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An Introduction to the Study of the Danube Script

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There are certain regions in Europe where the visual manifestation of human symbolic activity in prehistory is livelier than in other areas. Southeastern Europe is one such region with an exceptionally rich heritage of cultural symbolism. A broad variety of visual motifs are found on rock paintings and engravings, on the ornamental designs of pottery, utensils, and architectural forms, and in the use of signs with notational functions, single or in groups, incised or painted on artifacts (Kozlowski 1992: 72 ff.).

The richness of signs in Neolithic and Chalcolithic Southeastern Europe shows considerable variation in space and time. Core symbols that may reflect a large coinage of basic ideas—such as the spiral, the meander, the V sign and others—are wide-spread throughout this culturally interconnected zone, while other symbols have a more limited range and are found only in certain regions. A closer inspection of ornamented and inscribed artifacts reveals that motifs in common use interact with symbols of local range, forming specific regional networks. Local traditions of cultural symbolism may have been as diversified as the types of artifacts that are known from the archaeological record.

The signs and symbols of Southeastern Europe did not make a sudden appearance. They show striking resemblances with motifs of periods that preceded the Neolithic Era. The cultural roots of symbolism in regional Neolithic societies are associated with the Mesolithic of the seventh millennium BCE in the Danube valley (Lepenski Vir, etc.), and they reach back even deeper in time, showing similarities with the abstract ornamentations of artifacts from the Late Palaeolithic, such as the site of Mezin in Ukraine (c. 15,000 BP).

The rise of early agrarian communities in the valley of the Danube and its hinterland produced innovative technologies. In the course of this process, sign use consolidated and assumed the character of an organized form of notation. This transition to writing marks the first experiment of its kind in world history. The experiment with writing technology in Southeastern Europe produced an original writing system which is addressed here as the "Danube script," and the cultural horizon in which it originated is referred to as the "Danube civilization." These terms are synonyms with the earlier terminology, "Old European script" and "Old Europe," coined by Marija Gimbutas (1991).

In a wider perspective, the terminology focusing on the key name "Danube" is likely to facilitate interdisciplinary discussions about the history of writing and about issues relating to ancient writing systems, in particular. There is a general consensus among scholars that the

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¹ See Haarmann 2002: 17 ff. for further discussion about this terminological innovation.

emergence of early scripts is associated with cultural evolution in the valleys of big rivers or in adjacent areas. This is true for civilizations in Mesopotamia, Egypt, in the Indus valley, in China as well as in Southeastern Europe. Once issues of early writing in the Danube civilization are introduced into interdisciplinary discussions by making terminological reference to the river itself. scholars from other disciplines (Mesopotamian studies, Egyptology, etc.) may readily recognize a congruence with the pattern studied in their own field. In the long run, this may serve as an incentive to promote interdisciplinary cooperation and comparative research on pertinent issues concerning the origins of writing.

For more than a hundred years, objects which bear symbols and signs have attracted the attention of scholars, and numerous studies have been published. Unfortunately, dilettants and nationalists have also participated in the discussion about sign use and are in part to blame for the reservations and skepticism that are noticeable in certain academic circles, relating both to the issue of Neolithic symbolism as a field of study and to the findings of writing research.

Writing in Neolithic Europe? That sounds unreal to students of ancient writing systems. And why does this idea seem so strange? The answer to this question has much to do with the state of the art of writing research, and this state reflects traditional views about the emergence of writing and about its nature as an institution of early civilization.

Writing research: Orphanage of a nonestablished discipline of science

Throughout 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 is not established anywhere as an independent domain of the cultural sciences, unlike historical linguistics, the cherished child of romantic historicism of the late eighteenth century (Seuren 1998: 51 ff.). It seems like a paradox 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.

Research on the history of writing has remained, to this day, 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 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 also lack a grasp on archaeological insights about the cultural embedding of ancient societies and their motivation to introduce writing. Linguists sit in libraries and work with written documents but they do not necessarily engage in archaeological studies, investigate assemblages of artifacts (including inscribed objects) in museums or visit excavation sites.
- Archaeologists talk about writing systems without even discussing basic definitional approaches to writing technology. They often observe patterns of consensus and adhere to truisms such as, "We all know what writing is," or the like. If conventionally generalized viewpoints are given priority, then one cannot expect new questions to be asked and unknown horizons to be explored. Archaeologists do not

engage in the study of sign systems (language and non-language related) in a network of communication because that scientific terrain extends beyond the archaeological enterprise into the domain of semiotics.

Archaeologists have made pronouncements about how writing came about in ancient societies without proper methodological tools at their disposal. As for the archaeological record of inscribed artifacts in Neolithic Europe, archaeologists have persistently degraded writing technology as "potters' marks" despite the presence of features which clearly speak against such an identification.

Anthropologists 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 various principles of writing apply to differing linguistic structures. Given such limitations, anthropologists miss their chance to refine the methodological instrumentarium about semiotic markers of writing and the organizational principles of scripts. approaches used by anthropologists to analyze ancient scripts tend to lack insights into the semiotic infrastructure of sign systems. Knowledge of this infrastructure indispensable for an 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 adheres to the description of what is already known and accepted by the scholarly establishment. Consensus is not the key to revolutionary breakthroughs in the world of science. Progress arises from the exploration of new horizons which calls for discussions about controversies, instead of remaining silent about unresolved agenda. The range of intriguing issues which

deserve to be explored in order to make progress in writing research is much wider than conservatives are willing to acknowledge.

The bias of the conditioned mind: Ex oriente lux and the Mesopotamian "prototype" model of civilization

The study of writing systems has followed certain canonical paths which are characterized by the observation of alleged truisms. tricky thing about truisms in science is the unstable oscillation 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 actually misconceptions or distortions of reality. It is tedious to try to cope with truisms and to distinguish between these various "categories."

Writing, as an information technology, is a marker of civilization in the sense of high culture, and it is interrelated 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, its original weight in discussions about cultural evolution may become distorted, or even lost.

"Getting writing right" (Watt 1989) does not call for the adoption of the conventional definition of writing—the most favored among scholars of writing research—which is that writing is 'visible speech' (making the sounds of language visible in the form of written signs). This conceptualization of writing is awkward because it excludes forms of sign use that mark the initial stage in the emergence of writing systems which were not language-related or predominantly phonetic. Moreover, the narrow definition of writing as a technology to make spoken language visible blurs the view on ancient scripts. The predominant signs of early writing systems are non-phonetic, with various

categories of logographic and ideographic sign types (e.g., determinatives in Egyptian hieroglyphs, logograms in cuneiform writing, and ideographs in ancient Chinese writing).

The challenges which the research on writing is facing today resemble, in certain ways, the necessities of modernization which astronomers have to cope with. For decades, since the discovery of Pluto in 1930, the truism that has been propagated about our solar system was that there are nine planets circling the sun and only one is inhabited by life forms. The 21st century has brought unexpected challenges. discovery of a vast ice-belt with many celestial bodies circling around the sun at a distance far beyond Pluto has prompted the need for a revision of conventional definitions of the concept "planet." Some celestial bodies in this belt, which has been termed Kuiper's Belt, are much larger than Pluto.

The older truism of nine planets in our system is, therefore, no longer valid. The new truism is that there are more than nine although nobody can as yet say how many. This is a matter of debate about definitions which has newly flared The perspectives for exploring new horizons and for devising new models of our planetary system are immense. There is already about categorizations talk of planets, distinguishing primary planets such as Earth, Venus or Mars from secondary ones such as the sizable moons of some of the primary planets (i.e., Titan, one of the moons of Jupiter).

The range of ancient writing systems which have been acknowledged by the scholarly establishment is more limited than the variety of scripts available for investigation. Those scientists who adhere to the canon (that writing began in Sumer) would not engage in the study of the Danube script since it has not been deciphered. Some scholars 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).

Literacy in Southeastern Europe flourished at a time when no other writing system existed in the Old World. Therefore, bilingual and digraphic texts do not exist, including several languages in different scripts. In the absence of a "Rosetta Stone"—the item that made possible the breakthrough in the decipherment of Egyptian hieroglyphs in the 1820s (Champollion 1825)—the prospect of ever cracking the code of the Danube script seems minimal.

In writing research, as in other disciplines of modern science, theory-making readily adheres to the application of prototypical models that are supposed to have explanatory potential for all known cases of a studied subject. In the humanities, thinking in terms of the categories of prototype models has long been canonical. Assumptions about the emergence of ancient civilizations in the Old World, formulated by modern scholarship, illustrate the canon (Haarmann 2007: 162 ff.).

According to traditional cultural chronology, the threshold of civilization was first passed in Mesopotamia in the late fourth millennium BCE. According to this canon, any ancient civilization is characterized by a specific combination of advanced institutions of a hierarchically stratified, urbanized society with centralized political leadership (kingship), and statehood with a related bureaucracy to handle state affairs. The traditional argument for the emergence of writing is that this technology was introduced as an instrument of state bureaucracy.

A certain kind of circular reasoning originated in the context of Mesopotamian archaeology in the 1940s when the slogan *ex oriente lux* ('the light from the East') was coined. This fixation on the Mesopotamian prototype produced well

known, wide-spread, and misconceived "truisms".

- Since it is believed by many scholars that Sumerian civilization is the oldest known in the world (an assumption which does not hold true) its cultural fabric serves as a prototypical model for research on ancient cultures;
- Since the Sumerian prototype of ancient civilization is canonical, researchers look for a "Mesopotamian" fabric of high culture wherever an ancient civilization might have emerged.

According to this circular logic, a given culture cannot be identified as a civilization if scholarly analysis of local settings does not reveal a stratified society, political leadership and statehood.

There are many flaws in this notion of prototype with respect to how ancient civilizations emerged. Ironically, the network of features postulated for the "prototype" is not even complete in all known and "acknowledged" cases of civilizations of the Old World. The most crucial properties—stratified society, statehood and bureaucracy—are either missing or weakly developed in some regions. instance, a state with a clearly defined territory and a common army was absent from the conditions of political rule during the Shang Dynasty (c. sixteenth-eleventh centuries BCE) in ancient China, as was an apparatus of state bureaucracy (Chang 1983: 25 ff.). Statehood and hierarchical social structures were also missing in the context of the ancient Indus civilization (Maisels 1999: 220 ff.).

The discourse about the emergence of civilizations, the unfolding of their institutions and especially about the trajectories of socio-cultural evolution illustrates the problems inherent in the prototype mentality. Consequently, the issue of how writing

technology unfolded as one of the institutions of ancient civilizations has been tainted by the mindset that adheres to the prototype. Typical of this is the debate about the nature of the signs and symbols on the Tărtăria tablets that flared up in the 1960s and continued into the 1970s. As long as the absolute age of the tablets was undetermined and archaeologists dated the artifacts to the third millennium BCE, most of those scholars who engaged in the discussion were convinced that the signs inscribed on the Tărtăria tablets reflected a far-distant cultural influence from Sumerian civilization.

The identification of the signs on the Tărtăria tablets as a script exported from western Asia was conclusive with the fabric of the Mesopotamian prototype. When, in the 1980s, dendrochronological dating methods were applied to determine the true age of the Tărtăria tablets, and it was confirmed that these artifacts belong to the late sixth millennium BCE, the debate about the Tărtăria signs experienced a radical change. According to the truism that Mesopotamia was the cradle of civilization, the scholarly establishment found it inconceivable that an earlier script might have emerged in another region of the world, independently from the Mesopotamian tradition of writing. discussion about the system of signs and symbols in Neolithic Southeastern Europe has been strained by the Mesopotamian bias up to the present.

And yet, there are signs of emancipation from the concept of a Mesopotamian prototype. During the past two decades, some sensational archaeological discoveries have produced new insights into the absolute chronology of the history of writing, and these insights call for a revision of previous conceptions about the high age of writing in Mesopotamia. The early beginnings of Sumerian pictography are literally "outdated" by finds of older evidence of the use of Egyptian hieroglyphs that extends the cultural chronology of writing at least 150 years back in

time from the oldest texts from Uruk. There is no longer any doubt that the tradition of writing in ancient Egypt emerged in the pre-dynastic period and is older than the use of pictographs in southern Mesopotamia (Dreyer 1998).

For a long time the truism of Mesopotamia as the cradle of civilization and of writing technology remained unrivalled, and the notion of *ex oriente lux* was used by many scholars as a handy slogan indicating that the light of civilization arose from the East. The recognition of the chronological antiquity of early Egyptian writing makes a decisive difference. If one is inclined to adhere to a handy slogan, then the novel truism could be paraphrased as *ex meridie lux* ('the light from the South'). And yet, old-fashioned descriptions of events in the world history of writing continue to reproduce the older matrix of *ex oriente lux*.

In view of the growing evidence in favor of the independent emergence of writing in the context of European cultural evolution, it is necessary to call for yet another shift in perspective concerning the beginnings of early civilization. Neither *ex oriente lux* nor *ex meridie lux* are valid. A more appropriate truism is *ex occidente lux* ('the light from the West').

The notational systems utilized by the Neolithic societies in Southeastern Europe developed as the result of the maturation of the Danube civilization that flourished from c. 5500 to c. 3500 BCE. The exclusion of these early experiments with writing technology from the acceptable topics of writing research deprives scholarship of a valuable case study to modernize its methodology. This exclusion also produces contradictions since, in other scientific disciplines, writing in Neolithic Europe has been acknowledged as a reality to reckon with. This is true for the new paradigm of the philosophy of language and writing presented by Christoph Türcke (2005: 59 ff.).

insights relating to early successful experiments with writing in Southeastern Europe have also been duly noted in the modern history of information technology (see Watson 2005:106).

It, therefore, appears that the discussion about writing technology outside the traditional canon of writing research assumes the role of an arbiter in the modernization process. Rudgley (1999: 70 f.) gives the following evaluation:

If the Old European script is a highly developed form of writing—and Gimbutas and Haarmann have presented a credible case for it being so—its very antiquity makes it a book that seems to be destined to remain firmly shut. . . . The notion of an Old European script goes against many of the entrenched positions of archaeology and the traditional view of the development of civilisation. The implications are immense. [. . .] The ideological wall constructed to divide prehistory and history, the primitive and the civilised, and writing and re-writing would fall overnight were the Old European script to be indisputably vindicated. It would herald nothing less than the collapse of the present notion of civilisation.

Focusing on the Danube Script

Writing is an information technology. This is a truism which has always remained valid. As a rule, histories of writing focus on the inquiry of this characteristic property. The analysis of the principles of writing (logographic versus phonographic), the categories of signs (iconic versus abstract), their compositions in sign inventories, and their alignment in sequences of the written code are indispensable for the understanding of how writing functions.

And yet, the essence of what makes writing significant in any society does not merely lie with the practical functions that writing has for information technology. Equally important are investigations into the role of writing and its interplay with other sign systems in community life, the incentive for ancient societies to introduce writing, the development of writing as a cultural institution and as a marker of

civilization, the functional range of ancient literacy, and other phenomena. This means, in addition to being a technology, writing is a prominent factor of cultural ecology.

The history of writing concerns a gradual advance from the recording of ideas and concepts to the fixation of sound structures. This prolonged process lasted for one and a half thousand years (as compared to the timeframe of the origins of literacy in Egypt and Mesopotamia) before reaching its full-fledged stage of phoneticization: writing according to the alphabetic principle. The initial thrust to create an inventory of conventional signs for expressing items of knowledge in relation to community life — whether sociocultural, economic or religious—was not motivated by the intention to render the sounds of a given local language in visual signs. The long lasting evolutionary trajectory toward phoneticization—the progressive identification of visual linguistic sounds—eventually with culminated in the adoption of the "one sign: one sound" principle in writing language.

The assumption that writing is primarily the use of letters of the alphabet to record phonetic sounds is a typically Euro-American idea. This erroneous notion has eclipsed the recognition of the existence of early writing in Neolithic agrarian societies. The archaic principle of logographic writing marks the initial stage of all experiments with writing. Interestingly, this type of script, with its sign-meaning correspondence has remained the major constituent of the system of Chinese characters, from its beginnings up to the present.

In the initial stage of the process of encoding knowledge through a system of visual signs, individual signs are used to express ideas (cognitive concepts). Cognitive concepts—albeit independent from the words of a given language—readily coagulate around linguistic concepts (the meaning of words). The rendering

of phonetic sounds in order to write words in a given language, is a more complex challenge than the expression of ideas in terms of visual signs.

Even at a stage when ancient writing systems assumed more and more phonetic properties, the intention was not to apply visual signs in an phonographic exclusively function. For example, Sumerian scribes never intended to render their language consistently in writing. Sumerian writing "remained in its essence a mnemonic system in which an exact rendering of the pronunciation was not aimed at" (Diakonoff 1976: 112), and this is true for ancient Sumerian pictography (c. 3200-c. 2700 BCE) as well as for the cuneiform script (after c. 2700 BCE). It was only with the adoption of cuneiform signs for writing Akkadian that the decisive step toward a more consistent phoneticization was taken.

There has been much speculation about the reality and nature of the Danube script. Some are inclined to call it a script in statu nascendi ('in the state of being born'). Such a notion gravely distorts the functional capacities of the sign system in question. The sign system in Southeastern Europe started out like all other original writing systems in the world, as an exclusively or predominantly logographic script. Nobody would call the Sumerian writing system in statu nascendi because the scribes did not attempt to render the language exactly as it was spoken. This was not a deficiency, but was simply an adherence to an archaic form of writing technology in order to preserve a traditionally established form of writing. In fact, this way of writing, oriented toward logography, is still valid for writing Chinese. It would be absurd to speak of Chinese writing as representing a script in statu nascendi because it does not fit the narrow margins of what is termed "true writing" by the Euro-American tradition

What is *in statu nascendi* is the state of overall research on the Danube script which deserves serious interdisciplinary investigation. Fortunately, the archaeological record of Neolithic communities in Southeastern Europe provides ample documentation of the material living conditions and cultural development of Neolithic societies, of the symbiotic web of imagery, cultural symbolism, and wide-spread communicational networks that existed throughout the region.

In order to take a measurement of the contemporary state of research on Neolithic signs and symbols, to explore the most viable approaches to studying the system of signs, and to further the exchange of ideas among those scholars who are engaged in the study of Neolithic material culture, the first symposium on this pertinent topic was organized by the Institute of Archaeomythology in collaboration with the Serbian Academy of Sciences and Arts. This event, "Signs of Civilization: International Symposium on the Neolithic Symbol System of Southeast Europe," took place in Novi Sad (Serbia), May 25-29, 2004. An exhibition of inscribed objects, mainly from the Vinča region, accompanied the symposium (see Starović 2004, for exhibition catalogue).

The conference archaeologists, attracted linguists, semiologists and other interested scholars from countries in Eastern and Western Europe and North America. The organizers of this international gathering did not strive for unanimity concerning the nature of sign use in the European Neolithic, and were gratified to see that the contributions illustrated a wide array of approaches to the study of Neolithic systems of visual communication. In addition to the sign system of archaic writing that is gaining more and more attention, the role of religious symbolism was addressed in relation to signs of writing, and the probability that notational sign inventories existed for rendering measures and/or numerical concepts was also explored.

During the symposium, an approach was presented to position the study of writing in Southeastern Europe in a wider frame, introducing an analysis of basic features of the Danube script in comparison with other ancient writing systems of the Old World. ancient systems include Sumerian pictography, the original Elamite (Proto-Elamite) script, Egyptian hieroglyphs, the ancient Indus script and the ancient Chinese tradition of oracle bone This analysis includes comparinscriptions. isons of the organizational principles of ancient writing systems (i.e., the composition of sign inventories, logographic versus phonetic writing) as well as comparisons of their social functions (i.e., religious versus economic).

The Novi Sad conference produced something that is perhaps more fruitful than a state-of-theart report. It opened the view on a wider perspective of intercultural communication in Southeastern Europe during the Neolithic Era. Positions were clarified, more questions were raised than answers given, and demands for more precision in research work articulated. Other valuable insights resulted from the symposium including the expressed need to better coordinate future research. There was a consensus among the organizers and about the need for participants future interdisciplinary conferences on this pertinent topic.

Further explorations on the Danube script and the symbol system of Southeast Europe are planned for the spring of 2008 by the Institute of Archaeomythology in collaboration with two Romanian museums. An exhibition and symposium will take place April 3-5, 2008 at the National History Museum of Transylvania, Cluj-Napoca—with special emphasis on the inscribed objects from the Turdaş and Tărtăria excavations. On May 18-21, an exhibition and international conference will be held at the Brukenthal Museum in Sibiu. Both events are intended to deepen and intensify the discourse

on Neolithic sign systems and to focus specifically on the issue of archaic writing in order to reach further than what was achieved with the Novi Sad conference. Among the key issues/questions to be considered are the following:

- What was the overall composition of the sign inventory in use by the communities of the Danube civilization, and how many hundreds of signs were utilized?
- What was the composition and categorization of local varieties of the Danube script (e. g., Vinča, Karanovo, Cucuteni-Tripyllya); and how marked were the local and regional differences?
- How are individual signs and groups of signs positioned on objects?
- How can signs of writing and their specific features be identified in contrast to other domains (i.e., ornamental design, religious symbolism, potters' marks)?
- What is the symbiotic interplay between signs and symbols in the Danube civilization; and in what ways do signs of writing "interact" with ornamentation on figurines and other artifacts?
- Were there regional differences in the frequency of sign use?
- What was the exact time frame of sign use in various regions?
- To what extent was the tradition of literacy disrupted (and how?) and to what extent (and where?) did it possibly continue? Are the traditions of the Danube script and of early Cretan writing linked?

- What are the spiritual and practical functions of archaic writing and genres of literacy in Neolithic Europe?
- A detailed map is needed of archaeological sites throughout Neolithic Europe indicating the location of objects inscribed or painted with signs.
- A typology of objects is needed of those bearing signs of the Danube script (i.e., figurines, cult vessels, altar pieces, pots, etc.)
- Continued development of data banks of inscribed objects with single and multiple signs including archaeological contexts and related information are extremely important for ongoing research.
- A comprehensive survey of inscribed objects preserved in museum collections are needed, specifying their location, typology, and state of scholarly analysis.
- Without attempting to "translate" specific signs and symbols, how could the Danube script have functioned for the communities of the Danube civilization?

The selected papers from the Novi Sad symposium presented in this issue of the *Journal of Archaeomythology* are intended to provide incentives for streamlining and intensifying further research efforts concerning the signs of writing and other systems of communication in their dynamic interplay.

In "The Danube Script and Other Ancient Writing Systems: A Typology of Distinctive Features," linguist Harald Haarmann discusses the early experiment with writing in Southeastern Europe and provides an introduction to sign systems, notational systems and the status of writing in the realm of culture. He also discusses the principles of writing

common to ancient scripts and outlines a typology of writing systems, principles and techniques of writing, and parameters for comparing ancient writing systems.

Italian researcher Marco Merlini discusses the historical background and significance of three engraved tablets and related artifacts discovered in 1961 near the Romanian settlement of Tărtăria. The "Tărtăria tablets" have occupied a unique and controversial position in debates about the earliest European writing. His paper, "Challenging Some Myths About the Tărtăria Tablets: Icons of the Danube Script," presents the results recent investigations on the context and dating of this discovery and the possible significance of the tablets as icons of the Danube script.

Romanian archaeologist Cornelia-Magda Lazarovici discusses the "Symbols and Signs of the Cucuteni-Tripolye culture," a highly culture group developed from northeast Romania, Moldavia and western Ukraine. The categories of inscribed and painted artifacts presented in this overview include figurines, pottery, clay objects of various kinds, altars, models of sanctuaries and ovens. According to this research, the signs and symbols used by the Cucuteni-Tripolye communities meanings associated with agricultural rituals and an intimate engagement with the cycles of the natural world.

In "Database for Signs and Symbols of Spiritual Life," Romanian archaeologist Gheorghe Lazarovici discusses the development of an extensive database, catalogues and dictionaries containing information about Neolithic signs and symbols. Mathematical algorithms were developed to correlate data in order to discern direct or indirect connections between objects characteristics within and their specific archaeological contexts. Correlated and seriated tables are used to discern the evolution of different categories of signs and symbols. In the

author's view, information obtained from these tables indicates the existence of a "sacral writing" with a dynamic evolution which developed in the Late Neolithic Vinča C culture groups, such as Turdas, Gradešnica and others related to Vinča C.

pioneering research by American The archaeologist/linguist Shan M. M. Winn on early script signs in the central Balkans is introduced here in three parts. His paper, "The Danube (Old European) Script: Ritual use of Signs in the Balkan-Danube Region c. 5200-3500 BC," recounts his initial study of symbols on Vinča and Tisza artifacts in northern Yugoslavia and southern Hungary. collecting signs from more than forty Vinča sites in 1971, he catalogued 210 sign types in his doctoral dissertation, Pre-Writing in Southeastern Europe (1973). He chose the term "pre-writing" as a result of scholarly resistance to his original use of the term "script." The second part describes his reassessment of the signs, including fifteen categories and 242 signs and symbols based on distinctions in usage. The final part focuses on two spindle whorls that he discusses as evidence for writing. Based on the premise that the inscriptions are best interpreted in the context of ritual. Winn identifies several signs and submits a tentative interpretation.

Concluding thoughts

It is significant to recognize that the earliest farmers of Southeastern Europe developed mature, sustainable societies that required the transmission of intentional accumulated knowledge. It is quite possible that the longterm cultural potency of these societies was enhanced by the ability to concentrate collective memory and communal concepts beyond the limitations of oral tradition. People found ways to record essential ideas onto media more durable than individual human minds

While several authors in this issue have offered suggestions about the possible significance of certain signs and symbols, we would like to emphasize that it is not necessary to decipher the meanings of inscriptions in order to prove existence of a system of visual communication

However, the ubiquity of inscribed objects within domestic contexts, used for ritual as well as practical purposes, speaks for the widespread use of signs and symbols—not for economic bookkeeping, as in Mesopotamia—but as an intrinsic expression of cultural embedding within the local landscape of regional communities and throughout the larger parameters of the Danube civilization.

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