



Challenging Some Myths About the Tărtăria Tablets Icons of the Danube Script

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*Milady...you are old but look like a babe,
and even dress like a queen*
(song by the Italian pop singer Roberto Vecchioni)

This article will display the first results of the "Tartaria Project" promoted by the Prehistory Knowledge Project, Rome, carried out by the author and Gheorghe Lazarovici, from Eftimie Murgu" University, Reșița.

1. The Tărtăria Tablets as Icons of the Possibility of Neolithic Writing

The group of three inscribed Tărtăria tablets and their script-like signs are *the* icons of the *Danube Script* and of the *Danube Civilization* because they are the focal point of a fierce debate regarding both the spatial and temporal incubators of writing and the chronology and location of the cradle regions of civilization in Europe.

Evidence of similar signs has been known since the late nineteenth century excavation at the important Romanian Neolithic site of Turdaș (Tordos in Hungarian)¹ in Transylvania. The discovery in 1961 of three inscribed tablets near the settlement of Tărtăria kindled a wave of controversy regarding both the chronology and the origin of the signs. The recalibrated dating

¹ Many of the signs and the unusual artefacts from Turdaș are known only from the unpublished but meticulously illustrated notebook of Zsófia von Torma where she hypothesized the existence of a "Turdaș script."

of this discovery opened the possibility that writing in the Danube basin predated the earliest Sumerian cuneiform and Egyptian hieroglyphics (Figure 1).



Figure 1: The group of three Tărtăria tablets (photo: M. Merlini).

Paradoxally, the Tărtăria discovery cracked the scepticism of some scholars over the spectacular claim that the Danube Civilization used an early form of writing, while reinforcing the doubts of others. Since their discovery, the Tărtăria tablets have occupied a unique and often contentious position in European prehistory because of the dispute about their dating and the assertion that their symbols could express a form of literacy (for a survey see Merlini 2004a: 51-63).

Regarding their dating, their stratigraphic position is unsure. Therefore, they have been

used by some scholars (Hood 1967: 99-102, 1968; Makkay 1969, 1971, 1984, 1990) as evidence for a low chronology for the Danube Neolithic: i.e., that the Tărtăria tablets might belong to the Vinča C migrations (5000-4500 BCE according to Transylvanian C14 data) when such a “writing” system was largely used, not only in Southeastern Europe, but also in the area of proto-Sumerian civilizations (Lazarovici and Lazarovici 2003: 387). At the same time, the Transylvanian tablets have been considered by other scholars to be genuine Early Vinča artefacts of the fifth millennium BC (Gimbutas 1982: 87) or of the latter half of the sixth millennium BC (Haarmann 1990: 76). Therefore, they have been identified as the earliest examples of a writing system in the old world (Masson 1984; Haarmann 2002a).

The *possibility* that the tablets could represent the earliest writing in Europe has stimulated the re-examination of the archaeological material found in the last century and a half in the Danube basin. In a number of locations, investigations still in progress are facilitating the re-evaluation of hundreds of inscribed artefacts which predate the earliest Sumerian examples by up to two thousand years.

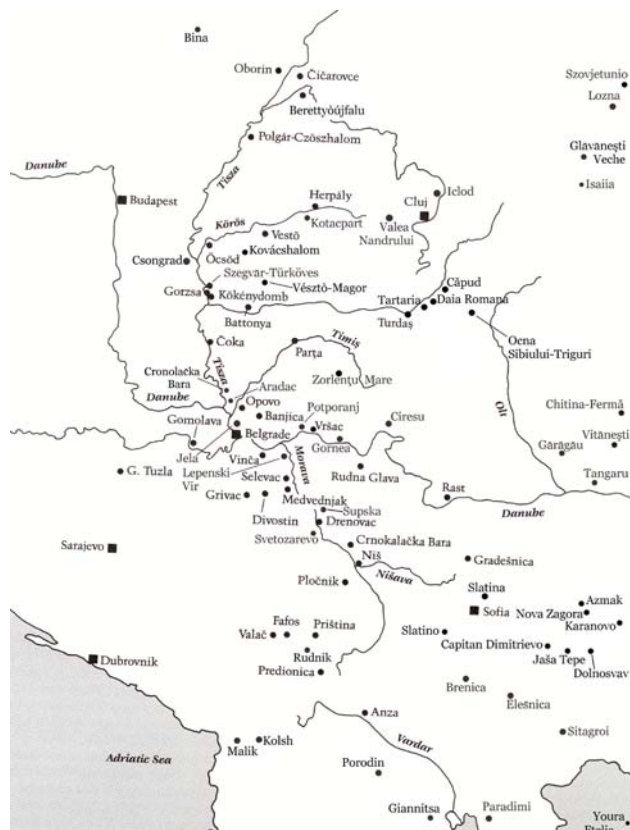
The most exciting discoveries are taking place in the archaeological collections of museums and universities which contain many inscribed objects, unearthed during the last century, which have not been published. Their excavators did not dare to speculate that these objects might express a system of writing. Other archaeologists did not realize that their findings, catalogued and published even decades ago, might bear inscriptions. They considered the strange geometrical, abstract and linear signs to be badly done decorations scratched by confused artists. Therefore in reproducing and publishing those artefacts, they sometimes amended and adjusted the inscriptions in a more fashionable way, regularizing their shapes or forcing a symmetry on the original patterns.

A third wave of scholars maintained that the strange signs were some sort of magic-religious symbols or ownership and manufacturer's marks. The last resource was to consider them simply as random scribbles made by bored and idle potters.

In the last few years the mere *possibility* that the Tărtăria tablets could express an early form of writing has changed the point of view of many scholars and has precipitated a rapid accumulation of archaeological evidence supporting the thesis that a European literacy existed in Neolithic times. For that reason the Transylvanian artefacts are no longer considered to be a unique wonder.

At the end of the 1960s, Janos Makkay counted about forty contemporaneous settlements which used similar signs in the region occupied by Hungary and Romania (Makkay 1969). In 1990, Shan Winn enumerated about fifty villages in the Danube basin alone (Winn 1990) and, according to a map published by Harald Haarmann (1999), there are twenty-three sites in the restricted area between Belgrade and Sofia. I have also mentioned (Merlini 2004a) more than eighty villages of the Danube Civilization in which signs of literacy have been discovered (Map 1).

It is important to stress that the presence of writing-like signs is not only a characteristic of large settlements. Inscribed artefacts are found as abundantly in small villages. Considering such a wide diffusion of signs, it is possible to infer the existence of an unexplainably high literacy level in the Neolithic communities throughout Southeastern Europe. Some scholars are devoting much effort to create inventories of the Danube Script. Two have been published by the *Prehistory Knowledge Project* (Haarmann 2003 [excerpt from Haarmann 1995]; Winn 2004b), and others are being developed by Andrej Starović and Gheorghe Lazarovici.



Map 1: “Literate” settlements of the Danube Civilization (Merlini 2004a, fig. II).

2. Tărtăria-Gura Luncii: A Controversial Discovery

Tărtăria is a rural Transylvanian village of five thousand inhabitants in the county of Alba, western Romania, famous in Roman times for its gold mines. The prehistoric settlement of Tărtăria-Gura Luncii is not very far from the copper and gold deposits of the Zlatna region and is located some 18-20 kilometres from two important Neolithic settlements: Turdaș and Alba Iulia-Lumea Nouă (Map 2).

The Tărtăria-Gura Luncii tell contains approximately three meters of Neolithic cultural strata, reaching a depth of four meters in some places. Four culture layers have been uncovered and the author has finalized the plan and profile with Gh. Lazarovici (Lazarovici and Merlini

2005; Merlini and Lazarovici forthcoming). The first level of habitation with the ritual grave (Vlassa’s Turdaș layer according to the obsolete chronological system by M. Garašan) contains the pit house, and perhaps surface dwellings, that belong to the Vinča culture, phases A2-A3. The settlement was fortified. The second level (named “Turdaș–Petrești” by Vlassa) actually belongs to the Vinča B phase. At this time, the settlement extended to about 7-8 ha and utilized only surface dwellings (Lazarovici and Lazarovici 2006: 477 ff.). The third level (named “Petrești–Turdaș” by Vlassa) belongs to the Petrești culture, phases AB. The top layer is indicated by the Coțofeni culture, related to the Baden and other Indo-Europeanized societies that replaced the Neolithic and Eneolithic cultures throughout Southeastern Europe.



Map 2: Location of the Tărtăria settlement.

This imposing settlement lies on a terrace around 20 meters above the Mureș river in an east-west orientation. The mound, which is 300-350 meters long and 150 meters wide, is situated in an intensely cultivated area, making it unfortunately easy for amateurs to rummage

through the soil to take out shards, fragments of figurines, remains of altars, and other artefacts.

The Tărtăria-Gura Luncii site has been studied in four distinct stages. In the 1930s, the settlement became known when Marton Roska (University of Cluj) accidentally discovered some Neolithic objects on the site resembling those from Turdaş (Roska 1942). In 1942-43, Kurth Horedt systematically investigated Tărtăria-Gura Luncii for the first time, although he only excavated a limited area in the northwestern sector of the settlement and wrote a brief report exclusively for limited circulation (Horedt 1949).

Nicolae Vlassa (archaeologist at the Cluj Museum) did a survey excavation in 1961 accompanied by Iuliu Paul and Attila Laszlo. His main purpose was to gain an understanding of the Turdaş stratigraphy by using parallel information from Tărtăria. The enormous collection of Turdaş finds accumulated by Transylvanian museums lacked any stratigraphic detail and the inventory of artefacts had been studied only in terms of typological and stylistic features. A direct stratigraphic analysis of the Turdaş site was no longer possible because the eponymous settlement had been carried away by the Mureş river. Fortunately, similar stratigraphy was still available for study at Tărtăria-Gura Luncii.

Iuliu Paul (University of Alba Iulia) performed the last systematic investigation of Tărtăria-Gura Luncii in 1989, continuing the excavation in the northwestern area of the settlement and extending the research both to the central and eastern areas (Map 3).

Discovered and lost

In 1961 Nicolae Vlassa, then 29 years old, discovered three inscribed plates of baked clay together with a small pile of offerings, associated with the bones of a mature human

being estimated to be 35-40 years old (Vlassa 1963: 492). Vlassa cautioned immediately that “the find being quite recent, we can as yet offer only some general remarks about its meaning and importance” (Vlassa 1962: 27). In subsequent publications, he continued to repeat the same information he had written in the preliminary report (Vlassa 1963, 1970, 1976). Fourteen years later he was still only offering introductory remarks. Here is a synthesis of the scenario interpreted by Vlassa (1976: 31):

- 1) The bones appeared “scorched and disjointed, some of them broken”;
- 2) The pit was a “magic-religious pit . . . filled with an ashy earth,” the pile of objects found at the bottom of it was a “sacrificial offering”;
- 3) The discovery was “the only magic-religious complex . . . of this kind in the Turdaş culture areas”;
- 4) The skeletal remains represent a Great Priest or a Shaman cremated during a sacrificial ritual;
- 5) The burnt, broken and disarticulated bones were “the remains of a sacrifice, accompanied by some kind of ritual cannibalism.”

Concerning the inscribed signs, the archaeologist made a note in the excavation report that one tablet “bears a (hunting?) scene, and the two other extremely curious signs placed in several rows” (Vlassa 1963: 490). Accompanying the marked plates, the pile of offerings consisted of twenty-six burned-clay sculptures with triangular heads and cylindrical-or-prism-shaped bodies, two Cycladic-like alabaster figurines and a spondylus shell bracelet making a total of thirty-two objects. Of these finds, Vlassa published only ten.

The other objects found in the excavation are still unpublished and the main regret is that they

are not even findable. In the National History Museum of Transylvania at Cluj the showcase dedicated to the Tărtăria ritual pit displays only ten artefacts: the tablets, five clay idols, one stone figurine (not from alabaster as Vlassa thought) and the bracelet (Figure 2). Another clay figurine (part of a pot) is displayed in another section of the showcase. Sabin Adrian Luca inserted a marble sculpture and a zoomorphic altar into the Tărtăria finds, but it is debatable whether or not they belong to the ritual pit (Figure 3).



Figure 2: The Tărtăria artefacts in the Cluj museum showcase (photo: M. Merlini).

Why the Tărtăria tablets are dubiously dated archaeological artefacts

The Tărtăria tablets have not been securely dated according to three points of view: Questions about their radiocarbon-dating; the ambiguous stratigraphy inside the pit; the uncertain location of the pit inside the stratigraphy of the Vlassa excavation.

Questions about their radiocarbon-dating

Regarding the dating of the Tărtăria tablets, most scholars have never mentioned a direct C₁₄ analysis on them. For example, in *The Goddesses and Gods of Old Europe* (1982),

Marija Gimbutas stated that “By *analogy* with calibrated radiocarbon dates for early Vinča layers *at other sites* the date of the lowest occupation level cannot be later than the early fifth millennium” (Gimbutas 1982: 87; *italics mine*). Other researchers (Barbulescu 2001; Halloran 2002) were less prudent, claiming the results of a direct radioactive carbon dating of the tablets. Some “novelists” were even less cautious, and on the basis of the supposed C₁₄ analysis they claimed that the tablets mention Enki and Ur of the Annunaki gods at least 1,000 years earlier than the corresponding Sumerian cuneiform texts (Gardner 2000). One has also to consider that the story of a Russian analysis made in the early 1960s is still circulating.



Figure 3: The zoomorphic altar from Tărtăria (photo: M. Merlini).

The fact is that the tablets have never been analyzed by radiocarbon, yet the legends abound. For example, according to various Romanian archaeologists, the tablets can no longer be submitted to C₁₄ analysis. They explain that Vlassa was not present at the event of their discovery, which happened just a few hours before the final closing of the excavation. The tablets were soft and covered with limestone due to the humidity in the pit. In order to harden them, a well-meaning and hasty restorer decided to bake them in the electric

oven of the museum laboratory. He noticed only later that the tablets were inscribed when he removed the calcic layer. Nobody knows at what temperature and how long they were baked. The fact of the matter is that, after this heat treatment, the tablets of Tărtăria will *never* be able to pass the carbon 14 test. According to Masson (1984: 115), the baking caused thermic stress that compromised the clay's basic quality indispensable for carbon analysis.

There are no photos of the tablets before the oven-treatment and Vlassa didn't mention the mishap in the preliminary excavation report or in subsequent articles. He also refused to discuss this situation with his close colleagues and friends. In his articles, he noted only that the tablets were "poorly burnt." Their reddish color could have been due to the oven-treatment in the museum. Nevertheless, other scholars have considered (on what documental basis?) that the tablets are unbaked (Whittle 1996: 101).

This unfortunate situation has damaged not only Vlassa's reputation, but that of the tablets and of the *Danube Script*. Some scholars even maintain that the tablets were not discovered by Vlassa at Tărtăria but in the basement of Cluj museum, in one of the boxes in his custody containing the Turdaş findings of baroness Zsófia von Torma.

The story of the oven sounds convincing but there is a problem. The tablets cannot be analyzed by the radiocarbon method, not because of thermic stress, but because they are made primarily of sand. The composition of sandy clay is confirmed by an analysis made by Corina Ionescu and Lucretia Ghergari of the Mineralogy Department of the Faculty of Biology and Geology of Cluj University for the *Prehistory Knowledge Project*.

The results reveal that the tablets do not contain any carbon which makes it impossible to determine their isotopic chronology. Moreover, a microscopic examination made by the same

specialists revealed that the tablets were subjected to acid treatment just after their discovery that modified the original slip. Nowadays the clay shows a chestnut reddish color and it is crystallised to the point of looking like tuff.

The ambiguous stratigraphy inside the pit

The only information that exists concerning the stratigraphy of the tablets inside the pit is from the preliminary excavation report published in 1963 by Vlassa in the magazine *Dacia*. Unfortunately, the archaeologist focused more on the hypothesized Mesopotamian influence in Transylvania than on the description of the excavation and its findings. As Emilia Masson has already observed, the publication doesn't include any reproduction *in situ* of the important pile of bones and artefacts or how they appeared at the moment of their discovery at the bottom of the pit. Neither does it contain a report about the circumstances of the dig, nor about the exact location of the findings (Masson 1984: 114). The only evidence one has is a dark photo (Vlassa 1963: 487 fig. 3, n. 4) in which an arrow points "to the 'ritual pit', dug in the yellow loess" where the idols and the clay tablets were found (Figure 4).

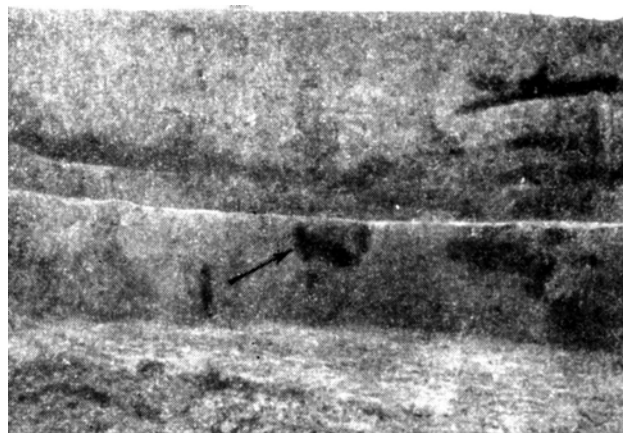


Figure 4: The only photo indicating the position of the 'ritual pit' (after Vlassa 1963, fig. 3).

The uncertain location of the pit inside the stratigraphy of the Vlassa excavation

If the stratigraphic position of the tablets within the pit is unsure, so is the stratigraphic position of the pit itself. The pit was discovered in the yellowish clay layer suggesting a range of possibilities in terms of its location—from level 11 (after observations from Vlassa) to level 6: from Vinča B1/B2 pit-house layer, to an Early Cooper Age Petrești culture Phase AB. This hesitation is strange because Vlassa excavated the site of Tărtăria with the purpose of obtaining good stratigraphic information in order to better understand the finds from Turdaș.

These weak points in Vlassa's framework have induced many scholars to be sceptical about the information communicated by the Cluj archaeologist regarding the layer where the pit was located, the position of the tablets inside it, and even their belonging to the Tărtăria settlement (see, for example, Berciu 1967; Comșa 1987).

3. A Challenge to Some of the Myths Concerning the Tărtăria Artefacts

The Tărtăria tablets were accompanied by human remains which are still preserved in the basement of the National History Museum of Transylvania in Cluj. To help solve the controversy of the dating, Gheorghe Lazarovici and I, under the patronage of the *Prehistory Knowledge Project*, went in search of the bones and found them in October, 2003. We asked for an anthropometric analysis of the bones from the University of Iași. We also sent a bone sample to the Laboratory of the Department “Scienze della Terra” of La Sapienza University in Rome requesting a C14 analysis (Figure 5).

I will now consider and challenge some of the myths concerning the Tărtăria tablets on the basis of the *Prehistory Knowledge Project* investigation.



Figure 5: The tablets were accompanied by human remains which are preserved in Cluj, in the basement of the National History Museum of Transylvania (photo by M. Merlini).

The enigma of the cultic sacrifice and the charred human remains

In Vlassa's (1963) excavation report the pit was filled with earth and ash, the bones which lay at the bottom appeared “scorched and disjointed, some of them broken,” and they were supposed to be associated with the three clay tablets covered with strange signs and a small pile of offerings. These three key observations led to his interpretation that the pit was a “magic-religious one”; the bones, tablets and objects were a “sacrificial offering”; and the burned human remains represent a Great Priest or a Shaman who was cremated during a sacrificial ritual.

The Vlassa hypothesis about human sacrifice is based upon unstable archaeological ground although it aligns with previous interpretations of skeletons found at the foundations of houses, thought to be evidence of sacrificial burials. Confident in his interpretation of a sacrificial ceremony, Vlassa jumped to the unproven conclusion that a cannibalistic ritual had taken place in Tărtăria.

Although this hypothesis was based on weak circumstantial evidence, there are other sites which have also been interpreted by researchers as showing evidence for cannibalistic ceremonies. For example, at Orăștie, only a few kilometres from Tărtăria, roasted human remains were found with crushed big bones for the assumed purpose of extracting the marrow. Two skullcaps were cut just over the ocular arcade which could have been held in the palm and used for libation. In this case the bones were not used as food but as a tool (Luca 2001). In 1999 at Bolgrad (northwestern Black Sea area), in an excavation funded by Newcastle University, a large fragment of a human skull was found among potsherds and animal bones in a semi-subterranean dwelling belonging to the Gumelnița Culture. Preliminary examinations at the Laboratory of the Institut de Palaeontologie Humaine identified three artificially perforated holes and grooves on the surface of the skull interpreted as evidence of cannibalism (Dolukhanov 2000).

Some scholars have challenged Vlassa's interpretation of a cannibalistic sacrifice and have suggested that the human bones at Tărtăria represent a priest, a shaman, a spirit-medium or a high dignitary (Chapman 1983) who died in a fire and was buried with ritual articles he valued while alive. Other scholars speculated that he was the supreme priest who was burned after he finished his serving time as a sacrifice in honor of the great God Saue, according to the Sumerian tradition (Tonciulescu 1996).

What really happened at Tărtăria? A sacrificial ritual, a cannibalistic ceremony, a conflagration? None of these explanations, for the following four reasons:

- 1) In the case of both ritual and secular cannibalism, it is necessary to find evidence in the skeletal remains, especially from the head, arms, or legs. A wide range of bones were found at

Tărtăria, but many are useless as food, such as ribs and vertebrae, and no skull fragments were found;

- 2) In a banquet, the bones are often scattered on the ground among the remains of meals, and they sometimes end up as refuse in domestic waste zones, or are gnawed by dogs. In Tărtăria they were packed together and accompanied by ritual and high status artefacts;
- 3) The bones were broken in a natural way and were not crushed as if to extract the marrow, as at Orăștie.
- 4) The bones are not burnt at all. Since the bone fragments are of a dark brown color, it was legitimate to suppose that this was the consequence of thermic stress as a result of partial or total carbonization of the collagenous matter converted by charring into elementary carbon. Chemical tests at the Laboratory of the Department "Scienze della Terra," La Sapienza University of Rome, have excluded the possibility that the bones were converted into carbon. Instead, the dark brown color is due to the absorption of oxygen hydrate and insoluble humates coming from the burial place (Figure 6).

Gheorghe Lazarovici and I have formulated a working hypothesis that the charred-like color of the bones and the "exploded" appearance of some of them are due to a natural process of discarnation. We do not assume that the body was prepared by a process of excarnation and intentional dismemberment because we found no clear sign of knife, razor, blade, bird beak, claws or animal fangs.² In our view, the defleshment was accomplished by the natural decomposition of the body (possibly by exposure to natural processes) during the first

² In the same area, excarnation was typical of the Coțofeni culture (in tumuli).

stage of burial. In this phase of the research, however, we cannot exclude a very delicate process of cleaning away soft tissues using, for example, fingernails as the Chokta tribe did in North America.

Following our working hypothesis, the Tărtăria pit would be evidence of a secondary burial. Did a double funeral rite take place with the reburial of disarticulated skeletal remains? If one follows Krum Băčvarov's suggestions about secondary burial in the Bulgarian Neolithic as the conclusion of a two-stage process of post-mortem body treatment, the Tărtăria reburial would follow this pattern and could reflect a rite of initiation (Băčvarov 2003). Such practices may be associated with ancestor worship and socialization of the dead.

If the bones are not charred, the other two traditional hypotheses fail: an accidental death by fire or a cultic sacrifice of the corpse by fire.

The riddle of the identity of the corpse

In the published literature, the bones from Tărtăria are supposed to belong to an adult male who is usually considered to be a priest, a shaman or a high dignitary on the basis of the associated artefacts and the cremation ritual designed for a very special person. Nevertheless, the anthropometric analysis conducted by the Centre for Anthropological Research of the Romanian Academy of Science at Iași ascertained that the bones belong to a female, very ill and very old for the standards of that time. If one wants to continue with the image of a ritual pit, it is necessary to speak about the Tărtăria priestess, shaman-woman or dignitary-woman. In this phase of the research we prefer to talk about "Milady Tărtăria" and to indicate her status as a "revered holy woman" (Merlini 2004a: 289). Let us try to outline an identikit for Milady Tărtăria on the basis of the anthropometric analysis made by Georgeta Miu in Iași.



Figure 6: The bone fragments are of a dark brown color and some have an "exploded" appearance, giving the illusion that they had been burned (photo: M. Merlini).

The sex, age, height and anthropological type of Milady Tărtăria

The skull and pelvis are missing (from the latter there are only some fragments), so the determination of sex and age of the subject has some limitations. Based on the metric and morphological features of the long bones (entire or fragmentary) and others (collar bone, vertebrae, talus, heel bones, and fragments of the belt bones from the pelvis area), she has been identified as a 50-55 year old woman. The estimated age was based on the reabsorption of the spongy tissue, aspects of the pubic area, and the pathological degeneration of certain bones.

The estimated height of the skeleton is 147 cm, indicative of a small-statured woman. This calculation was based on classical methods of measuring the length of the radius, cubitus and tibia. Although the skull and face bones are missing, the small height of the subject and the gracile features of the bones have led us to the conclusion that Milady Tărtăria was of the Mediterranean type.

Paleopathological aspects

A degenerative process of the bones has been identified on the *cervix femoris* and on the right

head of the femur. This degenerative-arthritic process contributed to the modification of the diaphysis (shaft of the bone), making it thicker and shorter, which caused an ankylose (closing) of the femoral articulation (Figure 7).



Figure 7: A degenerative process has been identified on the right femur (photo: M. Merlini).

It is possible to observe the same degenerative process on three dorsal vertebrae (possibly the 6th, 7th and 8th) in which the body of each vertebra is half the normal size because of the destruction of the tissue on the right side. This

kind of malformation did not cause neurological lesions. It is possible that this degenerative process affected the ribs related to these vertebrae (some fragments show this process). The lower part of the articular surfaces of the pubis shows a similar destructive process.

We do not know the origin of these bone lesions, but they are associated with a quite high process of osteoporosis. All of these degenerative processes may have produced great pain which must have been a commonplace experience for Milady Tărtăria during the last 10-15 years of her life. But her death could be related to other causes.

According to the anthropometric analysis, this degenerative process of osteoporosis was not the “silent epidemic” that typically affects post-menopausal women involving loss of bone mass, but could have been due to *pyogenic osteomyelitis* (bone inflammation) or to *Mycobacterium tuberculosis* (osteo-arthritis tuberculosis) or to *Treponema pallidum* (syphilis). *Osteomyelitis* is the most common pathology seen in ancient skeletons and it is usually the result of infections by microorganisms.

Tuberculosis is also a very ancient disease. The bacillus *Mycobacterium* probably predates the genus *Homo*. The earliest evidence in Europe is in Germany, where a young male (c. 5,000 BC) was found with his 3rd and 4th thoracic vertebrae collapsed (Herzog 1998).³

Regarding syphilis, endemic or non-venereal syphilis (*treponematosis* or what is commonly referred to as *bejel*) and venereal syphilis are not the same diseases. In the case of both, skeletal involvement is extensive and ultimately fatal;

³ Tuberculosis, according to most medical historians, originally became a medical problem when humans began domesticating cattle and other mammals which carry a form of the disease known as bovine tuberculosis. The consumption of infected meat and milk products eventually led to the transmission of the disease to the human population.

however, their mode of transmission is quite different. The venereal form of the illness is transmitted by sexual contact, while the non-venereal form is transmitted by skin contact, occurring mostly in childhood (Ortner and Putschar 1985). The origin of syphilis is an ongoing debate, but early evidence of it was revealed by an Italian burial⁴ and another in Poland (Carter 1998: 532:). Even though *pyogenic osteomyelitis*, tuberculosis and syphilis behave differently,⁵ the symptoms of each are quite similar and these symptoms affected Lady Tărtăria from the time of her youth.

Milady Tărtăria limped on her right leg since her youth because of her thicker, ankylosed and shorter right femur and leg. She had a posture forming a > (an arrow) because of her degenerated, decalcified and fragile spine. She had also the tendency to angle towards the right because scoliosis had deformed the right side of her chest and her right shoulder. A figurine found at Turdaş (interpreted as male) can give an idea of the physical posture, garment and jewelry of Milady Tărtăria (Figure 8).

The radiocarbon dating of the bones

The uncalibrated age of the C₁₄ analysis made by the laboratory at La Sapienza University has been converted to the corresponding calibrated age using the data and the procedures reported by Stuiver and Reimer (1993). The result is the following (Merlini 2004a: 289): Rome – 1631 (human bones): 6310 ± 65 yr BP / calibrated 5370–5140 BC (Figure 9).

⁴ The discovery in 1992 of syphilis in a tomb at the Pantanello Necropolis (Metaponto) proved that that disease had existed in Europe 2,500 years ago. The presence of syphilis was detected by the examination of human remains. *Sclerotic hyperostosis* (the thickening and pocketing of the cranial wall) was an effect of this disease (Carter 1998).

⁵ For example, syphilis of the bone is commonly symmetrical, *pyogenic osteomyelitis* is less so, and articular surface lesions of tuberculosis are usually asymmetrical unlike other forms of arthritis (see <http://www.anthro.ucdavis.edu/courses/s02/ant156/Lecture%2014.htm>).



Figure 8: A figurine from Turdaş could give an idea of the appearance of Milady Tărtăria (courtesy of the National History Museum of Transylvania, Cluj).

To which culture do the Tărtăria finds belong?

If one compares the chronostratigraphic sequence of the Transylvanian and Banat sites with the C₁₄ age of the human bones discovered by Vlassa in the ritual pit, Milady Tărtăria can be dated to the Middle Neolithic cultural phase of Vinča B1/B2. In particular, her age falls between the oldest calculated for the Banat culture (from 6330 ±140 yr BP Lv-2139 to 6240±70 yr BP Lv 2148) belonging respectively to the Vinča B1 phase (pit-house level 2) and

Vinča B1/B2 (pit-house level 3). According to the excavation levels, Milady Tărtăria and the tablets are situated between layer 14 and the base of layer 11 (Figure 10).



Figure 9: The radiocarbon-dating of the bones in the laboratory at La Sapienza University (photo: M. Merlini).

Can the Tablets be dated through direct association with the human bones?

Some scholars, perhaps in an effort to explain the incongruity of the signs on the tablets with their expectations, have insinuated that the creators of the tablets were intruders into the Vinča layer from later and higher levels. Ruth Tringham (1971: 114) and Sarunas Milisauskas (1978: 129-130) asserted that the pit *may* have been dug near the Turdaş layer, but was not from it. This conjecture suggests a later date for the tablets that agree with the views of other scholars such as Georgiev (1967: 99), Neustupny (1968a: 32-35), Dumitrescu (1969:

92) and Whipp (1973: 148-149). David G. Zanotti (1983) also advanced the supposition that the tablets were intrusive from the upper strata, most likely connected with the presence of bronze on the site, in particular with the Baden-Kostolac culture. This would date the tablets between 5,400 and 5,000 years ago, contemporary with the Uruk IV and Jemdet Nasr periods in Mesopotamia, and make the signs compatible with the Sumerian analogies detected by Adam Falkenstein (1965: 271) who synthesized them in a chart, and those discussed by Sinclair Hood (1967, 1968).

According to Zanotti's assumption, Vlassa actually found the inscribed artefacts in a pit dug from the Vinča-Turdaş level⁶ but they had been buried in a very superficial stratum on the steep northwestern slope of the mound characterized by a mixed archaeological context. In Zanotti's view, the tablets could be intrusive from the upper stratum and could, therefore, be a product of trade or the reflux movement of tribes returning to the Aegean (Zanotti 1983: 212).

In order to challenge Tringham, Milisauskas, Zanotti and other scholars' assumptions, how can we assert that the bones and tablets are synchronous? First, let me point out that these scholars are following an obsolete chronology. They do not consider that the Turdaş culture was born on a Vinča B foundation and developed after the Vinča C migrations (with the concomitant social shock and cultural collision). The Turdaş culture is actually more recent than Milady Tărtăria and belongs to the Late Neolithic, as do the Tisa, Stoicani-Aldeni, and Pre-Cucuteni cultures.

⁶ Radiocarbon data for the Turdaş culture are: Turdaş, pit house 1/1993: Deb-5775 5790±70 BP, (4734-4549 CAL BC), pit house B2/1994: Deb-5765±70 BP (5044-4895 CAL BC); Orăştie – Dealul Pemilor, pit house 1/1992-1993: Deb-5762 = 5825 ±60 BP, (4768-4582 CAL BC) and pit house 2/1994 : Deb-5775 = 5790±55 BP (4734-4582 Cal BC) (see Luca 2001: 140-142, pl. VI-IX).

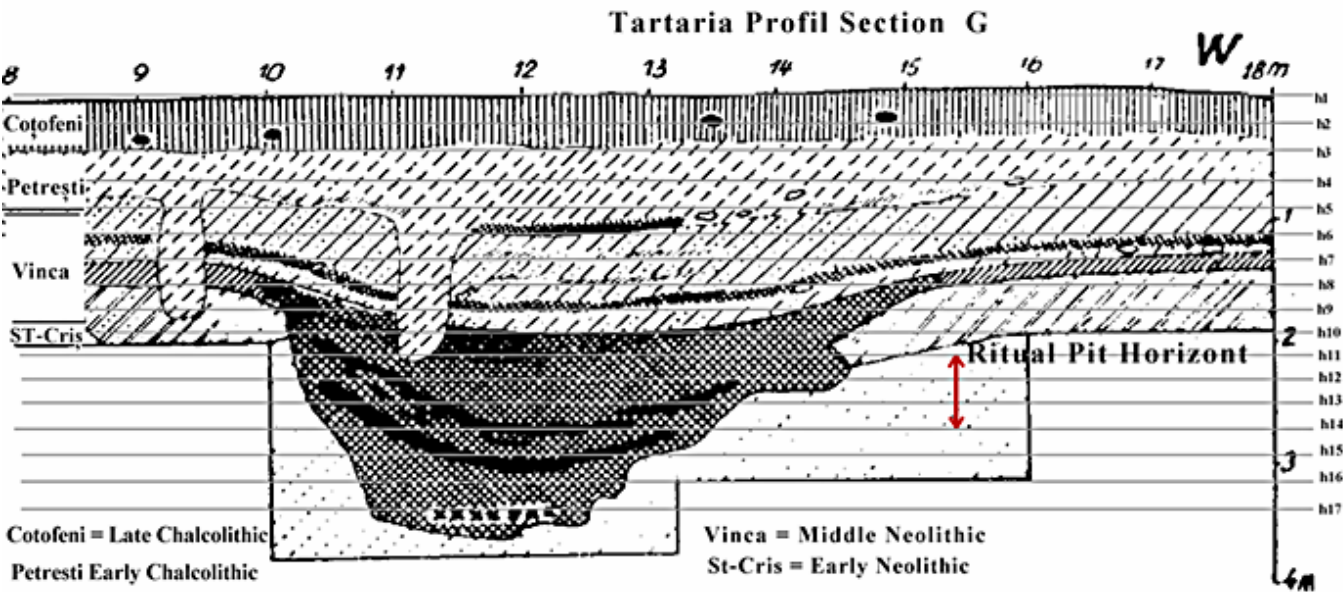


Figure 10: The stratigraphy of the ritual pit.

The Chronological Position of the Tărtăria Bones

Cultural layer in Tărtăria	Radiocarbon Data (BP) of Transylvania (T) and Banat (B)
Vinča B1/B2 Pithouse layer 11-12	Orăștie I Turdaș group = Vinča C1 (T) Deb-5765 6070±70 BP Parța, layer 6a, L41 Banat Culture (B) Lv-2150 6070 ±80 Parța layer 6a, L 41 Lv-2144 6100 ±80 Parța layer 6a, L 18, Lv-2149 6160 ±90 Parța, layer 7c - 6a, L 40 Lv-2140 6140 ±80 Parța, layer 7c - 6a, L 40 Lv-2140 6140 ±80 Parța layer 6a, P41, Lv-2148 6160 ±100 BP Parța, layer 7c - 6a, L 20 Lv-2148 6240 ±70 Parța, layer 7c - 6, L17/43 Lv-2151 6240 ±70 Parța, layer 6a, L 42 Lv-2143 = 6340 ±100 Parța, layer 7c - 6a, L 42, Lv-2142 = 6240 ±80
Vinča B1 Pithouse layer 13-14,	Parța layer 7c - 6a, L 42, Lv-2141 6290 ±80 Parța, layer 7c - 6 Lv-2139 6330 ±140

Second, let me consider how the tablets' "intrusion" happened in the Zanotti reconstruction. In the hope of ascertaining the true location of the Tărtăria tablets, he attempted to recreate via computer the area of trench G (where the tablets were found) as it was prior to the 1961 dig. Using a combination of map enlargements, sections and Vlassa's original photographs, he hypothesized the proximity of the ritual pit to the original surface prior the excavation. But in his artificial and untested study he did not consider that the river once ran underneath the settlement and one side had been eroded. A very steep bank still proves this and the line of the ancient course can be traced beneath. This natural phenomenon gave a different inclination to the slope from that presumed by Zanotti. His reconstruction of the sediments is only valid *after* the Vlassa excavation. The site must certainly have looked different four thousand years ago at the time of Baden-Kostolac culture (Figure 11).

Gheorghe Lazarovici and Zoia Maxim did a topographic survey on this controversial point. They presumed that in Neolithic times the settlement did not have an eroded tell shape but that it laid on a terrace whose limit was at minimum 10-15 meters away. Their conclusion is that the feature of the pit and the position of the tablets were not disturbed by the Baden-Kostolac pit (30-40 cm) which is supposed by Zanotti to have cut as deep as 2 meters. The leakage angle of Zanotti's reconstructed slope measures around 45°, but in reality it is 70-80°—a fact which indicates that the erosion was natural and intensive (Lazarovici and Maxim 1993: 22). One should also consider that the ritual pit is too narrow to allow the tablets and the accompanying pile of artefacts to have fallen down.

Lazarovici and Maxim criticized Zanotti's conclusions in very harsh terms, considering them "unreasonable or naive" and his remarks to be "childish and untrue." Interestingly,

Milisauskas's later work (2002) carefully avoids any discussion of the controversy.



Figure 11: The location of the ritual pit.

4. Conclusion

The acknowledgement that the Danube valley developed its own system of writing seven millennia ago has important cultural repercussions that sweep away many long-standing ideas about European prehistory. The reorganization of its dates and chronological sequence has profoundly changed the geographical location of its cradle regions. In fact, the birth of writing is backdated from the kingdoms and the great city-states of the Bronze Age to the semi-egalitarian villages of Neolithic peasants. Its center of gravity has moved from the Near East to Southeastern Europe.

The recognition of the development of a script in Southeastern Europe is stimulating an acknowledgement of the Danube civilization. Indeed, the existence of writing is one of the indicators of early civilization status which must now include the Neolithic and Eneolithic cultures of the Danube Valley. Moreover, from a chronological point of view, this European region has to be placed in a prominent position in reference to other Ancient World civilizations such as in Egypt, Mesopotamia, the Levant, and the ancient Indus valley.

In a virtuosic loop, if the Tărtăria tablets have made the existence of a European Neolithic *ars scribendi* a highly probable reality (Figure 12), the acknowledgment of the development of the Danube Script and the high status of the Danube Civilization amplify the significance of the tablets.



Figure 12: The only monument in the world dedicated to a writing system is at Tărtăria (photo M. Merlini).

The incised signs on the Tărtăria tablets are believed to be a very early form of writing by a growing number of scholars, but the interpretation of the incised messages is far from being elucidated. Several researchers have dared to propose a meaning for the signs and the tablets seem to function as a Rorschach test



Figure 13: The tablets are similar to loaves of bread made of clay.

where people project onto the signs what they already have in their minds.

Although this research is in progress, I would like to make two observations: It could be productive to begin to think of the Tărtăria tablets as similar to loaves of bread made of clay that were easy to manipulate in ritual (Figure 13). The bread patterns discovered at Ohaba Mătnic, Vinča, and Vršac are pertinent examples of objects bearing texts or sacred symbols utilized during agrarian ceremonies (Lazarovici 2003b).

It is also amazing to note the possibility of overlapping the two tablets which both bear a round hole and are divided into cells. The hole on the rectangular tablet fits precisely the hole on the circular tablet, and the former tablet perfectly covers the upper register of the latter (Figure 14). This could mean that they were worn, one over the other, and the resulting compound between the rectangular and circular tablets may have created a relationship of overt (seen) and esoteric (hidden) signs (i.e., the signs on the upper register of the circular tablet would have been covered). The fact that the two punctured tablets could have been utilized as superimposed exoteric and esoteric amulets is

indicative of magical associations of the script (see Makkay 1968: 286; Hood 1967: 111). Was the sacred assemblage particularly in use during initiation ceremonies?



Figure 14: Two tablets may have been worn as amulets, one over the other (photo: M. Merlini).

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