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# Writing as Technology and Cultural Ecology

Explorations of the Human Mind  
at the Dawn of History



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## **Introduction:**

### **Elementary parameters in the study of ancient writing systems**

Writing is unanimously regarded as a marker of civilization in the sense of ‘civilization as high culture’. This insight has never been seriously questioned. What makes writing a marker of civilization is more than its mere function as an information technology. Those who possess writing have always been aware that, beyond the practical use of rendering ideas and words in the written code, it constitutes the realm of symbolic values that make writing an ingredient of cultural ecology.

In the ancient civilizations, the craft of writing is hailed as a blessing given to humankind by divine intervention. For instance, in Mesopotamia, the Goddess Nisaba was held in high esteem as the patron of writing and learnedness. The Sumerian scribes would add a formula to their compositions: “Nisaba be praised!” (Frymer-Kensky 1992: 40). It may seem strange at first sight that a female divinity would be the patron of writing in a region where this craft started out as an instrument of state bureaucracy and taxation (Schmandt-Besserat 1992). And yet, in early Mesopotamian civilization as well, the use of the Sumerian script in religious functions forms a firm part of the urban communities of the city states as a domain of literacy in its own right.

Writing was also conceptualized as a divine gift in ancient Egypt. “Egyptian hieroglyphs were said to be the brainchild of the god Thoth” (Beard 2004: 137). The spirit world of the ancient Egyptians and of those who shaped the fabric of other ancient civilizations was imbued with beliefs in the magical powers of script signs and sacred texts. In some cultures, the institution of writing has been cultivated as the instrument par excellence to civilize the human mind. Not only writing as a craft but also the scribes who mastered it enjoyed special appreciation in their communities. This is well-known with respect to the ancient civilizations (i.e. Egypt, Mesopotamia, China) where the scribes were organized as members in a prestigious class of skilled professionals.

While nobody questions the values of writing for cultural knowledge-construction the origins of this craft seem to be shrouded in the darkness of the prehistoric past. The history of writing begins with the first signs incised or

painted on pottery, wet clay, bone or some other material. This is the standpoint of many scholars in the field of writing research, and handbooks are compiled favoring this perspective. And yet, in order to perceive the magnitude of the art of writing as a communicational tool designed by the inventive mind, it is necessary to shed light on the cultural conditions in human communities that further the motivation of early writing. “The question of how writing systems emerge is related to, but different from, the question of how writing is possible” (Robertson 2004: 16).

The present outline therefore does not only focus on a formal description of the ancient scripts as an information technology but also on the evolution of human symbol-making and on an inspection of the sociocultural conditions which made the elaboration of a system of visual communication – of first writing – possible.

## **Writing research: The orphanage of a non-established discipline of scholarly research**

For the duration of its scholarly history, research on the history of writing has been treated like an orphan by the established disciplines of the humanities that deal with language and culture issues. Strange as it may seem, the history of writing is still an orphan and not established anywhere as an independent domain of the cultural sciences in its own right, unlike historical linguistics, the cherished child of romantic historicism of the late eighteenth century (Seuren 1998: 51 ff.). It seems paradoxical that the speedy progress made by historical linguistics in the course of the nineteenth century would not enhance the development of writing research in a similar way. In the early phase of historical-comparative studies, before methods of internal linguistic reconstruction had been elaborated, historical linguists had to rely on written records of the languages which were compared for most of their historical evidence.

To this day research on the history of writing has remained an arena where experts from different fields and amateurs alike demonstrate their expertise (or speculations) by making pronouncements about the emergence of ancient scripts and their historical development:

- Linguists who are familiar with the languages of antiquity and who study the scripts in which they are written may have an understanding of the organization of sign systems and how signs are applied to the sounds of a language; but they may well lack a grasp of archeological insights about the cultural embedding of ancient societies and their motivation to introduce writing. Linguists often sit in libraries and work with written documents but they seldom

engage in archeological studies, investigate assemblages of artifacts (including inscribed objects) in museums or visit excavation sites.

- Archeologists, on the other hand, often talk about writing systems without even discussing basic definitional approaches to writing technology. They frequently select their issues by observing patterns of consensus and adhere to truisms of the kind: “We all know what writing is”, or the like. If conventional generalizing viewpoints are given priority then one cannot expect new questions to be asked and unknown horizons to be explored. Archeologists would not engage in the study of sign systems – language and non-language related – in a network of communication because that is scientific terrain extending beyond the archeological enterprise into the domain of semiotics.
- Deplorably, even without proper methodological tools at their disposal archeologists have made pronouncements about how writing came about in ancient societies. As for the archeological record of inscribed artifacts in the Neolithic of Europe, archeologists have persistently degraded writing technology as potters’ marks despite the presence of features that clearly speak against such an identification.
- Thirdly, anthropologists tend to amply elaborate on ancient scripts and literacy, but only as safe players, focusing on the established canon of writing systems and leaving out controversial cases. As a rule, scholars of this discipline lack any intimate knowledge of ancient languages and of how different principles of writing apply to differing linguistic structures. Given such limitations, anthropologists miss their chance to refine the methodological arsenal with regard to semiotic markers of writing and the organizational principles of scripts. Anthropologists’ approaches to analyzing ancient scripts tend to lack insight into the semiotic infrastructure of sign systems, this being an indispensable ingredient for the understanding of how early experiments with writing were initiated and how writing skills unfolded.

Progress in science, and in writing research in particular, cannot be expected if one stays with the description of what is already known and accepted by the scholarly establishment. Progress arises from the exploration of new horizons, which means engagement in the discussion of controversies, not adhering to a treacherous consensus and remaining silent about controversial cases. The range of cultural settings that deserve to be discussed for the analysis of writing technology is much wider than the establishment is willing to acknowledge.

The number of ancient writing systems that has been acknowledged by the scholarly establishment is more limited than the variety of scripts that has been investigated by others. For instance, some exclude the ancient Indus script from the canon (as in the volume edited by Houston 2004). Others are especially sceptical about the inclusion of varieties of the Danube script (e.g. Daniels and Bright

1996). There are also fluctuations in the history of research relating to one and the same topic. Illustrative of this is a shift in identification of sign use in Neolithic Europe. In his early assessment, Winn (1981) speaks about “pre-writing”. Yet, he also admits that the insights produced in Haarmann’s (1995) study on pre-alphabetic writing in Europe convinced him that the true nature of the Vinča sign system is in fact that of a script (Winn 2009: 50 f.).

In order to make the ongoing discussion in the domain of writing research fruitful, this study will investigate an extensive array of original pre-alphabetic writing systems.

#### Original writing systems of the Old World

- The Danube script (c. 5300 – c. 2600 BCE)  
Principle of writing: Logographic with occasional marking of phonetic elements  
Writing systems inspired by the Danube script: Linear A in ancient Crete; Linear B for writing Mycenaean Greek; the scripts of ancient Cyprus, i.e. Cypro-Minoan, Cypriot-Syllabic (the latter purely phonographic = syllabic without a logographic component)
- The Egyptian script (c. 3300 BCE – 1st century CE) in three variants: Hieroglyphic, Hieratic, Demotic  
Principle of writing: Logico-segmental (logograms + signs for rendering the consonantal structure of words)

#### Derivations: Meroitic (in ancient Nubia)

- The Sumerian script (ancient pictography since c. 3200 BCE, cuneiform since c. 2700 BCE)  
Principle of writing: Logico-syllabic (about two thirds of the signs were used as logograms, one third as syllabograms)

Derivations: cuneiform script used for Akkadian (with a shift to a predominance of syllabograms), Elamite, Hurrian, Urartean, Hittite, Ugaritic, Persian

- The Proto-Elamite script (c. 3050 – c. 2700 BCE)  
Principle of writing: Logographic with an additional phonographic component

Derivations: none known

- The Indus script (c. 2600 – c. 1800 BCE)  
Principle of writing: Logographic with occasional marking of phonetic elements

Derivations: none known (individual signs of the ancient script are perpetuated, as magical symbols, among the Dravidian population in southern India)

- The Chinese script (since c. 1200 BCE)

Principle of writing: Logographic (ideographic) with an additional phonographic component (rebus)

Derivations: historical Ido (Korea); historical Man'yōgana and modern Kanji (Japan); historical Chu Nom (Vietnam); script of the Yi/Lolo in southern China; the historical scripts of the Yao, Hsi-hsia, Juchen, etc.

Original (pre-Columbian) writing systems of the New World:

- Olmec (c. 1500 – 600 BCE)

Principle of writing: Logographic (+ additional phonographic component ?)

Writing systems inspired by Olmec writing: primary scripts such as Mayan (logico-syllabic) and Zapotec; the Zapotec script inspired other writing systems such as Toltec, Aztec and Mixtec

To this overview of pre-alphabetic writing systems has to be added the tradition of alphabetic writing from which all modern scripts derive:

- Varieties of the alphabet (beginnings in the 17th century BCE)

Principle of writing: Purely phonographic (without logographic component)

Seminal scripts from which numerous others have derived: Phoenician, Aramaean, Greek, Latin, Brahmi, Cyrillic, etc.

## **The bias of the conditioned mind: *Ex oriente lux* and the Mesopotamian “prototype” model of civilization**

There were times when researchers in the field were free to speculate about the historical relationships among ancient writing systems because reliable dating methods of artifacts and cultural strata did not yet exist. In Karl Faulmann's "Illustrirte Geschichte der Schrift" (1880: 27 ff., 62 ff.), the first universal history of writing ever compiled, the author engages in chronological speculation by assuming that the system of Germanic runes was the oldest script of humankind and that the Mesopotamian and ancient Egyptian traditions were inspired by the runes in both the outer form of their signs and their manner of stylization. Faulmann's assumption about the runic system being the mother of all other writing systems was certainly inspired by a Eurocentric bias, a common attitude of the time (Lambropoulos 1993).

The Eurocentric viewpoint, however, was less an instrument of cultural ideology than a reflection of Faulmann's observation that the basic ingredients of the human sense of abstractness were seemingly manifested in the shapes of the runic signs. Among these basic abstract forms are the circle, the rectangle, the triangle, the dot, and the stroke in different positions (vertical, horizontal). Faulmann's sharp eye identified these abstract forms in the sign inventories of the ancient scripts that were known at the time. Archeology had not yet discovered the ancient writing systems of Minoan Crete (hieroglyphic and linear), the Danube script (Old European script) and the ancient Indus script archeology. These scripts, therefore, do not feature in Faulmann's overview.

Although Faulmann was wrong in his assumption about the high age of the runic script he nevertheless touched on a relevant semiotic issue; specifically the abstractness of signs of writing as a reflection of how the abstract mind works in humans. Paradoxically, the discussion concerning abstractness in sign systems received its major impulses not from research devoted to writing as a cultural institution, but rather from a tradition that vehemently denied the importance of writing and propagated the priority of the spoken over the written language, making the former the primary object of language studies: Saussurian structuralism (Seuren 1998: 144 ff.). The realm of abstractness as manifested in the monopoly of arbitrariness – the major arbiter of spoken language – has been widely explored (Thibault 1997: 163 ff.).

The role of iconicity, which may be considered marginal for the organization of spoken language, with its manifestation of motivated onomatopoeic expressions, is different in writing technology. Here, phenomena of abstractness can be appropriately assessed only in their relationship to manifestations of iconicity and to cultural symbolism in a wider perspective (Haarmann 1997a). The issue of the distinction of parameters of abstractness as an organizing force of writing systems has been addressed in an analysis of the web of semiotic relations (Haarmann 1998a).

The study of writing systems has followed certain canonical paths that are characterized by the observation of alleged truisms. The tricky thing with truisms in science is the unstable vacillation in the amount of truth that they carry in their conceptualizations. Some truisms may reflect a true image of reality, others may have a true core but are too generalizing, while others are misconceptions or distortions of reality. Trying to cope with truisms and distinguish between their various "categories" is tedious. Writing, with its function as an information technology, is a marker of civilization in the meaning of high culture, and it is inter-related with other markers of high culture. This is a truism that nobody has ever seriously denied. However, if this truism is integrated into a network of other truisms about the nature of civilization then it may lose its original weight for the discussion about cultural evolution or it may even become distorted.