writing, thus knowing how to “read” the signs meant being able to decode the universe.<sup>17</sup>

The overall configuration of these aspects suggests a notion of *writing* that allows for a multi-perspectival profile, that is, a profile not restricted to the usual interpretation of writing as just another denotationally specified format for the phonological components of language. Although the aspect of *turning written* (viz. the totality of parameters and conditions, which interfere in the process of transforming phonetic articulation into another medium, namely graphic articulation, the term *entextualization* (Silverstein and Urban 1996) covers part of this phenomenon) is of particular importance within the historical and epistemo-

<sup>17</sup>See (Maul 1999); further on the role of sign-shapes and understanding, see (Finkel 2010).

logical process under discussion, it is complemented by other aspects of similar significance. To cover these different perspectives, the term *Kulturtechnik* is used here, as it encompasses all features that add to the specific profile of writing, and consequently to our understanding of its role within the globalization of knowledge. Other ways of documenting and transmitting knowledge are covered by this term too: paper tools (e.g., chemical formula), geometrical representations, sketches, diagrams, maps, mathematical and logical symbols, and so forth. Moreover, *Kulturtechnik* is not limited to writing, but also encompasses purely iconic systems, such as images, as well as numerical systems.<sup>18</sup> Consequently writing is to be understood within the concept of *Kulturtechnik* as the systematic handling of symbolic representational systems.<sup>19</sup>

The invention or introduction of writing is to be regarded as a response to societal needs and developments, such as (bureaucratic) control, the need for calculation, prestige, ceremony, and representation, to mention some of the most evident stimulators.<sup>20</sup> The (historically discernible) solutions to meet these needs are characterized by varying strategies of problem solving, depending on the preconditions and the setting of such a process (Ehlich 1980). The consequences of the implementation of a sophisticated means of graphic communication clearly differ according to the given historical, societal, and cultural circumstances. A *scriptural turn* which leads to the invention and establishment of a pristine writing system will differ from subsequent transformations and modifications of the particular system adopted by a previously non-literate society. The term *Kulturtechnik* underlines the anthropological (cultural) nature of writing. The installation of writing in a society is a conscious act, thus biological metaphors such as “genesis,” “emergence,” and the like are less helpful.

On the contrary, although the discovery of some of its principal elements (representation as the most important) might have occurred accidentally, its constitution as a system is always the consequence of intentional coordination. This holds true not only for *de novo* scripts, but also for the introduction of (newly invented or existing) scripts within a given society. (Cancik-Kirschbaum and Johnson forthcoming)

At the same time writing incorporates a potentially creative force, insofar as it can take on a leading role in the creation or internal development of cultural segments (or subsystems), such as religion, law, politics, economics, and so forth. But one must bear in mind, at the same time, that once writing has determined

<sup>18</sup>Difficulties arise with the metaphorical use of “writing” as, for example, with “genome sequences (and the relevant terminology (transcriptase ...))” and other fields).

<sup>19</sup>The acknowledgment of both the linguistic-discursive *and* the iconic-operative aspects of writing has considerable consequences as regards the analysis of the genesis of writing systems (Cancik-Kirschbaum 2012).

<sup>20</sup>See (Postgate et al. 1995; Morenz 2004).

parts or even the entirety of these social spheres, other traditions will have been transformed, suppressed, or even forgotten. That is to say, the creative process associated with the implementation of a written tradition is inevitably linked to process of selection with regard to the existing repertoire of knowledge.

### 5.3 Writing and Textuality: Different Levels of Representation of Knowledge

In the Ancient Near East, writing as a means of graphic communication originates within the sphere of bureaucracy and economic administration.<sup>21</sup> It is a society of increasing complexity that not only determines the field(s) of application of the new technology, but also provides for its institutional setting.<sup>22</sup> Graphic and pseudographic recording systems, precursors to writing, emerge in Mesopotamia during the late fourth millennium. The creative force of this invention was not immediately visible, as it was embedded in a wide range of innovations, stimulated by the needs and settings of a complex society. These first samples of early systems of graphic communication were neither without functional parallels nor were they designed as autonomous, self-explanatory devices. They were constituted within a sophisticated repertoire of externalizing tools, practices, mnemonic devices, and communicative techniques, for example, the use of seals conveying hierarchically sequenced information, clay as a medium (in the literal sense of the term),<sup>23</sup> or the “trace” (of a reed, a finger-imprint on any object, even textiles) as a record of processes of en- and decoding. As graphic manifestations these systems relate to iconography; as regards the serialization of concrete information they parallel numerical notation. In Michalowski’s words:

Seals, potters’ marks, painting and craft ornamentation, tokens, bullae, numerical tablets, and other designs – these must be seen as parallel systems of communication. (Michalowski 1990, 59)

Multiple technical and conceptual stimuli—some of which certainly elude us—seem to coincide in the formation of a new *Kulturtechnik*, viz. *writing*. How exactly these converge into the elaborated system that shows up toward the end of the fourth millennium remains open to speculation. But, as the term *Kulturtechnik* also indicates, we have to allow not only for *stimuli* and *development*, but also for experiment, error, invention, and systematic elaboration.

Early Mesopotamia and its adjacent regions furnish detailed, although evidence of the pristine establishment of several writing systems. The process of

<sup>21</sup>It goes without saying that this special field is itself part of and was shaped according to the outlines of its supporting cultural background, by its perception of the world and its governing principles, see (Selz 2000, 171).

<sup>22</sup>See (Nissen et al. 1993; Englund 1998; Damerow 1999; Selz 2000; Krebernik 2002; Glassner 2003; Damerow 2007).

<sup>23</sup>For calculation, see chapter 6.

adapting writing systems to particular languages has repeatedly taken place between the third and the first millennium BCE, as various civilizations adopted the cuneiform so as to enable record keeping in their own language. And last but not least several entirely new, formally and typologically different systems of writing were conceived:

1. Alphabetic script: attested in its earliest examples in the eighteenth century at the Western periphery of the cuneiform-based societies and strongly influenced by the Egyptian writing tradition. It occurs in not only linear (letter-based) applications, but also in two cuneiform modifications (namely Ugaritic cuneiform in the fourteenth century, and Old Persian cuneiform in the sixth century).<sup>24</sup> Interestingly enough for Old Persian the “moment of invention” is attested in a contemporary royal inscription that reads: “And Darius, the king, says: By Uramasdas favor, I made this inscription otherwise, in ‘Aryan,’ which did not exist before, on clay-tablet, as well as on leather.”<sup>25</sup> “Aryan” is the language of the Old-Persian script.
2. Glyphic script: used in Anatolia from the fifteenth century onwards to encode the Luwian language in a mixed system with syllabic and logographic components. It is attested mostly in representative monumental inscriptions in stone, but also in seal-inscriptions and on lead strips.

The actual history of all these different writing systems—whether cuneiform, linear, or hieroglyphic—can be taken one representation of the globalization of knowledge, namely knowing “how to write.” Indirectly they are linked to metalinguistics, as they are all examples of a more-or-less efficient link between language and a completely different representational system.

The process of *transmission* takes on a special nuance if seen within the vital sphere of cultural contact. The transfer of a writing system together with its didactic material on the one hand, and the transformation of the system in order to adapt it to the concrete needs of the receiving community on the other hand, fostered an awareness of linguistics and grammatical thought. These became explicit not only in translation (bilingual and trilingual versions of a text), but also in the use of vocabularies (up to four languages!) and bilingual lexical lists. Early attestations of this use can be seen in twenty-fourth-century Ebla in northwestern Syria, and it is certainly not an accident that this takes place at the periphery of the heartland of cuneiform, Mesopotamia. The transmission of the cuneiform writing system and its subsequent grammatological adaption to a new linguistic context has taken place several times during the history of cuneiform writing.<sup>26</sup> A particular phenomenon within the multilingual and multiscriptural continuum of Ancient Near Eastern societies is *alloglottography*: a text is written

<sup>24</sup>The so-called alphabetic technique co-existed with the traditional systems of writing and finally replaced them.

<sup>25</sup>Translation, see (Rubio 2006, 38–39).

<sup>26</sup>Cf. for example, (van Soldt 2010).



Figure 5.1: Assyrian scribe writing Akkadian in cuneiform script on a clay tablet next to an Assyrian scribe writing Aramaic in alphabetic script on a piece of papyrus or leather (pergament). Reconstruction of a Wall Painting from Til Barsip, eighth century BC, Louvre. (Photo Florentina Geller)

(down) in a language different from the language in which it was originally uttered and/or in which it is intended to be read. The translational process involved is immediately linked to the level of writing and based on a deep knowledge of the interdependences of language(s) and writing system(s). This principle may first be observed when the first (known) transfer-process of the cuneiform writing system took place, from Sumerian to Akkadian: as a self-conscious process this system has been reconstructed for the trilingual inscriptions of the Achaemenid kings of Persia (Rubio 2006).

Looking at the various languages transmitted via the practice of writing, we must bear in mind that not only written language and spoken language have left their traces, but also the degree to which a writing system as such is bound to render the internal and external linguistic features of a given language. Thus writing systems differ considerably with regard to the implementation into (or

of) the grammatical system of the languages they convey—on the phonological, morphological, and syntactical level (Eisenberg 1989). This applies differently to the different types of writing systems. Grammatical and orthographic depth is an explicitly language-orientated characteristic of writing systems. The term “depth” relates to the third dimension of writing—besides the two dimensions of the written surface and the extension of textual record on the surface. This third dimension takes up the vital process of permanent change as a typical feature of living languages. Under certain conditions, these changes are made visible in the writing systems, for instance, by means of changing orthographic habits.<sup>27</sup> This holds especially true for the moments where the cuneiform system was adapted to another linguistic context, such as written Akkadian, a Semitic language with the sign system used for Sumerian (a language of unknown linguistic affiliation), written Hittite, an Indoeuropean language with the sign system used for Akkadian, and so on. The difficulties in adapting a writing system to any other language are not easily overcome: the set of graphemes must be made to correlate with the respective sound inventories; the morphological structures and regularities of individual languages are more or less smoothly harmonized with the possibilities of a logo-syllabographic sign system. But it is exactly this difference, this *formal dissimilarity* (they are “aligned” through functional similarities, but the formal incompatibilities must still be overcome) between the giving and the receiving part that becomes productive in the Near Eastern history of writing. Lacking contemporary (past) theoretical discourses about the phenomenon, the history of those translation processes may be studied only indirectly, namely through the changing patterns of the cuneiform scripts. These changes turn out to be an archive of the difficulties, of the—successful and sometimes unsuccessful—attempted solutions to the formal dissimilarities between the two systems. Thus, for example, in order to render Akkadian adequately, the receiving writing system had to elaborate its phonographic capacities (Greenstein 1984). The grammatological features linked to orthographic depth also make the coexistence and overlay of languages visible, as is the case with Aramaic and Akkadian during the first millennium: here particular features of spoken Aramaic leave their traces in the writing of Akkadian in cuneiform (Streck 2001).

Once writing has been installed as a system of recording, following orthographic norms and conventions, the adaptation to the manifold chaos of language and speech-act is obviously achieved by direct usage. As to the incentives that

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<sup>27</sup>So, for instance, morphematic (that is, focusing on the semantic identity of a word) writing conventions in alphabetical or syllabic systems will heavily influence phonetic adequacy. The recent orthographic reform of German, for example, made use of that principle. For instance, the word for the stem of a plant used to be spelled STENGEL, but this has been changed to STÄNGEL to clearly designate its etymological derivation form “STANGE” (tiny pole). But the phonetic reality is that we all articulate the |e| rather than the |ä|. On the other hand, syllabic or phonographic renderings of originally morphophonemically structured writings (typically, logograms, one word = one sign) may considerably hinder the process of perceptive understanding.

may at first have stimulated this widening of the primary disposition of the recording system one can only speculate. To an important degree, they are based on conditions that have been observed for such processes leading to expanded use in later epochs:

1. particular demands on the recording of proper names (personal names, place names)
2. of terms and designations in a foreign language
3. a widening of the sphere in which writing is used, that is, a widening of the circle of users as well as of specific contexts of usage (literature!)
4. the presence of several languages side by side as a phenomenon of limited “processes of globalization”
5. the elimination of ambiguities and orthographies prone to misunderstanding.

Be this as it may, in Mesopotamia the implementation of new “manners of writing” is evidently regulated by the alternate play of availability and need. This process led to a situation, masterfully described by Piotr Michalowski:

The early history of cuneiform might be characterized as one of an uneasy adaptation of an autonomous communication system to accommodate natural language. By the middle of the third millennium the new system was capable of representing full utterances, but it was still something of a mnemonic device to the extent that no attempt was made to represent with precision all aspects of language. Only kernel elements were noted, and these were not inscribed in the order in which they were read. Thus a verb, which in later writing might have numerous affixes, would only carry one or two prefixes. The reader was expected to provide the missing elements and to unscramble the signs into their proper sequence. The graphic elements needed for fairly accurate phonological representation of Sumerian language were all in place, [...] but that was not the goal of the recording system. (Michalowski 1994, 25)

By the second quarter of the third millennium, this process seems to have reached a certain optimum: the proportion of logographic and phonetic-syllabographic graphemes becomes stable. Even “frozen” ways of writing begin to appear, that is, ways of writing in which a convention of writing stands in opposition to the phonetic reality. While Sumerian texts are mostly rendered in a morpheme- and word-centered manner, in second-millennium documents we find also syllabographic renderings—thus a “syllabic orthography” existed. But, as Cooper puts it:

Despite the obvious capability to write texts entirely phonetically [...] the resistance to a purely phonetic orthography which would have greatly simplified these writing systems suggests that certain ideological biases in favour of traditional logophonetic writing were working

against Gelb's 'principle of economy aiming at the expression of linguistic forms by the smallest possible number of signs.' (Cooper 2004, 91)

An interesting situation arises toward the end of the cuneiform cultures, more precisely, in Hellenistic times. For centuries past, Aramaic had competed with Akkadian as the major language for social interaction and administration. In everyday life, the Aramaic alphabetic script was used increasingly for documentation in cuneiform. Depending on the region and the socio-political situation, this process of superposition and substitution varied in intensity and speed. However, cuneiform script was more and more restricted to monumental-representative and to scholarly contexts. The process was hastened by the final collapse of the last great empires of the Ancient Near East in the seventh and sixth centuries as well as the Macedonian conquests in the fourth century BCE. It is true that in the big institutions of the southern cities, up until the first century CE, cuneiform continued to be written down. But the loss of the corresponding abilities and thereby the loss of the observations, practices, and items of knowledge laid down in cuneiform was an imminent threat. Though expertise in cuneiform shows up even in Late Antiquity, the latest cuneiform texts known today date to the end of the first century CE. The fading of the cuneiform script marks the end of a long-lasting process, which was most probably triggered by the creation of alphabetic systems in the eighteenth century BCE and accelerated by socio-political developments in the following centuries.

But there was at least one interesting attempt at a transfer of the cuneiform materials into a different writing system in order to maintain access to certain aspects of the cuneiform tradition. The so-called Graeco-Babylonica are a case in point.<sup>28</sup> They are documents that transcribe texts from the Sumerian and Akkadian tradition in Greek letters, that is, a *phonetic* transcription of the ancient cuneiform languages to the young Greek alphabet. The texts exhibit a relatively strict consensus on how to "transcribe" the phonetic record of Sumerian and Akkadian. In a certain sense the procedure enlarged the well-known tradition of textual bilinguism—giving a more or less convincing translation of a given (generally Sumerian) text to Akkadian—with the practice of indicating the pronunciation of signs. In this case, the transfer is not only from language into writing, but from an already "written" language, with a decisive emphasis on phonetics. What could be the aim of such an attempt if not that of overcoming the hermetic tradition of the cuneiform culture and the clusters of knowledge that were embedded within it.

Writing is closely associated with the term *text*, referring to both the outer format as such, as well as to the inner structure, the fabric, the tissue of words and meanings. But textuality and the use of writing do not principally coincide as they pertain to different descriptive systems (Ehlich 2007). *De facto* Egypt as well

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<sup>28</sup>See (Geller 1997; Westenholz 2007).

as Mesopotamia point to a multimedial textual concept, thus allowing for “texts” even in the earliest phases of writing (Morenz 2007). Protocuneiform and archaic cuneiform documents represent in fact *virtually open texts* in condensed clusters of information (Selz 2007). These “texts” are principally open with respect to the language used for their interpretation: verbalizing, paraphrasing, extending, and unfolding the given information. Several external factors may influence a “text.” There is, for instance, the question of genre, which heavily determines a text: a mythological narrative will exhibit specific features not found in a legal document. But not only the normative impact of written genre has been considered, the role of non-written traditions and their impact on written tradition in pre-modern literate societies has seen much debate.<sup>29</sup> On the other hand the fixation of speech and speech-bound texts in writing generates new and different cognitive potentials, especially if literacy is not only bound to the *communicative memory* of a society, but also relates to its *cultural memory*.<sup>30</sup> The two expressions have lately been used with reference to ancient societies, denoting the societal interest of either transferring information within society (*communicative memory*) or keeping information available (*cultural memory*). Writing pertains to both concepts, as it links the aspect of communication to both the storage and performance of information.

#### 5.4 Literacy and the Material Aspects of Writing

From what has been said, the impression may arise that writing is an autodynamic force, being at the same time a vehicle and a motor for the globalization of knowledge. This is certainly not the case. Some of the limiting factors connected to the spread of information via writing have been hinted at above. In a certain sense writing stands in opposition to the globalization of knowledge insofar as it is a technique that requires a high degree of specialization in practices that are localized in both space and time. In societies with restricted literacy, and even more so in premodern societies, this is the dominant pattern!

Another perspective, too rarely adopted, has been recently highlighted by K. Lamberg-Karlovsky. Our attitude toward the role of writing is heavily biased by the particular nature of our evidence, the textual record itself being its main object of study and source of knowing. But it should be kept in mind that, although evidence seems to suggest a high degree of acceptance for cuneiform script (and its derivatives) many peoples did in fact renounce such a take-over. This especially holds true for the initial phase of literacy in the Ancient Near East:

With the exception of a single region [...] every settlement ‘colonized’ by the literate i.e. during the so-called Uruk-expansion refused to adopt the written tablet as a communicative device. [...] All indigenous communities exposed to literacy, whether the Proto-Elamite culture on the

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<sup>29</sup>See (Wilcke 2000; Macdonald 2005).

<sup>30</sup>See (Assmann 1992; Raible 1999).

Iranian Plateau, the Uruk in northern Mesopotamia and Anatolia, or the Egyptian in the Levant, refused to assimilate and adopt the written sign as a communication device. It is perhaps difficult for us to accept that writing, a technology which we highly prize, would be self-consciously avoided. Perhaps this is why shelves of books discuss the origin, function, and nature of writing, while the apparent avoidance of becoming literate is all but ignored. (Lamberg-Karlovsky 2003, 63)

Although it may seem to be a quite difficult undertaking to estimate the degree of literacy in Ancient Near Eastern societies, some general observations may be drawn from the available evidence—differing from time to time and from region to region. Thus it can be shown that one has to account not only for a generally restricted number of *litterati*, but also within this group differing types and degrees of functional literacy.<sup>31</sup> Full comprehension of the writing system and its capabilities was limited, for the most part, to very few members of an intellectual elite. This mode of restricted literacy, that is, only a small group was able to handle the technology competently in all its details, underscores the important role of writing as a part of *Herrschaftswissen* (Pongratz-Leisten 1999). Nevertheless, even before the invention of the alphabetic mode, simplified but fully functional syllabaries allowed a much broader usage of writing. So, for instance, Old Assyrian cuneiform script (used during the nineteenth and eighteenth centuries BCE in Northern Mesopotamia and Anatolia in a primarily economic (long-distance trade) context) attests to a highly efficient variant of syllabic cuneiform: less than 100 signs were sufficient to encode speech adequately. But interestingly enough this system was not continued even though it could have been easily transferred. It is not clear whether the political situation or, for instance, ideological (prestige) motives, or even the sheer resistance of more complex, existing cuneiform writing traditions, can be held responsible for this situation. A similar case can be observed in the Early Iron Age Aegean (Sherrat 2003).

Literacy then is not a constantly growing feature of Ancient Near Eastern civilizations and thus cannot be seen as a factor enabling or even fostering the process of the globalization of knowledge. On the contrary, the level of the use of writing varies on all scales, from the micro-level of individuals to the macro-level of entire societies. The oscillation between varying degrees of literacy is well known from other historical periods, but the closest parallels to the Ancient Near Eastern situations are offered by medieval Europe. From the eleventh century onwards, for example, a close connection between new approaches to doing business and literacy can be observed: the growth of literacy is a consequence of the production and retention of records, as well as an increasingly dense network of referential uses of written record (Clanchy 1979).

But what about the consequences of a given implementation of script-based communication within a society, which to a large extent bases its system mainly

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<sup>31</sup>For a systematic approach, see (Wilcke 2000).

on forms of oral communication? How does such a *scriptural turn* influence the authority of the spoken word?<sup>32</sup>

The transition from language as sound to writing as symbol is the same as the transition from voice to text and from chief to king. There is a relationship between authorship and authority. Writing is the isolating symbol of power. It isolates the literate and the powerful from those who are illiterate. In virtually every case in which writing is invented, it is not the author but the institutional context of authorship that yields the power. Initially, wherever one finds writing, the author is anonymous – a tool of administrative power directed by a central authority. (Lamberg-Karlovsky 2003, 64–65)

Being a tool as well as a sign of power and authority, writing must—especially in premodern societies—maintain itself in opposition to competing modes of representation, transmission, authority, and so forth. It has to continually prove its societal value. Some intriguing insights concerning the economic side of the implementation of writing in a society can be gained by means of a simple modification of the central theme of Coulmas’ book on *Language and Economy* (Coulmas 1992): by substituting the word *language* with *writing* the following complexes result:

1. “Writing is an Asset”: Writing and Money in the Development of National Economics (chap. 2)
2. The Value of Writing: Factors of an Economic Profile of Writing (chap. 3)
3. Writing-related Expenditures of Government and Business (chap. 4)
4. Writing Careers: Economic Determinants of Writing Evolution (chap. 5)
5. Economy in Writing: Economic Aspects of the Writing System (chap. 6)
6. Writing Adaption: Differentiation and Integration (chap. 7)

It becomes immediately clear that the entanglement of economic interests and the role of writing are to be considered as important a factor as the globalization of knowledge, not only with regard to modern periods, but also to premodern times! Although these perspectives cannot be elaborated within this paper, I should like to point at least here to the institutional *as well as* to the institutionalized character of early writing, which not only has its bearing on obvious aspects such as the standardization of the system, but also on the content and extension of the knowledge encoded therein: the training of scribes becomes central to the formation and tradition of culturally relevant bodies of knowledge. However, at the same time, the fields of scribal engagement were thus shaped, controlled, and determined. Within their curriculum, exercises and examples not only taught the conventions of writing and of script, but also aided the formation of spheres of knowledge. These

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<sup>32</sup>The role of “materiality” with regard to early textual culture as Ancient Near Eastern societies still remains to be investigated. But the range of possible implications is illustrated, for instance, in (Gumbrecht and Pfeiffer 1988).

included operational knowledge as laid out in technical literature, recipes, and administrative documents, accumulated knowledge deriving from observation, lists, tables, productive-speculative knowledge, as in, for example, theology, astronomy, or divination, and representative knowledge, as encoded in literature or royal inscriptions. Although the wealth of written documents extant from the historical phases of Ancient Near Eastern civilizations is indeed impressive, two features must be kept in mind: (1) the use of writing was restricted and the documents are not at all representative of the diversity of cultures and societies which were part of contemporaneous history—and thus of the many levels and fields of knowledge active at that time (2) the documentation itself is characterized by a certain anonymity as regards the fields of knowledge, learning, science, and lore. Certainly, names of “authors” and of individual scholars are known (mainly from first millennium contexts), some of them can be followed over several generations, and networks of experts can be reconstructed especially in late periods in certain fields as astronomy, divination, and medicine. Thus some “careers” of scribes and scholars are nicely documented via the royal correspondence: the king requests their expertise or discusses particular problems with them. But on the whole—and this is a typical feature of the Ancient Near East—the individual scholar and expert is seen (and sees himself) as part of a general tradition; his contribution to the field may be acknowledged, if at all, in the so-called colophons. These “scribal” comments are to be found at the end of cuneiform tablets of mostly canonical texts, stating the “scribe’s” name, family, age, and the circumstances of the edition presented.<sup>33</sup>

The establishment of writing as a tool of documentation has had another direct impact on the overall organization of societies’ knowledge. The tablets written had to be stored and methods found for the systematic organization of the written record. Management of the written record was an essential activity within the sphere of administration (private or institutional) as well as within the sphere of “literature” (of all sorts). Yet the managing of records affects primarily two levels within the system: the level of textual organization and supplementary information given on the tablets, such as the above-mentioned colophons, but also the numeration of tablets within a series, dating, or giving the document particular external formats and features. These help to differentiate at first glance most of the written documents. Much more difficult is the organization of complete files or dossiers. According to the affiliation of the documents, whether private households, palaces, or temples, the function of archive or library was assigned to a single room, part of a room, or several rooms. We do know that economic and juridical documents were kept in baskets, pots (sometimes with name and/or dating), boxes, and other containers. Larger institutions and libraries stored tablets on shelves and in small niches. Sizes vary within time and context.<sup>34</sup> Although the Library of Alexandria figures as one of the most prominent libraries in the Ancient world and is often mentioned as the “prototype” for collectively stored knowledge,

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<sup>33</sup>A representative collection and overview is given in (Hunger 1968).

<sup>34</sup>See (Veenhof 1986; Pedersén 1998).

it must not be forgotten that the Ancient Near East attests to the existence of similar, but much older institutions. Not many of them have been recovered, but certainly the great “library of Assurbanipal,” the thousands of texts found in the residential area in Nineveh, or the libraries at Sippar, Nippur, or Babylon were of comparable size and importance. The organization of these huge amounts of materialized knowledge of all kinds, the conditions of accessibility and participation, the systematization of collecting and excluding texts for these institutions has not yet been extensively studied. But these materials should certainly be taken into account when analyzing the role of writing and the globalization of knowledge.

The use of writing enables the logical disciplining of thought (Stetter 1990, 279). This at first glance somewhat banal observation is easily understandable with regard to the level of content. But of no less importance is the impact of the materiality of writing on the generation of new knowledge as well as on the reorganization and redirection of existing fields. It is the scriptural mediation of thought that is inevitably linked to the external format as well as to the internal organization of a writing system. Spatiality is a particular characteristic of writing (whereas language is not spatial, but at best linear!) thus extending the possibilities of the latter. The formal criteria, the aesthetic profile of a text, the metapragmatics of writing<sup>35</sup> is a domain of knowledge in its own right, transferred within the practice of writing. Its effects can be observed not only in the development of previously unknown formats such as tables, which allow for a two-dimensional presentation of information. But also the subtle technical changes such as the shifting ergonomics of writing itself are to be taken into consideration. The morph (form), the external features of a writing system, to a certain extent directly condition its applicability, for example, with regards to the velocity of writing and reading. These relate, for example, to the possibility of multiplying texts, thus producing multiple sets of one and the same record, or making text easily available. Even the development of cursive writing styles follows from the ever increasing necessity of writing huge amounts of texts, which do not serve monumental or ceremonial purposes. Rationalization of the process of writing is often shaped by the demands of speech-related writing. On the other hand the graphic organization of written text relates to its perception. So, for instance, writing in *scriptura continua* is not only difficult for modern readers, but testifies to the tradition of reading as an oral activity (Saenger 1994). The relation between language and writing may, according to the respective system, necessitate the conveyance of secondary information, for instance, modes, stress, intonation, even the indication of word boundaries, the end of phrases, and so forth. Thus many writing systems develop diagrammatical elements to render phenomena, which are not or cannot be represented on the sign-level (graphematic) itself, such as spatial distribution to mark word-boundaries, punctuation, to mark the end of phrases or the mode of speech (exclamation! request? citation “”), or segmentation of paragraphs to mark

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<sup>35</sup>The term is prominent in anthropological linguistics, but not in grammatology, see (Silverstein 1993).

contextual boundaries (Raible 1991a); these translate semantic macrostructures of texts, as well as microstructures of a spoken situation (Frank 1993).

Besides operational knowledge transported by word of mouth or directly (and indirectly) learned by concrete observation, with the invention of writing a new quality of exchange arises. Stored in writing, the archives and libraries of the central places outside of Mesopotamia, such as Boghazkoy/Hattusas in Anatolia, Ras Shamra/Ugarit on the western periphery, and Tell al-Amarna in Egypt, give an impression of what the “exported” assemblages of knowledge contained (Pedersén 1998). As these texts—or at least some of them—were part of the curricula they represent bodies of knowledge and modes of thinking and organizing knowledge. As such they are not only subject to vertical diachronic transmission within a given society, but are also part of the horizontal (synchronic and diachronic) transmission into foreign cultural contexts.

Within the long-lasting process of the *globalization of knowledge* writing as a dynamic, yet at the same time systematically controlled *Kulturtechnik*, manifests its consequences of different levels. Generalizing the evidence gained from the situation in the Ancient Near East, the following spheres of interrelation make the role of writing evident:

1. as a media for the exchange, transfer, and storage of all sorts of knowledge
2. as a dimensional extension of cognitive facilities
3. as a shaper of thought, stimulating paths of reflection and articulation
4. as giving/limiting/excluding access to certain domains of knowledge
5. as affecting and transforming societies as a whole.

On different scales and within differing contexts they are concerned with the transmission of knowledge of any kind, whether intuitive knowledge or practitioners’ knowledge, symbolically represented knowledge, technological or scientific knowledge, or second- and higher-order knowledge.

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