Semiotic approach to the features of the 'Danube Script'

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ABSTRACT – *The article presents a matrix of basic semiotic markers and rules for examining the internal structure of the sign system developed in the Neo-Eneolithic in the Danube basin. It is intended a) to test the hypothesis that these cultures had an early form of writing, the so-called Danube script; b) to infer the principles of this system of writing; c) to distinguish between bi- and multi-signs texts of the Danube script, without knowing what any of them meant, from compounds of signs associated with other communication codes, among them decoration, symbols, and divinity identifiers. The matrix is applied to some recent discoveries selected not from the core area of the Danube civilization in the Vinča region, but from peripheral regions, in order to document how widespread the Danube script was.*

IZVLEČEK – *Članek predstavlja matrico osnovnih semiotičnih označevalcev in pravil za preučevanje notranje strukture sistema znakov, ki se je razvil v neo-eneolitiku Donavskega bazena. Nameravam a) testirati hipotezo, da so te kulture poznale zgodnjo obliko pisave, tako imenovano 'Donavsko' pisavo; b) povzeti principe tega sistema pisave; c) poiskati razliko med dvo- in več-znakovnimi besedili donavske pisave, ne da bi poznal njihov pomen, iz sestave znakov povezane z drugimi kodami komunikacije, med katerimi so krašenje, simboli in določevalci božanskega. Da bi ugotovili kako razširjena je bila 'Donavska' pisava, je bila matrica uporabljena za preučevanje nedavnih odkritij, izbranih iz obrobnih območjih in ne iz jedra donavske civilizacije na območju Vinče.*

KEY WORDS – *Danube script; Danube civilization; Neo-Eneolithic; Symbolism*

DID A FORM OF LITERACY DEVELOP IN THE NEO-ENEOLITHIC IN SOUTH-EASTERN EUROPE?

The existence of a script which developed in the Neolithic in the middle and lower Danube basin was seriously believed by eminent archaeologists, historians, linguists, and philologists at the end of the nineteenth century and in the early decades of the twentieth. But the precocious specimens of European writing could not be related to the Neo-Eneolithic due to a lack of reliable dating methods. The shards found at Turdaș, at Vinča, or in other Danube-Balkan settlements were clearly inscribed with the signs of some sort of writing, and scholars sought links between south-eastern Europe and the more 'civilized' regions of Mesopotamia, the Levant and eastern Mediterranean[1].

From the middle of the twentieth century, the introduction of well-established dating methods determined that the inscribed Danube-Balkan objects dated to the Neo-Eneolithic, and as a result their signs suddenly became mute, being considered mere deco-

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1 For the "Turdaș script" see Zsófia von Torma, Heinrich Schliemann. Heinrich Karl Brugsch, Arthur Evans, H. Schmidt. For the "Vinča script" see Miloje Vasić.

ration, ownership marks, or simply scratches. The invention in south-eastern Europe of an *ars scribendi* in Neo-Eneolithic times was held so unthinkable that the simple possibility of it has been ignored, and its evidence given very scant attention.

It was the discovery in 1961 of three inscribed tablets at the settlement of Tărtăria-*Gura Luncii* (Alba county, in Romania) that kindled a wave of controversy regarding the *possibility* that Neolithic and Eneolithic cultures might have had an early form of writing in south-eastern Europe (Fig. 1).

Paradoxically, the Tărtăria discovery cracked the scepticism of some scholars over the spectacular claim that the Neo-Eneolithic Danube Civilization used an early form of writing, and at the same time reinforced that of others. In fact, since their discovery, the Transylvanian tablets have occupied a unique and often contentious position in European prehistory because of the dispute over two main points: their dating and the assertion that their symbols could be a form of writing[2].

Regarding their dating, the archaeological documentation from the discoverer (Nicolae Vlassa from Cluj Museum) is not completely reliable. Therefore they have been used by some scholars as evidence of a low chronology for the Danube Neolithic period (*Hood 1967.99–102; 1968; Makkay 1969; 1971; 1984; 1990*): the Tărtăria tablets might have belonged to the Vinča C migrations, when such a 'writing' system was largely used not only in south-eastern Europe, but also in the area of proto-Sumerian civilizations (*Lazarovici 2003.87*). At the same time, the Transylvanian tablets have been considered by others scholars as genuine, early Vinča artefacts of the fifth millennium BC (*Gimbutas 1982. 87*) or the latter half of the sixth millennium BC (*Haarmann 1990.76*). Therefore, they have been considered as the earliest attestations of Old European script (*Masson 1984; Haarmann 2002*).

But how old are the Tărtăria tablets? For forty-two years no one considered they were accompanied by human remains, which are still preserved in Cluj in the basement of the National History Museum of Transylvania. Gheorghe Lazarovici and I, under the patronage of the *Prehistory Knowledge Project*, in October 2003 went in search of the bones, found them, and requested a ^{14}C analysis at the laboratory of the Earth Sciences of La Sapienza University of

Fig. 1. The group of the three inscribed Tărtăria tablets.

Rome. The results are: Rome – 1631 (human bones): 6310±65 yr BP; 5370–5140 calBC (*Merlini 2004b; Merlini on line*). Therefore, the earliest evidence of a European script comes from Transylvania (Fig. 2).

Sometimes events do not change the course of history by their direct and immediate effects, but by their collateral effects. Indeed, in the last few years the possibility that the Tărtăria Tablets could be the

Fig. 2. The Tărtăria tablets were associated with human remains which are deposited in the National History Museum of Transylvania in Cluj.

2 For a survey see Merlini (*2004a.51–63*).

"most ancient European library" has stimulated a re-examination of the archaeological material found in the last century and a half in the Danube basin. And in a number of locations the checks still now in progress have allowed a re-evaluation of hundreds of inscribed artefacts which predate the earliest Sumerian cuneiform and Egyptian hieroglyphics.

Therefore, in the last few years a very rapid accumulation of archaeological evidence has occurred, supporting the thesis that European literacy existed in the Neo-Eneolithic, the *Danube script*[3]. The most exciting discoveries are happening in museum and university archaeological collections. Many signs and their combinations unearthed during the last century's excavations were not published by their discoverers because, not having a pattern of decoration or symbols, they did not dare speculate that they might be a system of writing. Other archaeologists did not realize that their findings, catalogued and published even from decades before, might have inscriptions. They considered that the strange geometrical, abstract and linear signs only badly executed decoration scratched by confused artists. Thus in reproducing and publishing them, they amended and adjusted them in a more fashionable way by regularising their shapes, or imposing symmetry upon their original patterns. A third wave of scholars maintained that the strange signs were magic-religious symbols or ownership/manufacturing marks. If both interpretations failed, the ultimate resource was to consider them simply as random scribbles made by bored and idle potters.

Finally, some scholars simply did not realize that the objects they had discovered had signs on them. In the fifties Milutin Garašanin found an inscribed figurine at Supska (near Ćuprija, Republic of Serbia and Montenegro), but he did not notice the A, I, M, H, and Y-like motifs positioned on a large triangle incised on the chest. This inscription was re-discovered in 2002 by Andrej Starović (*2004*).

On the other hand, a considerable number of books and articles have been devoted to a (quasi) scientific fiction aimed at 'reading' the Vinča 'documents' as alphabetic texts. The present interest in a 'Neolithic alphabet' in the Balkans is connected to the re-

inforcement of nationalistic "archaeo-political" manoeuvring.

THE POSITION OF THE DANUBE SCRIPT WITHIN THE DANUBE SYSTEM OF COMMUNICATION

The Danube script appeared in south-east Europe around 5300 BC, some two thousand years earlier than any other known writing. It originally appeared in the central Balkan area and developed locally. It quickly spread to the Danube valley, southern Hungary, Macedonia, Transylvania, and northern Greece. It flourished up to about 3500 BC, when a social upheaval occurred: according to some, there was an invasion of new populations, whilst others hypothesise the emergence of new elite (Fig. 3).

The early European writing was later to be lost, and what remains of it is unfathomable, and tenaciously resists the efforts of anyone attempting to decipher it. Nothing is known about the existence of such a referential language. Moreover, it is too ancient for us to hope to find anything like the trilingual Rosetta Stone which would permit us to translate it into a known language. Although it is now lost and pro-

Fig. 3. The region where the Danube Civilization and the Danube Script flourished in 5 millennia BC. The Danube Script was used in the core area of the Danube Civilization only. From on-line Signs.

3 I employ the term "Danube signs"/"Danube script" as general allocution and "Vinča signs"/"Vinča script" strictly limited to the Vinča culture which developed in the central area of the great Danube basin. This terminology is coherent with the challenge to demonstrate that the "early civilisation" status can no longer limit itself to the regions which have long attracted scholarly attention (i.e. Egypt-Nile, Mesopotamia- Tigri and Euphrates, the ancient Indus valley), but it has to expand to embrace the Neo-Eneolithic civilisation of the Danube basin. The script is only a mark – although important – of the high status of the civilisation which flourished along Danube River.

bably undecipherable, some scholars are using a semiotic approach to crack some elements of its generic code (*Haarmann 1995; 1998a; 1998b; Merlini 2002b; 2003b; 2004a; on line; Winn on line*).

According to this semiotic research, Danube script is a very archaic system of writing, and possibly not capable of encoding extended speech or long narratives because phonetic elements are absent or insufficiently rendered in the writing. It consists probably of a mix of logograms, ideograms, pictograms, and some phonetic elements occasionally and marginally marked. The connection to the conceptual sphere is much stronger than the connection to the phonetic. Other ancient writings of this type are the Elamite script, the Indus script, the hieroglyphs of the Phaistos disc, the Chinese writing on oracular bones, and Olmec glyphs.

Although the Danube script was probably only in *statu nascenti* and had a very weak association with phonetics, it should not be confused with other communication channels used by Neo-Eneolithic populations such as religious symbols, geometric decorations, aides memoires, astrological and terrestrial charts, ritualistic markings, numerical notations, family identifiers or community affiliation marks, as well signs stating the owner/manufacturer of an artefact. The *Danube System of Communication* was composed of several elements of which writing was only one. It is a very exciting communicative means for us, but possibly not the most important for the people of the Danube area.

The problem is that the distinction between the Danube script and other means of communication is not so evident. Firstly, signs of writing could co-exist on the same object with marks of other informative codes. In fact, sometimes more than one channel of communication was in use at the same time on the same vase, figurine or spindle whorl. Secondly, when inspecting the internal structuring of the Danube Communication System, evidence of a writing system in a very archaic phase becomes noticeable, so the outline of its signs as well their organization in space were not clearly distinguishable from other communication channels. In particular, they share the same geometrical roots (showing sometimes the same outlines) with decorations, symbols, divinity marks, owner-manufacturer marks, chronographic representations, and astronomical signs.

However, an object considered a mignon, phallus-like artefact standing on an altar (*Gimbutas 1991.*

313) offers us some reference points, because it is a communicative "three-faced Janus" which combines a plastic representational code, graphic symbolism and an inscription, and the linear writing system is in *statu nascenti*. The object was found in 1976 at Ocna Sibiului (in Romania) in a "community dwelling" dedicated to a religious cult. It belongs to the first phase of the Pre-Criş II culture, and is 8000 years old (absolute dating). Both the phallus and its support are made of stone (micaceous grit). (Fig. 4)

According to the discoverer, Iuliu Paul, the object is not a phallus, but a small (2 centimetres wide at the base and 4.5 centimeters tall) and highly schematised conic statue. Its style is reminiscent of a similar piece, made of calcite, found in sanctuary no. 21 from the layer VII of the Çatal Hüyük settlement, dated to 6500–6200 BC, but not bearing an inscription. James Mellaart, the former head of the excavations at Çatal Hüyük, asserts that the statuette corresponds to a bearded man riding a bull (*Mellaart 1963*). Hökmann believes that it represents an embracing couple (*Hökmann 1968*). Comparing the two interpretations, Paul chooses the second, and extends it also to the Ocna Sibiului statuette, suggesting that it was

Fig. 4. The inscribed "not phallus" from Ocna Sibiului (Romania).

modelled under a strong Anatolian influence. The minute statue is that of a bearded man, carved in bas-relief to enable us to identify his features, bound to a woman now unrecognizable. On its right side the object possibly bears the sun and a crescent moon, the cosmological symbols of the couple. Thus the Transylvanian statuette, although similar in shape and general features to that from Anatolia, differs from the latter because the main message (the embracing couple) is suggestively represented not only iconographically, but also through a combination of incised symbols (Fig. 5).
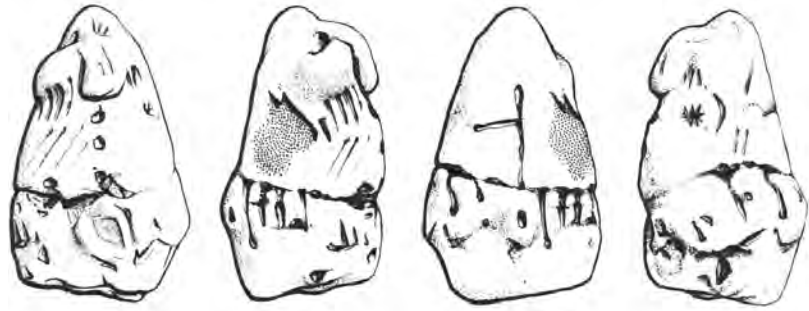

Fig. 5. Cosmic symbolism on the inscribed "not phallus" from Ocna Sibiului (Romania).

The statuette's parallelepiped base was found beside it. Its dimensions are 4 cm long, 2 cm tall and 2.5 cm wide. It bears an inscription composed of N, X, V, ∧, <, > motifs, parallel horizontal lines and a lozenge. The signs are simple rectangles organised in linear sequence. According to Paul they are "ideograms made in a linear manner" (*Paul on-line*). If one compares them and the signs of writing in Haarmann's inventory[4], one finds that they have a more archaic and not well-standardised pattern (Fig. 6).

The text, of course, is indecipherable, but one can note that, although the small statue has mainly male symbols (and its actual shape is phallic), the altar presents an inscription predominantly composed of female signs. In particular, the lozenge is placed in a central position and is slightly in relief, like the bearded man on the statuette. It is also associated with some pairs of signs executed similarly to those from the statuette representing the sun and crescent. The only difference is that the predominant technique on the base seems to be excision (*Paul 2002*).

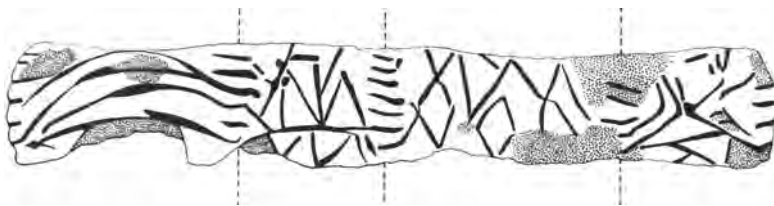Statuette and altar form a "cultic assemblage" which represents the oldest existing combination between

plastic illustration, symbols and signs of linear writing, and which maybe construed as a conversion-table between these three different types of communication codes. Iconic representation, symbolism and written message are elements of the same symbolic complex, the one reflecting or partially defining the others. Whether or not one agrees with Leroi-Gourhan's interpretation of most of the abstract signs as gender related, his discovery that figuration (animals in Upper Palaeolithic messages) and abstraction were related in an organised way and were, in some sense, of equivalent value, is significant (*Leroi-Gourhan 1964*).

One can presume that on the Ocna Sibiului "cultic assemblage" a single message could be transmitted through three channels and therefore, each narrates in its own code, the same myth. But what is the myth being reported by the Ocna Sibiului "non phallus"? It probably involves a narration which acted in the Danube basin as the foundation of all the regional spiritual beliefs, and which was common also to other primitive agricultural societies. It could well concern the creation and re-creation of the world, which is closely connected with the conjunction of the opposites expressed by the sacred union between a female and male divinity (*ieros gamos*). This mythical drama consists of sexual union, birth, death, and re-birth; i.e. "the mystery of the life cycle". It is therefore possible that the small statuette and its base are the earliest example of Danube art which employs iconography, magic-religious symbols and signs of a linear writing for the narration of the myth, the motion of the universe as a perpetual sexual act between sun and moon, the mother of all other myths (fertility, rebirth, the vitality of water etc.).

Fig. 6. The inscription on the inscribed "not phallus" from Ocna Sibiului (Romania).

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4 Haarmann's inventory (1995) is now available in the Prehistory Knowledge Project web site: www.prehistory.it

But what need was there to transmit the same myth by the three different codes? The demiurgic meaning of sacred sexual intercourse rendered in a plastic way is mentioned above. Regarding the language of symbols, it conveys meanings in a synthetic way, and the effectiveness of a symbolic message can be measured by means of its own fundamental essentiality. For Christian believers the minimal sign of the cross evokes a complex myth. Two segments placed cross-wise immediately recall the figure and story of Christ, already handed down in a sequence of events, both oral and written. Similarly, the astrological symbols, the sun and moon, were probably used on the small statue of Ocna Sibiului to fix and convey the essence of a spiritual message, the power and the blossoming effect of *ieros gamos*, by simply triggering the memory of the observer.

Ultimately, the sequence of linear written signs on the altar, although in archaic style, was used to mark the various passages of the myth of divine creation and, perhaps, detailed the makers' drama as recalled during collective rituals. It is possible to imagine that the inscription was the graphic expression of oral formulae, depicting ritual sounds which were organised into a logical sequence. Were these single words or systems of words, or some tape sort of mantra? We do not know for certain, and probably never will.

If a mythical story can be transmitted by more than one code, we cannot expect each iconic detail or symbol to correspond to a linear written sign (or vice-versa). However, it is important to observe that the ritual object of Ocna Sibiului shows us the foundations of the combined use of an iconographic code, archaic magical-religious symbols, and signs of a linear script; and these are the same writing signs which, when inscribed or painted on other artefacts in different patterns, are able to narrate other myths.

The "non-phallus" informs us that the inscriptions in Danube script were not used only to evoke the name of the divinity or some of its attributes, or recall the name of the worshipper, but contain a ritual formula, and were sometimes employed as "mythograms", texts which narrate myths, stories and epopees. The mythograms' purpose was probably "to record (fix), preserve and transmit this kind of spiritual knowledge. It might also have induced the spectator to recall and orally express the whole myth, as well as to perform the related ritual practices" (*Paul 2002*). The Ocna Sibiului ritual object is also important because it shows that the Danube Neolithic population

invented a linear writing based on a threefold Palaeolithic and Mesolithic heritage: a range of visual indigenous symbols which persisted for several thousand years, specific principles in the spatial distribution of the signs. and an archaic native spiritual tradition. For this reason I agree with Budja that "the external symbolic storage employing technical and symbolic culture was a characteristic of hunter-gatherer as much as of agrarian societies. For this argument here we should expect that hunter-gatherer symbolic structures in the Balkans and Carpathians maintained long traditions and that the 'revolution of symbols' in the context of the transition to farming is not a paradigm we have to adopt" (*Budja 2004.81*).

In addition to the Ocna Sibiului ritual assemblage there is other evidence of Danube texts co-existing on the same object with marks of other informative codes. For example, on a clay model of a temple from the early 5th millennium BC found at Gradešnica (north-west Bulgaria), and also on heavy restored, facade, walls and lateral walls are decorated with a symbolic design and decorations. The main beam has M and W motifs characteristic of the constellation of Cassiopea. The front columns on either side of the entrance are vertically inscribed with script signs divided by dots (Fig. 7).

Fig. 7. This temple model from Gradešnica (northwest Bulgaria) facade, walls and lateral walls are decorated with a sacred design and symbolic decorations. The main beam presents "M" and "W" motifs characteristic of Cassiopea constellation. The front columns at either side of the entrance are vertically inscribed with script signs divided by dots.

A MATRIX OF SEMIOTIC MARKERS AND RULES FOR CHECKING POSSIBLE CLUES TO A SCRIPT IN THE DANUBE BASIN

Although the Danube script has a very weak association with phonetics and we are not able to read it at all, it should not be confused with other communication channels used by the Neo-Eneolithic Danube populations. But can we distinguish in the field, with a reasonable degree of probability, a sign or a grouping of signs belonging to the writing system or to the decorative sphere, the symbolic language, divinity marks, owner-manufacturer marks, or chronological representations?

I submit to the discussion a matrix of basic semiotic markers and rules in order to distinguish bi- and multi-sign texts of the Danube script, without of course knowing their meanings, from compounds of signs associated with other communication codes, among them decoration, symbols, divinity identifiers[5]. Of course, these indicators and guidelines are in progress, because one will be able to distinguish the different communication channels only when one is be capable of reading the script. On the other hand, one will not even be able to read the inscriptions if one is unable to isolate their signs from the others. It is really a loop that one has to break step by step and by progressive approximations.

How to distinguish script signs from ornamental motifs

The writing has some features that distinguish it from decoration, but it is not always a clear distinction. If it is unclear, it is easy to explain the reason:

● Writing and decoration can both be finalised to transmit messages, packages of information. "The whole world outlook of prehistoric farmers was expressed in the ornamentation: the Land and Underground World, the Sky, the Sun, the Moon, the Stars, the Plants, Animals and People... Observant people can see complete 'texts' composed from ornaments: it is raining, grain is falling to the ground, it is sprouting..." (*Videiko 2002*).

● Script signs and decorations share the same geometrical root, which is why they sometimes have identical outlines. Their derivation from similar graphic sources is so strict that some signs appear to be a development of the schematic decorations on Lepenski Vir and Vlasac boulders, or an evolution of the linear ornamentation on Starčevo vessels.

● Some signs (for example, Λ, V, M, X, +, and some naturalistic motifs such as sun, rain, bird, tree) can be, depending on the context, either a written sign or decoration (*Gimbutas 1991*).

● Script signs and decoration can live together on the same object.

● Both written signs and decoration could have been conceived for aesthetic purposes.

Dealing with such subtle confines between a decorative design and a written text, and facing an uncracked code, which semiotic criteria can one use to distinguish between artistic applications and script? There are some guidelines to the writing system vs. decorative design:

● If one sets aside for a moment exceptional signs that can be used for writing messages as well for artistic ones, script signs are easily identifiable by their individuality, conventions and standardisation, and their membership in a precise and systematic inven-

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5 Between 2001 and 2005 the author visited and investigated many Neolithic and Eneolithic collections of Danube Civilization. In Austria: Naturhistorisches Museum- Prähistorische Abteilung of Wien. In Bulgaria: National Museum of History, National Archeaological Museum. In Germany: Museum für Vor- und Frühgeschichte of Berlin, Archäologische (Vormals Prähistorische) Staatssammlung – Museum Für Vor- Und Frühgeschichte of Munich. In Greece: National Archaelogical Museum of Athens, Archaeological Museum of Volos, Archaeological Museum of Rodhes, Archaeological Museum of Thessaloniki, Archaeological Museum of Ioannina, Archaeological Museum of Florina. In Hungary: Budapest History Museum. In Italy: Museo Nazionale Preistorico ed Etnografico L. Pigorini of Rome. In the Republic of Macedonia: Archaeological Museum in Skopje, Gradski muzej of Skopje. In the Republic of Serbia and Montenegro: National Museum of Belgrade, Museum of Novi Sad, Museum of Kladovo, Museum of Vršac, Museum of Lepenski Vir. In Romania: Muzeul National de istorie a Romanici of Bucuresti, Muzeul de Istorie si Arta al Mun. of Bucuresti, Muzeu naţional de Istorie al Transilvaniei of Cluj-Napoca, Muzeul Banatului of Timişoara, Muzeul Naţional al Unirii of Alba Iulia, Muzeul Brukenthal of Sibiu, Muzeul Judeţean of Botoşani, Expoziţia Arheologică Tibiscum of Caransebeş, Muzeul de Istorie al Moldovei of Iaşi, Complexul Muzeal Judeţean Neamţ of Piatra Neamţ, Muzeul Judeţean de Istorie şi Arheologie Prahova of Ploieşti, Muzeul de Istorie of Sibiu, Muzeul Regiunii "Porţilor de Fier" of Drobeta Turnu – Severin. The author also visited and studied many university collections. In the Republic of Serbia and Montenegro: Department of archaeology, Faculty of Philosophy, University of Beograd, Vinča "Belo Brdo" Archaeological Site and the exhibition *Signs of Civilization* in Novi Sad. In Romania: Pre- and Protohistorical Research Centre of Alba Julia University "1 Decembrie 1918", Universitatea "Al. I. Cuza" Facultatea de Istorie, Seminar de Istorie Veche şi Archeologie of Iaşi, Institutul de Arheologie of Iaşi, Cucuteni Rezervaţia Archeologica.

tory (in the progress of being built and with much effort by scholars who are also dealing with regional variants and chronological modification)**6**.

● It is more probable that geometric, abstract, highly schematic, linear and not very complex signs (like the Y, M, N, X motifs) remained within the script framework rather than the ornamental. Only written signs can be modified by three techniques: a) duplicating-multiplying them; b) reversing them round as in a mirror, inverting them, or simultaneously rotating and inverting them; c) applying diacritical marks such as small strokes, crosses, dots, and arches. The sophisticated rule of multiple variations occurs only in written signs. On this basis, a V can be transformed, for example, into a V+, a V/ or a \I/. The variations can be simple (applying only one diacritical mark to a root-sign), or complex (applying two or more diacritical marks to a root-sign).

● Signs of writing occur in isolation as well in groups.

● When in groups, written signs have an asymmetric coordination and prefer a linear alignment (but a linear alignment is not an absolute prerequisite for a writing system). The lack of symmetry raises doubts about their decorative attributes. Sometimes the space is organized in registers, in columns or in lines to facilitate reading and writing, but Danube script signs are not symmetrically positioned in the aforementioned frameworks.

● Written signs can be combined by ligatures, which occur when two or more signs are written or printed as a unit.

● When in combination, script signs do not form a harmonious design, but a functional one (although they are sometimes positioned in an aesthetic way).

● The use of dots and vertical strokes in separating signs or groups of signs is a strong indication of the occurrence of an inscription.

● An inscription can combine both abstract and naturalistic signs.

● Writing does not suffer from horror vacui; it never saturates the available space.

Ornamentation has a completely different purpose, rules of composition and organisational principles.

We can select those we feel are necessary for a comparison with written signs:

● If one sets apart for a moment those ambivalent signs that can be ornaments carrying messages as well writing, the decorations are form a specific collection, a corpus of artistic motifs.

● When one deals with geometric, abstract, highly schematic, linear and uncomplicated signs (for example Y, M, N, X motifs) there are many opportunities to move outside of decorative framework. In fact, it is difficult to appreciate the pleasing of the eye by such "unusual" ornaments: their outline is graphically banal and much less decorative than motifs such as spirals or labyrinths. Perhaps it is more productive to consider them as a means of writing or as symbolic messages.

● The artistic signs can be varied by duplicating or multiplying them or rotating them as in a mirror, inverting them, or rotating and reversing them simultaneously, but they are not subjected to the technique of multiple variations, which is a key characteristic of the Danube script. Therefore, decorations do not become more complex by the application to them of diacritical marks such as small strokes, crosses, dots and arches.

● Ornamentations occur preferably in groups; single-sign decorations are very rare, because they are preferred as symbols.

● In general (but there are important exceptions), the space is not organized in different registers, in columns or in lines typical of a script layout.

● An ornamental element is in general arranged with others in order to capture a symmetrical balance to enhance the aesthetic value of the object. The rhythmic and symmetrical repetition of a geometrical motif is the principal feature of the decorative system of the Danube Civilization (*Todorova 1978*). If the search for graphic harmony drove scribes to systemise the decorations along repetitive and regular patterns, the patterns are not necessarily linear. When forming combinations, it is not infrequent that the ornamentations are arranged according to a hierarchical principle: the units are grouped to create ever-widening patterns. In conclusion, a decorative motif is very rarely based on the asymmetrical combination of its units.

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6 Shan Winn in USA, Harald Haarmann in Finland, Gheorghe Lazarovici in Romania, Andrej Starović in the Republic of Serbia and Montenegro, Adamantios Sampson in Greece are occupied to build inventories of Danube script signs.

● Ligatures are absent in the field of ornamentation.

● An ornamental element is in general arranged with others in order to give pleasure in exercising the sense of regularity and order. But since the greater artists of the Danube culture were aware that an excess of standardized monotony in a decoration could dilute its fascination, they sought variations in the signs outlines and in the signs patterns which are pleasing in terms of balancing boring repetition and confusion deriving from an excess of innovation, a tangle or an alteration in the proportions. The exploration of the complexity generated from slight variations in the framework of general homogeneity is one of the key principles by which the European Neolithic and Eneolithic realised artistic masterpieces.

● In decorative designs, dots and vertical strokes are in general not used to separate signs or groups of signs. If so, they are positioned symmetrically.

● In general, in ornamentation there is no combination of abstract signs and naturalistic motifs.

● It is not infrequent that a decoration, stricken by *horror vacui*, saturates the entire available space.

How to distinguish script signs from symbols

In the Danube Communication System, signs of writing and symbols could have been superimposed in many spheres, and the objective difficulties of distinguishing between writing and symbolic messages are so hard as to render the first invisible to many scholars. The reasons for the overlap between the two communication channels are that:

● Written texts and symbolic language can both be finalised for the transmission of messages, packages of information. Script signs and symbols, meanwhile share the geometrical roots inherited by the rich Mesolithic and Upper Palaeolithic visual inventory, which is why they sometimes have the same form.

● The Danube Script is a very archaic system of writing, so it consists probably of a mix of logograms, ideograms, pictograms and some limited phonetic elements occasionally and marginally marked. Logograms, ideograms, pictograms were mainly derived from the language of abstract symbols.

● Going deeper into the relationship between writing and symbolic code, one can note that the Danube script is primarily a sacred archaic system of writing employed in liturgies and to express magic-religious beliefs and, consequently, its signs often have the same outlines as sacred symbols, geometrical and abstract ones in particular. This sometimes causes confusion, but demonstrates at the same time the origin of many written signs from a language of sacred symbols.

● Some signs can be, depending on the context, a unit of writing and a symbol (*Gimbutas 1991*). There are three kind of ambivalent sign: abstract, simple-linear signs such as V, M, X, +; some (numerical?) signs based on strokes or dots; and naturalistic motifs such as sun, boat, animal head, hook, ring, star, tree roots, crescent, dancer, decapitated person, and ladder (*Merlini 2004a*).

● The symbols used in writing and symbolic language can be organised in the same way. In fact, symbols sometimes also follow a linear, logical, albeit not phonetic sequence, i.e. symbols can be linear, progressing from seed to the bud, thereupon to the developed plant, or on a hierarchical basis, as in Mesopotamia, with a distribution of divinities stratified according to their importance.

● Script signs and symbols (particularly religious abstractions) can be found side by side on the same object, because the two channels of communication were sometimes used together on the same item.

Here are some indications to help distinguish between inscriptions and symbolic messages.

● If one sets aside ambiguous signs which can also be involved in writing messages as well as in symbolic communication, one can observe signs which are merely units of script, and signs which are purely symbolic. Therefore, one can build an inventories of writing and of pure symbols, as for example, in the multiple variations on the circle on many pots from the Precucuteni and Cucuteni cultures. The signs ⊕ and ◎ are units of the Danube writing system[7] which are also symbols. On the other hand, solar marks, concentric circles, discs with differing internal features thus ⊛⊖⓪⊖⊙◉⊝⊕◎ are entirely symbolic. Other examples are the ellipse (the egg) and the double ellipse (the double egg), which are exclusively symbol (*Merlini 2004d*).

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7 They are respectively OE 138 and OE 186 in Haarmann's repertory (*Haarmann on-line*). The first is DS 145 variant in the 2004 inventory of Winn, the second is not listed (*Winn on-line*).

Contraposition	Writing	Decorations
Inventory of the script vs. corpus of the ornamental motifs	If one sets aside the exception of ambivalent signs that can be involved in written messages as well as in ornamental ones, written signs can be collected in a precise and systematic inventory.	If one sets aside exceptional signs that can be involved in ornamental messages as well as in writing ones, artistic signs can be collected into a specific corpus.
Sign outlines	Geometric, abstract, highly schematic, linear and not very complex signs belong, with more probability, to the script framework.	When one deals with geometric, abstract, highly schematic, linear and uncomplicated signs, one is with less probability within the decorative framework.
Techniques and restrictions on modifications	Writing can be modified by diacritical marks such as small strokes, crosses, dots and arches, as well as by duplicating or multiplying them, reversing them as in a mirror, inverting them, reversing and inverting them simultaneously.	The decorations are not subjected to the technique of the multiple variation. They can be varied only by duplicating or multiplying them or rotating them as in a mirror, inverting them, or inverting and rotating them simultaneously.
Balance between isolation and grouping vs. inclination to grouping	Written signs occur singly as well as in groups.	Ornaments occur preferably in groups.
Principles of spatial organisation	When in groups, written signs are asymmetrically co-ordinated and prefer a linear alignment (but a linear alignment is not an absolute prerequisite of a writing system). Sometimes they are positioned along different registers, in columns, or in lines.	An ornamental element is in general arranged with others in order to capture a symmetrical balance which enhances the aesthetic value of the object. The rhythmic and symmetrical repetition of a geometrical motif is the principle feature of the decorative system.
Ligatures	Written signs can be linked by ligatures.	Ligatures are absent in the decoration.
Functionality/aesthetics	An inscription assembles signs in a functional way (although written signs are sometimes positioned aesthetically).	The combination of artistic signs can be subject to slight variations in the framework of general homogeneity.
Dots and vertical strokes	The use of dots and vertical strokes in separating signs or groups of signs is a strong marker of the occurrence of an inscription.	In a decorative design, dots and vertical strokes are in general not used to separate signs or groups of signs. If so, they are positioned symmetrically.
Abstract and naturalistic combinations	An inscription can combine abstract and naturalistic signs.	In general, in ornamentation there is no combination of abstract signs and naturalistic motifs.
Horror vacui	Written signs never saturate the entire available space, because they carry a specific message.	It is not infrequent that decoration saturates the entire available space.

Tab. 1. A matrix of markers and rules to distinguish between writing and decoration.

● When written signs are associated with ambiguous signs (be script units or symbols), they are inscriptions and not symbolic messages.

● Only the signs of the script can be modified applying diacritics (such as small strokes, crosses, dots and arches) and duplicating or multiplying them, or moving them around in various ways as alluded to above. The symbols do not vary in outline very much. They cannot be reversed, inverted or enriched by diacritics as units of the script can. Sometimes they are duplicated or multiplied to reinforce their meaning and power.

● Abstract written signs are more numerous than abstract symbols. On the contrary, naturalistic symbols

are much more than writing depicting objects, plants, animals or natural phenomena. To synthesis, one can note that symbolic language has less of a tendency towards abstraction than writing. When one observes a combination of simple, abstract, linear signs on an object, it is probably a form of writing.

● It is important to highlight that pictograms and ideograms are not at schematic drawings, but precise forms of writing. They are not draft images stylised by the arbitrary inventiveness of a scribe, but signs that, even representing real objects, have three kinds of features: they are standardised silhouettes; they are inserted in a precise inventory of signs of writing; they have definite meanings. In conclusion, pictograms and ideograms are not simply images, but those specific images which settle in the inventory of the writing characters: they are signs of writing with a naturalistic root. If we consider the Latin alphabet, for example, the A reminds us easily of inverted horns from the taurine pictogram from which it originated; the V owes its existence to the Egyptian hieroglyphic of a praying man with raised arms. Even if A and V derive from ancient drawings, it is usual to consider them as letters of our alphabet, as well as it is expectable to consider the bull horns as an ancient pictogram and the orante as a hieroglyphic.

● Writing can be linked by ligatures, symbols cannot.

● The use of dots and vertical strokes in separating signs or groups of signs is a strong marker of the occurrence of an inscription, whereas the other hand, the symbolic code does not employ dots and vertical strokes to separate signs or compound of signs.

How to distinguish writing from divinity[8] identifiers

Divinity identifiers can be inserted into the general category of identification marks (such as ownership or manufacturer marks), but they are very peculiar identification marks. In the Danube civilization every divinity revealed itself by a distinctive mark, with local variants indicating the regionalism of the divine representation, and rituals and liturgies, in the framework of the same magic-religious beliefs. Moreover, there were local divinities recognized by their typical symbols and known and worshipped only in a limited area.
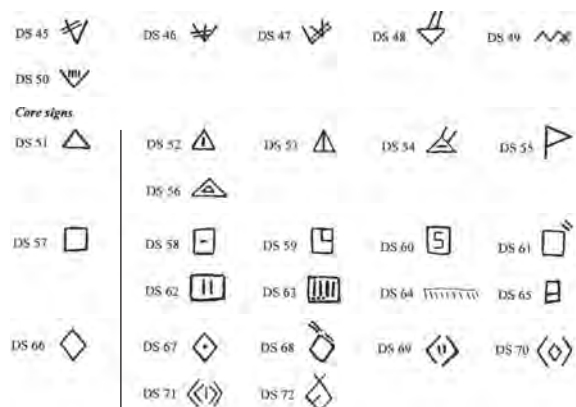
According to the traditional explanation, a Neo-Eneolithic divinity identifier may not be considered writing – although it identifies the essence of a divinity, synthesises its attributes and possesses/expresses its power – because it does not establish a link with verbal communication. Since it does not carry the name of the divinity, it is judged to be not a true god/goddess signature but merely a mark which might be abstract, arbitrary or synthetic, but which does not reflect the phonemes of its name or attributes. A divinity identifier is not written in a linguistic sense.

In the 2004 inventory, Winn placed the divinity identifiers among the signs of the Danube writing system (*Winn on-line*).

Contrapositions	Writing	Symbols
Inventory/repertoire	There are signs which are used only in written communication, so we can build an inventory of these.	There are signs which are used only in symbolic messages, so we can build a inventory of pure symbols.
The identification of the signs that can be writing units or symbols	When writing is associated with ambiguous marks (those which can be script units or symbols), one is dealing with an inscription.	One can be confident enough to assume to be outside of the symbolic framework when writing is associated with ambiguous signs (those which could be units of script or symbols).
Techniques and restrictions in outline modifications	Writing can be modified by applying diacritics.	Symbols do not vary in their basic outlines.
Pictograms and ideograms vs. schematic drawings	Pictograms and ideograms.	Schematic drawings.
Ligatures	Writing can be linked by ligatures.	Ligatures are absent in symbolic communication.
Dots and vertical strokes	The use of dots and vertical strokes in separating signs or groups of signs is a strong indicator of an inscription.	In symbolic language dots and vertical strokes are not employed to separate signs or groups of signs.

Tab. 2. A matrix of markers and rules to differentiate writing and symbols.

8 Regarding the Neo-Eneolithic period I prefer to use the term "divinity" and not "God/Goddess", which is much more pertinent for subsequent times.

DS 45 · DS 46 · DS 47 · DS 48 · DS 49
DS 50

Core signs

DS 51 · DS 52 · DS 53 · DS 54 · DS 55
DS 56

DS 57 · DS 58 · DS 59 · DS 60 · DS 61
DS 62 · DS 63 · DS 64 · DS 65

DS 66 · DS 67 · DS 68 · DS 69 · DS 70
DS 71 · DS 72

I am very wary of considering divinity identifiers as a category of writing, but for completely different reasons than the usual ones. According to the usual hypothesis, *ars scribendi* consist in the practice of memorising and expressing ideas connected to language through graphic signs, but for a growing number of scholars, the aim of this technique is different: storing and transferring information for reuse. So in order to define what writing is, no connection with the spoken code of a language is needed: its connections with the world of ideas and concepts is enough. To create a text means to fix concepts, a process independent of how they may be expressed in spoken language and its rules. What actually stimulates the use of writing is its relationship to culture: its mission is to establish sequences of ideas, to connect concepts. This is a mental process not necessarily having to deal with the translation of sounds into visual marks, but with the cultural milieu of a society. The contingent link between sounds and signs is not a theoretical, but a historical observation. The first writing experiments and the increasing integration of signs into a system were not directed at reproducing the structure of spoken language (words, syllables or letters), nor to express grammatical structures. Our ancestors were more anxious to represent their ideas physically. Transcribing speech onto clay or paper was a secondary goal which prevailed only later. The Indus civilization and the Danube civilization perhaps, declined before their writing reached this degree of maturity.

I am disinclined to consider divinity identifiers as a category of writing because, firstly, divinity identifiers are not common enough for a script in use at so many of sites for hundreds of years. In fact, the choice of indicating a divinity through a distinct sign was a private decision, localised to a region and even a village, a sanctuary or, even a single holy man; divinity identifiers were not codified through a general organised system of signs and, even if had been,

we are unable to find them in other regions or villages of the same culture. This observation is indirectly confirmed by Winn's list, which is polarized by so called "elementary signs out of time and space" easily encountered in any culture (i.e. triangle, square, and lozenge) and local, highly atypical signs. As a curiosity we can notice that Ds 55 (a flag hoisted on a pole), selected by Winn from divinity identifiers, is the same sign that in Egyptian hieroglyphs means god ("Necer", the carbonate hydrate of sodium employed to preserve the mummified corpses, and therefore to deify them).

Therefore, secondly, the Neo-Eneolithic divinity identifiers are like heraldic signs, where their numbers and shapes are not predetermined, but depend on how many aristocrats there are and on the pedigrees of their families.

Thirdly, the divinity identifiers go beyond some important conventions which rule the outline and organization of writing. Even if they can be modified by applying diacritics to express some particular attributes/powers or local hypostasis, they cannot be reversed or inverted as script units are.

In conclusion, a divinity identifier announces the presence and the powers of a divinity worshipped in a region or village or governing a specific cultic place. The idols marked by this kind of sign did not simply represent the image of a divinity, but became the divinity through a ritual in which they were imbued with godly essence. The action of tracing divinity marks in an appropriate way on figurines transformed them from everyday objects into concentrations of supernatural energies. For this reason one can infer that the most powerful statuettes, those worshipped outside the domestic sphere, were manipulated and inscribed only by initiates.

Which semiotic criteria can one use to distinguish between divinity identifiers and script units? Here are some ideas:

● Divinity marks are local; it is very difficult to find them elsewhere, even in neighbouring settlements. Therefore having found the single sign ◈ in prominent positions on Jela female figurines, Winn deduced it was the mark of a local goddess (*Winn 1981*). Contrariwise, the Danube script was in use from the sixth millennium BC to the middle of the fourth millennium in sites over a wide area between southern Hungary, Macedonia, Transylvania and northern Greece (*Merlini 2003a*).

● A divinity identifier was usually placed on objects representing the divinity, such as figurines, vases or seals, whereas inscriptions were on all kinds of objects.

● Divinity marks are positioned prominently. When, for example, it occurs on a figurine, it is located outstandingly and/or on strategic parts of the anatomy (particularly on the top of the head, forehead, neck, breasts, stomach, belly, vulva, back, or buttocks). A written text is not necessarily incised in a noticeable position, although some inscriptions are restricted to specific areas of objects.

● At times a sacred mark, representing the essence of a divinity in the abstract sphere, is so strictly connected to some of its key organs as to replace them: meanders in place of the vulva, spirals instead of buttocks, and so on. A written text never replaces a part of the denoted object.

● Scribes were careful and precise in making divinity identifiers. On the contrary, in many cases an inscription was engraved imprecisely due to the inexperience of the scribe or because of shaky hands. In others it as been corrected while the text was in progress (for example, the 'P' or 'D' in the upper left quadrant of the discoid tablet from Tărtăria).

● Divinity identifiers were made before firing and very deeply incised. An inscription could have been made before or after firing (in general it was made before firing) and with a have variable grade of pressure.

● A divinity identifier consists in general of a single sign, very specific in design, and distinctive in shape. Although script is mainly made up of one or two signs, one can also find long inscriptions.

● A divinity marker often has a pictographic root. The script is made up of abstract signs, rather than naturalistic motifs. Abstract signs and pictorial expressions are independent components in the formation of the Danube Script: the former played a more important role than the latter (*Haarmann 1995*).

● A divinity identifier is often a cartouche (hieroglyphic symbols enclosed in a loop) and is inscribed within an appropriate and reserved space organized according to a typical layout for reading a cartridge. The inscriptions show the most varied patterns, in horizontal, vertical or circular rows, but despite this variety signs are arranged in specific sequences (not necessarily linear).

● A divinity mark is preserved from superimposed scratches made during rituals or by accident. It was common for a scribe to leave some imprints on a written text (for example, on the tree of the other rectangular specimen from Tărtăria) and make scratches everywhere.

● There are signs which are used only as divinity identifiers, so we can make a list of them. There are signs which are used only in writing messages, so we can make a list of exclusively writing units.

In conclusion, observing the single sign of a pictographic root that was very well and deeply marked before firing in a prominent position and/or on strategic parts of a figurine, a seal or a vase, one has high probabilities of dealing with a divinity identifier, not an inscription.

THE OBJECTS OF DANUBE CIVILIZATION ARE BEARING WRITTEN TEXTS OR ONLY DECORATIVE MOTIFS, SYMBOLS AND DIVINITY IDENTIFIERS

A key step in searching for clues to scripts in the Neo-Eneolithic cultures of south-eastern Europe is to implement and test the markers and rules (aimed at identifying polyvalent inscriptions from compounds of signs associated with other communication channels) on the corpus of Danube inscribed objects. It is to detect the internal structure of the Danube sign system on the basis of the above mentioned typological and semiotic criteria and for evaluating the *possibility* of the presence of elements of literacy in these cultures.

A crucial piece of advice when applying this matrix of markers and rules in the field is that the falling of a sign or a combination of signs under one category of indicators does not mean they are forms of writing rather than decorative, symbolic and identifiable. The probability of hitting the bulls-eye is higher if a sign or a group of signs is simultaneously verified by as many as possible markers. To take an example, if its true that geometric, abstract, highly schematic, linear and simple signs are in general considered as writing, on can be sure of this only after this indicator of sign outlines is confirmed by others (e.g. linear sequence of the signs, multiple variation of some root signs by applying strokes to them etc.).

The following recent discoveries are just a few examples of how to apply the matrix of markers and rules. I selected them not from the core area of Danube civilization (the Vinča region), but from the peripheral regions in order to document how widespread the Danube script was.

Neolithic predators of classical Greek letters

An inscribed small-sized ceramic shard of 5000–4500 BC comes from the Cave of Cyclope on the desert islet of Youra (Northern Sporades, Greece). It bears the antecedents of the classical Greek letters Alpha, Epsilon and Delta which are aligned in a row. All three Youra signs fit Haarmann's inventory of the Danube script[9]. It is immediately evident that this sequence of signs is out of the decorative, the symbolic and the divinity mark frameworks (Fig. 8).

The fragment from the Cave of Cyclope proves that the *outlines* of the letters of the classical Greek alphabet are older than those of classical Greek script. The evidence for continuity in sign silhouettes does not obviously mean that the Greek alphabet originated from those ancient times, but that some symbols remained in use or were remembered down the millennia. The discovery also challenges the traditional theory that the Greek alphabet derived from the Phoenician, which is 3500 years later than the signs found on the potsherd from the Cave of Cyclope.

Contrapositions	Writing	Divinity identifiers
Global vs. local	Script was in use at sites over a wide area.	Divinity identifiers are local.
Occurring on all kind of object	An inscription can be found on all kinds of object.	A divinity identifier is prevalently placed on representational objects of the divinity such as figurines, vases or seals.
Occurring on many parts of an object	An inscription can be on any part of the object, although some kinds of inscriptions are restricted to specific areas.	Positioned prominently. When it occurs on a figurine, it is located outstandingly andžor on strategic parts of the anatomy.
Impossibility of replacing a key part of the object	A text never substitutes for a part of the object.	Sometimes a sacred monogram, representing the essence of the divinity in the abstract field, is so strictly connected to its key organs as to replace them.
Poorly marked vs. clear-cut	An inscription might be imprecise and carelessly wrought	The scribe is careful and precise in making a divinity identifier.
Independent of firing vs. before firing	A text is often made before firing, but it might also be made after. It could be incised with variable pressure.	In general, a divinity identifier is made before firing and very deeply incised.
Different number of units in play	Although script is mainly made up of one or two signs, one can also find three- and more- signs inscriptions.	A divinity identifier is in general a mono-sign.
Abstract roots vs. pictographic roots	The script is made up of abstract signs rather than naturalistic motifs.	A divinity identifier often has a pictographic root.
Patterns and layout	The inscriptions show the most varied patterns, in horizontal, vertical or circular rows. Despite this variety, signs are arranged along specific sequences (not necessarily linear).	A divinity identifier often has the shape of a cartouche and is inscribed within a reserved space organized according to a typical layout for reading a cartouche.
Superimposed scratches vs. preservation of the signs	Inscriptions are sometimes superimposed by scratches or scribal imprint.	A divinity mark is preserved from superimposed scratches made during rituals or accidentally.
Inventory vs. catalogue	Some are used only in writing. Therefore we can build an inventory of these.	Some signs are employed only as divinity identifiers, so they can be systematically catalogued.

Tab. 3. A matrix of markers and rules to distinguish between writing and divinity identifiers

9 From the left, the Youra signs resemble OE 103, OE 213a, OE185.

The unearthing of this inscribed, ceramic fragment of Neolithic pottery was by Adamantios Sampson, supervisor of the Inspectorate for Prehistoric and Classical Antiquities of the Cyclades. Between 1995 and 2004 he also discovered inscriptions sometimes composed of many symbols/letters at Ftelia (a settlement of the fifth millennia BC on Mykonos), at Yali (near Nisyros), in the cave of Skoteini at Tharrounia and in many other Neolithic sites in Cyclades (*Karantzola, Sampson, Ioannis 2002*). According to him, this succession of recovered inscriptions in the Aegean confirmed the existence of a "communication code which may have belonged to a Protobalkan script ... existing ...in the Balkans during the Neolithic age" (*Sampson 2002*).

The most interesting inscription is that found at Ftelia, because it is composed of many symbols/letters made up of geometric abstract signs rather than naturalistic motifs, with uniform dimensions organized in a linear alignment. The signs are clearly assembled in a functional way and not aesthetic manner. The text seems be split in two by a horizontal notch between the signs (Fig. 9).

A written message organized along linear registers and a scribe's mistake

If the most famous inscribed seal is the example from Karanovo, the most intriguing was discovered in 1999 by Panikos Chrysostomou (Pella Museum) at Yannitsa (northern Greece). It is of black stone

Fig. 8. A ceramic fragment from Cave of Cyclope (islet Youra, Northern Sporades, Greece) bearing the facsimile with the letters of classic Greek alphabet Alpha, Epsilon and Delta. It is dated to 7000–6500 BP.

and dates to 5250–5000 BC. The seal was moulded in a concave form, and its dimensions are 2.5 by 5.5 cm. The signs are incised on the concave side. Therefore the object was used to impress precise sequences of geometry on curved surfaces. Are they wrists, arms, sticks? (Fig. 10)

Applying the matrix of markers and rules one can notice that the signs are deeply incised, intentional, well identifiable in their individuality, highly stylised in form, and simple. They are linear and many express X, V or inverted V forms. The inscription is made up of geometric abstract signs rather than naturalistic motifs. In fact, only one sign resembles real objects in the shape of a body of an animal. The signs are of the same size. Moreover, they are conventional and follow a standardized model, as documented by the fact that some occur more than once. Some signs were modified by applying diacritics, possibly to express meanings which subtly changed from time to time.

On the Yannitsa seal the signs are linked by ligatures and arranged in precise linear sequences. In particular, they have been organized along three registers: as in the Gradešnica plaque, the scribe traced a series of horizontal guidelines that run along the seal's length, and then wrote over them. But he made an error. He traced the first line too high, so he had to give up writing over it. He also risked a lot on the last line. However, he managed to fit in the entire text by compressing it (*Chrysostomou 2002*). The linear sequence of the signs, the occurrence of reading registers, and the scribe's mistake prove clearly that the signs were assembled for a practical purpose and not for aesthetic reasons, because were designed to convey a specific, complex message.

The most intriguing feature of the seal are numerous cupolas which imprinted dots on the skin, clothes and other objects. Regarding their relationship with the signs, three kinds of cupola-dots occur: positioned at the end of a sign, superimposed on a sign, or completely separate from any others. The cupola dots also vary in diameter. Unfortunately, their role is completely unknown to us. From the precise execution and fixed organization one can infer that they played a key role in the construction of the message and not merely to separate its constituent units.

According to the finder the text should be read from top to bottom and from right to left. What kind of written message could have been traced on the seal?

To dare give an answer, one has at least to know how long the text was. Two holes at the extremities indicate that Chrysostomou had found only half of the entire object and inscription. Besides, a leather cord could string, as a necklace, a number of hollowed seals made of two interlocking parts. Conforming to this reconstruction, the written message could be elongated according to need, thus creating some sort of record.

Secondly, the complexity of the text, the difficulties of carving it on a hard surface, and the fact that the seal could have been worn as a bracelet or as a bead in a necklace means it was not used within an administrative-accounting framework. It is more reasonable to assume that the seal was utilized as an amulet, indicative of the magical associations of the script. It might have been an amulet-archive.

Thirdly, one has to consider the context of the discovery: Chrysostomou found the inscribed seal among some discarded shards on the floor of a house. Therefore the seal had been discarded because it had lost its significance and powers.

Finally, one has to take into account the material from which the seal is made: very hard stone. The scribe must have made great efforts in carefully incising the complex text. In addition, the signs must have had a precise and important meaning for lots of people, considering their repeatability over and over again.

What kind of message was so important as to justify such a high investment in time and expertise, wanted to be unchangeable down the course of time and repeatable thousands of times, but was suddenly discarded because it had lost its significance and impact, despite the will and the hope of the writer? The archaeologist in charge hypothesises a mythical story or a prey. In any case, one can recognize on the Yannitsa seal a system of writing of extraordinary complexity (*Merlini 2003c*).

Precucuteni Carved tablets

In 2000, two inscribed tablets were found at the Isaiia settlement, near Huşi (in Moldavia,). One, discovered in a cultic building, belongs to its earliest period, the Precucuteni II culture, around 5000 BC (*Ursulescu, Merlan 2002.73–76*). The date of the second tablet is uncertain, but its grouping of signs has

Fig. 9. At Ftelia (Mykonos, Greece) an example of symbols-letters occurred. It is composed of many "characters".

a striking similarity to that of the first example (Figs. 11–12).

The tablets are fragmented, made from local clay, and fired at a high temperature. The signs are etched. Vicu Merlan, one of the finders, described them as "linear incisions similar to musical notation". He asserted that their recovery in a cultic place showed the ancient use of an "archaic pictographic writing" or a "rudimental writing" by a priestly cast. The signs might "have transmitted prayers"[10]. According to Nicolae Ursulescu, the other finder and head of the Isaiia excavation, the tablets do not have "early writing", but "a very early use of an incipient writing" (pre-writing) strongly influenced by oriental culture, in particular "Sumer" (*Ursulescu 2002.8*). They are coeval with the Tărtăria Tablets which, however, display the distinctive properties of writing.

The writing or pre-writing hypothesis is not inconsistent, because in the Precucuteni II period, Isaiia was a crossroads for trade and culture due to its location next to the confluence of Jijla and Prut on the Moldavian plain. The presence of an important cultic dwelling of the community in the central area of the settlement attests to a rich spiritual life. In the sanctuary, a small altar and an *askos*, which is the most ancient evidence of this kind in southern-eastern Europe, have both been found in the company of the inscribed tablets.

Fig. 10. Yannitsa seal, 5250–5000 BC.

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10 *Vicu Merlan, personal communication 2002.*

Fig. 11–12. Inscribed tablets found at Isaiia settlement, near the town Huși (Moldavia, in Romania): Precucuteni II culture, around 5000 BC.

According to a semiotic analysis based on the matrix of markers and rules, the signs on the Isaiia tablets have characteristics typical of a kind of writing, although their outline is not always clear:

● The few detectable signs are writing-like, being geometric, abstract, highly schematic, linear and quite simple. Only a direct microscopic study of the incisions will allow us to establish if the difficulty in detecting other signs are due to the poor state of the objects, the lack of ability of the scribe in signs of writing or in copying them for magical purposes, ignoring their meaning and proper use, the in accuracy of the published drawings, or that they are mere scratches.

● Some signs that are purely identifiable by their individuality can categorised as writing, for example, the y and inverted y.

● Linear writing-like signs occur in groups on the tablets.

● Linear writing-like signs do not saturate the available space.

In conclusion, the circumstantial evidence of the presence of a script is not very strong on the Isaiia tablets, but stronger than the occurrence of decorative designs or symbolic language.

CONCLUSION

When inspecting the internal structuring of the sign system, clear evidence of a writing system becomes noticeable, although it is archaic and in *statu nascenti*. What are the organizing principles of the Danube script? Although it is likely that this system of representation will remain undeciphered, one can detect some features of its semiotic code:

● The script has a distinctive tendency to abstraction. It is made up of abstract signs, rather than representational motifs, and only a few inscriptions are formed from a combination of abstract and iconic signs.

● Most of the signs of writing are geometric, abstract, highly stylised in form, uncomplicated, linear in features and rectilinear in shape.

● Root signs were changed by various diacritics, with the exception of dots. We do not have enough evidence to establish if these signs are the foundations of a script i.e. a set of signs from the script.

● The Danube script organized written signs in an orderly manner and in specific places within a logically coherent system especially designed for readability. In many cases this order of is linear.

● The script is mainly made up of one and two-sign inscriptions, as in other archaic writing systems. Sign clusters of three or more signs are less frequent. Longer inscriptions are rare. This essential quality should not lead to the refutation of the status of writing to those signs. Even Hindu script (4600–3800 years old) often has single-sign inscriptions, which are complete written words, as hypothesised by Parpola (*1994*).

● The technique of forming complex signs by ligature was in use. Sometimes, for writing it is not enough to be huddle together like sheep. They connect with opening and terminal lines, interlocking in some manner, positioned within the confines of another, and merging. The result is inscriptions apparently composed of one or two very complex signs, but in fact each originated in a combination of signs.

● Sometimes dots and vertical strokes are employed in separating signs or combination of signs in complex inscriptions

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● Grammatical indications were probably omitted or left to out be understood with the aid of the surrounding context.

● Belonging to the first phase of writing, it was able to encode extended speech or long narratives because phonetic elements were absent or inadequately rendered. Sometimes the written message was used with signs referring to other communication channels.

● Any parallels between Danube inscriptions and Mesopotamian writing appears weak for chronological and graphical reasons. Firstly, the development of the Danube script predated similar evolutionary trends in Mesopotamia by almost a millennium. Secondly, if one compares the European signs with those on the ATU-list (*Green and Nissen 1987*), one can not observe any substantial convergence. In conclusion, chronological and graphic motifs exclude outside influences on the formation of the Danube sign system, either from the drift from east to west of the idea of writing, or in terms of any significant contribution to the sign inventory (*Haarmann 2002b*).

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