THE INTERRELATIONS BETWEEN BURIAL ORIENTATIONS AND ASTRONOMY IN THE BALKAN REGION

Alexandra Comșa

Keywords: Balkan Region, burial orientations and astronomy

Purpose

The paper is trying to point out the existence of a possible correlation between the position of the skeletons in the Neolithic time of Romania and the Balkan region and the Sun. Most of the large cemeteries considered here, with numerous skeletons, were excavated some decades ago (in the 50’s and 60’s of the 20th century) so that, the only instrument employed in the measurements was a simple compass. It means that no precise figures could be given, with regard to the orientation of the individuals under study; this is why some biases could appear. Even today, we have very few possibilities to determine the exact position of the skeletons in a necropolis; some of the possible causes being also the pressure of the earth upon the bones, which could somehow modify their initial position. In certain cases, some disturbances could be also determined by the landslides, floods or earthquakes, being known, for a long time, that Romania is situated into a region with high seismic risk. None at the least, the subsequent human intervenes, plundering for instance, have changed the initial situation.

That’s why there are some controversies regarding the issue of the skeletons orientation to the Sun. Some scholars considered it as a true fact (Cantacuzino Gh., Morintz S., 1968), while others were reluctant to this hypothesis (Bățărescu K., 2002, 260). Yet, in Central and Eastern Europe, the mentioned issue is considered to be very topical today (Lichter C., 2001).
Introduction

Astronomy is a very old science. People were constrained to be aware of some natural phenomena or movements of the stars and planets in order to be better adjusted to the nature. Economic activities of the human communities, like agriculture, cattle breeding, traveling, some ceremonies, feasts, customs and religious rituals, all depended upon the big cycles of the nature.

For an in-depth study with regard to the archaic populations, at the limit between archaeology and astronomy, a border science appeared, being called archaeo-astronomy. Out of the elements provided by the archaeological investigations, it tempts to reconstruct, as much as possible, the beliefs, myths and customs of the old civilizations. Such evidences, in Europe and elsewhere, are documented, among others, by temples and sanctuaries finds, which point out the importance of the Sun, Moon and some series of planets and constellations, for the archaic populations.

On the territory of Romania it is known, for instance that, during the Neolithic times, the Sun has played an important role for the people of that time. The Sun was guiding both life and death of the old societies (Comşa A., 1995a, 73-77; Comşa A., Schuster C., 1995, 279-288; Schuster C., Comşa A., 2001, 235). Agriculture and cattle breeding, main occupations at that time, depended upon various elements of the nature, including the Sun and the Moon. The beliefs and customs of those communities were connected with the principle of life, in many situations rendered by the Sun. The Neolithic societies also considered that the end of the life here, on the Earth, would transfer people, possibly after a longer or shorter journey, into a realm where another life would begin. The dead individual would have had the same social status he detained during his life and this is why, he was accompanied by all kind of objects, implements or adornments for personal use (Comşa E., 1995b, 46-54; 2005). Of course, there were also burials without inventory, but such a situation may be determined by other factors and does not reflect a change of beliefs.

Besides those usual items, we should notice the use of the red ochre for painting the entire body of the dead or just parts of it, being probably considered that, its red color, similar to the one of the blood, would help the people in the after world to reach easier their new “life”.
Another interesting aspect is the lamp placed in the burials, as found at Vălcea-Gradistea Ulmilor, in Southern Romania, and Ruse, in Northern Bulgaria, probably to provide the dead with the light, during their travel to the after world (Comșa E., 1995a, 114, 124).

As we will further notice, some communities buried their dead in a flexed position, with the individuals laid on their left or on their right side, while others interred their subjects with their supine body. This is an important element of the funerary ritual, which sometimes helps the archaeologists to distinguish certain phases of evolution, or even an entire material culture. There are also archaeologists who made a connection between the sex of the individuals and the flexed position of the dead, laid on their left or right side. Yet, this hypothesis is not being confirmed for all civilizations. For instance, the bearers of the Bodrogkerestur and Tisa Cultures, whose ranges cover some regions of Romania and Hungary, buried the men flexed on their right side, while women were flexed on their left side.

With regard to the flexed position, there are two trends of interpretation: the first one considered that the dead person would be laid so in order to imitate the sleeping individual, the same as death looks similar to the sleep. When they would wake up, in the after world, the dead would start a new life (Comșa E., 1995b, 125-126). There are necropolises, even in Romania, where some skeletons are flexed on a side, with their hands under the head, imitating the sleeping position.

The second interpretation maintained that the flexed skeletons would imitate the position of a child in its mother’s womb. In this situation, the inhumation would mean a return to the Mother Earth and in the Romanian Neolithic inhumation is predominant (Comșa E., 1987, 150; 1995a, 262).

Depending upon the degree of flexing, there are skeletons with a slight, moderate or stressed flexing. It seems that the last position could have been obtained just by binding up the cadaver.

We find appropriate to mention here that the flexed skeletons appear in the countries west and south of Romania, while the supine ones were to be found in the Northern Black Sea coast steppes, namely in those countries east of it. Romania is in the area of interference between those two funerary rituals (Comșa E., 1974, 153).

In this context, we should also discuss about the burials. In the first phase of the Neolithic, they were often placed in the settlement, between
the dwellings, or under their floor. Towards the Middle Neolithic, it is to be noticed that burials tempted to be grouped, moved towards the periphery of the settlement and finally separated from the place of the living and assembled into necropolises. Yet, this phenomenon has gradually occurred and those two manners of interment coexisted for some time (Comșa E., 1960a, 22, 28-30).

As I already stated above, the entire ritual of burying the dead was very important for the community and needed to be fully and correctly accomplished in all details because, otherwise, the soul of the deceased would return to the living for taking revenge upon the other members of the society.

One of the important elements that needed to be taken care of was the orientation of the cadaver. There are two main interpretations regarding the orientation of the burials: one states that it points to the direction of the sunrise and the other one maintains that it shows the region of origin for the respective community. The first theory is backed up by a statistic comparison made among the Neolithic necropolises of Romania that emphasized that most of the burials containing skeletons flexed on their left side had an orientation which varied between NNE 25 degrees and ESE 120 degrees. There were just two exceptions at the end of the Boian Culture (4th millennia) (Hașotti P., 1997), namely the finds at Fărcașu de Sus, in Oltenia, Southern Romania, with a WSW orientation. The skeletons flexed on their right side usually had their skull towards ESE 115 degrees and south 180 degrees. In this case, there were also few exceptions, some individuals being orientated between WSW and west or, more seldom to the WNW (Comșa E., 1987, 150).

Regarding the second hypothesis, if we consider that the orientation of the skeletons would always show the origin of the community, it could mean that in a necropolis, the dead came from different regions, without having connections with each other. Still, such an idea is not to be neglected as later on, in the Bronze Age, we find situations when allogeneous people have buried their dead with the same orientation and really pointing to their region of origin, as it happened at Cândești (Vrancea County), Poiana (Galați County), both in the romanian province of Moldova, or in other archaeological sites (Florescu M., Florescu A., 1983, 113).
Regarding the orientation of the Early and Middle Neolithic burials in South-Eastern Europe, we have 36 examples at our disposal, but for just 27 of them the orientation could surely be established (Lichter C., 2001, 42-43 and Figure 9). It could be observed that a uniform repartition of the dead orientation appeared. An interesting case is Trestiana (Criş Culture) (Necrasov O., Antoniu 1978; 1979; Popușoi E., 1980; 1981; 1992; Comșa E., 1995c; 249-251; Lichter C., 2001, 43, 432) where, out of the total number of 11 burials with 13 individuals, it could be determined that the main axis of orientation was NS (5 cases), respectively SN (3 cases). Exceptions were two dead, one orientated SE-NW and the other E-W.

According to some specialists, regarding the general orientation for the complex Criş-Starčevo-Körös from Romania, Hungary, Serbia and Bulgaria, nearly half of those deceased were buried on the axis EW (Lichter C., 2001, 175 and Figure 82). Just a quarter of the dead had their head towards direction W.

In Romania, it could be observed that the bearers of the Starčevo-Criş, Ciumesti, Dudești, Linienbandkeramik, Tisa, Vinča-Turdaš and Vădastra cultures had burials with various orientations, inside the settlements, with a flexed position of the deceased, either on its left or on its right side of the body. In some cases, the orientation of the dead could not be established, due to the disturbances of the burials (Comșa E., 1974, 113-122).

The necropolis at Cernica (Figure 1-3), in Muntenia, near Bucharest, in Southern Romania, or better said its area comprising the supine skeletons, was initially assigned to the Bolintineanu phase of the Boian Culture. More recently, they were reconsidered as belonging to the Dudești Culture (Comșa E., Cantacuzino Gh., 2001, 194-198, 200). The members of the respective community used to bury their dead on directions situated mostly between WSW 260 degrees and WNW 200 degrees. The flexed skeletons were assigned to the Boian Culture (Comșa E., Cantacuzino Gh., 2001, 194-198) and they were usually orientated towards SW 230 degrees and West 270 degrees. The resemblance existing between those two limits of variation for the orientation is probably due to the fact that both burial types have belonged to some partly related communities, a fact which explains some common funerary customs. At the same time, it is explainable the difference between the position of the skeletons (supine and flexed) because, the population with extended skeletons had a southern origin, while the one with flexed skeletons emerged out of the former, but
in strong relation with some communities from Eastern Romania (Comşa E., Cantacuzino Gh., 2001, 164-165, 189-190).

During the excavations carried out at Radovanu, Galaţi County, in Muntenia, Southern Romania, 26 Boian burials have been found, dated back in the transitional period from the Boian to the Gumelnita Culture (Comşa E., 1995b, 259). Their skeletons had as main orientation the East cardinal point (with the usual variation, between ENE and ESE). They were flexed on their left side and seldom on their right side. It is interesting to notice there a custom that is not only specific to the Boian Culture, but also to other civilizations of the Neolithic time. Some skeletons, in a stressed flexed position, were evidently tied up before being buried. By analogy to some situations described by ethnologists, it is presumed that, after being tied, the dead was put in a kind of sack and afterwards buried (Comşa E., 1990, 108). This is a possible explanation for those individuals found with their face downwards, but spread among the other usual burials in the cemetery. The skeletons laid on their left side were mainly orientated towards east, while those on their right side towards SW. We should also notice the slight variation between their orientations. For four of them, the distance from the East point is very low (burial 1 = ESE-93 degrees, burial 2 = 68 degrees, burial 3 = ESE-102 degrees and burial 4 = ENE 87), fact which is considered to indicate that those burials were made early in the morning, at the sunrise (Comşa E., 1990, 108).

Another interesting Boian necropolis was found at Popeşti-Vasilaţi, Galaţi County (Figure 4-5), in Muntenia, Southern Romania. Out of a necropolis that was much affected by various constructions and works, 16 Neolithic (Boian Culture) and 1 Bronze Age burials were rescued. Fifteen skeletons were flexed on their left and just one (Burial 5) is on its right side. The main orientation of the burials was to the East (Şerbănescu D., 1999, 58-60).

For the Gumelnita Culture (4th millennium) (Haşotti 1997), the orientation was established for 188 burials (Lichter C., 2001, 118-119). The main axis was E-W, with slight deviations towards NE, respectively SE. Therefore, at Ulmeni the deviations were found between 48 degrees NE and 90 degrees E. At Vărateşti B, more than 90% of the burials were placed between 53 degrees NE and 121 degrees ESE. At Radovanu the deviations were to be found between 78 degrees ENE and 112 degrees ESE.
At Vârăști-Grădiștea Ulmilor (Figure 6), belonging to the Gumelnita Culture, the individuals were usually orientated to NE and SE, thus, in the main direction East. Yet, there were also individuals, lesser in number, with their head towards NNW or other directions. We mention here that 4, out of those 126 skeletons, belonged to the period of transition from the Boian to the Gumelnita Culture and were laid on their left side, with a similar orientation (burial 10 – ENE 78 degrees, burial 22 – ESE 95 degrees, burial 61 – ESE 95 degrees, burial 121 – ENE 72 degrees), with a variability of just 23 degrees. Four other skeletons were dated in more recent time sequences. The other 118 burials contained mostly skeletons flexed on their left side.

After analyzing the existing information, it could be inferred that the necropolis comprised two groups of skeletons with similar orientations, between which a smaller group interfered. This fact, namely the presence of those two larger groups, are considered as possibly corresponding to different evolution stages of the Gumelnita Culture in the region, which resulted in small changes of the funerary ritual (Comşa E., 1995a, 111-112).

Another important group of 9 burials of the Gumelnita Culture were discovered at Dridu, Ialomița County, in Muntenia. Unlike those from Vârăști-Grădiștea Ulmilor which were mostly flexed on their left side, 5 of those uncovered at Dridu, were on their right side and 4 on their left, so that, more than half of them were laid on their right side. There were also differences with regard to the orientation of the dead. The skeletons from Vârăști, laid on their left side had their skull on directions which varied between ENE 72 degrees and ESE 117 degrees, while those on their right side had various orientations, between NNE 60 degrees and WNW 290 degrees. At Dridu, a similar situation could be observed, in the sense that the skeletons laid on their left side have a low variability in orientation (between NNE 23 degrees and ENE 67 degrees), while those flexed on their right side have their skulls between ESE 100 degrees and WSW 246 degrees.

In Bulgaria, among others, two necropolises of the Gumelnita (= Ruse) Culture were analyzed. Hence, at Ruse, the skeletons were flexed; the individuals laid on their right side being prevalent (28 out of 36). It happened that also, those flexed on their left side were orientated on directions close to E (11 out of 20). The skeletons on the right side had their skull with main direction S (8 towards SE, 13 towards S and 7 SW).
At Kubrat (Figure 7), another Gumelnița necropolis in Bulgaria, out of those 22 skeletons, 19 were laid on their left side and 3 on their right side, pointing to a similar situation to the one at Varaști-Gradistea Ulmilor. The resemblances between those two cemeteries also persist with regard to the orientation of the skeletons, those at Kubrat being mostly arranged with their head on the main direction East.

We ought to mention here that, as much as the funerary ritual is concerned in Romania, there were no differentiations between the burials of men and those of women, fact which made us believe that the woman was equal to man as concerns her social-economic status. Also, the children burials were spread in the necropolis, among those of grown up people and had the same depth (Comșa E., 1960a, 27).

An interesting conclusion that results from the data regarding the Gumelnița Culture in Romania and Bulgaria, is the one that we find a direct correlation between the position of the skeletons and their orientation. Those laid on their left side had their skull mostly towards NE and SE, while those laid on their right side had a SE and SW orientation (Comșa E., 1960a, 380).

As concerns the orientation in the Varna Culture from Bulgaria, which is part of the large complex Kudžadermen-Gumelnița-Karanovo VI in South-Eastern Europe, there are data for 484 cases in which there were also included the cenotaphs and disturbed inhumation burials (Lichter C., 2001, 96-98). In the latter case, the orientation could be established by analyzing the burials pits. A number of 380 burials from Varna I, Durankulak and Devnja had a percentage of 55% orientation to the north, over 20% to NNE and 17,5% to NE. Just 7.5% have their head towards NNW (Lichter C., 2001, 96 and Figure 40). Interestingly, 195 inhumations have a deviation of just 1 degree from the main axis of orientation, namely 80% of the inhumed at Durankulak were placed between 330 NNW and 17 degrees NNE, while 90% of those buried at Varna I between 8 degrees N and 72 degrees ENE (Lichter C., 2001, Figure 41).

Returning to Romania, we ought to mention that, for the necropolis at Ostrovul Corbului, belonging to the Șâlcașa Culture, the data regarding the orientation is known for 49 cases (Lichter C., 2001, 143 and Figure 67). Out of these, 21 were orientated on the axis ENE-WNW 17 EW and 7 ESE-WNW. There were also three major exceptions, namely those with W-E orientation.
For the Iclod group, the orientation could be established for 56 burials (Lichter C., 2001, 228 and Figure 69). Three quarters of the individuals were placed on the axis W-E, with some deviations towards WSW and WNW. More significant deviations from the rule were found at Iclod B, in Transylvania, Northern Romania, where, nearly one fifth of the dead were placed on the axis N-S.

Conclusions and remarks

The archaic communities probably believed that the star who brings life and heat on the Earth, would bring it also in the after world, where every aspect of the souls existence should be the same like in the usual life on the Earth. The necropolis was the realm of the dead, the same as the settlement was the one of the living. The Sun was dedicated a special cult, this practice being frequent among the populations who had agriculture and cattle breeding as main occupations, the way they were in the Neolithic times of the Balkan region (Cantacuzino Gh., Morintz S., 1968, 17-20).

In general, we could say that many Neolithic communities in South-Eastern Europe have buried their dead with their head orientated towards East, the cardinal point of the sunrise. Some deviation from the ideal West-East axis, as I already stated above, are due to external factors but, mostly to the seasonal variations, determined by the moment when the dead were buried. In the seasons when the Sun rose earlier, the deceased were closer to the North cardinal point. Yet, in winter, when the Sun rose later, the individuals were closer to the South cardinal point. It is understandable that the interment was not performed with a compass in hand, the main reference mark being the Sun. This assertion is not valid just for the Neo-Eneolithic of the South-Eastern Europe but to the most archaic civilizations from Europe, Asia, Africa and Americas.

The exception from the general rule of interment point out, according to the archaeologist specialists, unusual phenomena, connected to the social and religious life of those people. Probably, the respective deceased were not totally adjusted to the community or, they suffered of illnesses that made them undesirable for the society. Even today, in some archaic communities, those with mental sickness for instance, or those who are black magic practitioners, are buried outside the cemeteries or, if accepted
inside them, they have another funerary ritual and a restrained area for being buried (usually, at the limit of the cemetery).

From the viewpoint of the physical anthropology, there is no differentiation with regard to the sex and age of the individuals buried on the West-East axis. The only aspects could be determined by the presence of the inventory or, in certain cases, by the position of the corpse (on its left or right side). This aspect is also valid, in most of the cases, during the subsequent times in the metal epochs (Comşa A., 2001; 2003)

Alexandra Comşa
Institutul de Arheologie
Str. Henri Coandă nr. 11
București, România

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Fig. 1: Supine skeletons from Cernica (M = grave), Romania (after Comșa, Cantacuzino 2001).
Fig. 2: Supine skeletons from Cernica, Romania (after Comșa, Cantacuzino 2001)
Fig. 3: Supine skeletons from Cernica, Romania (after Comça, Cantacuzino 2001)
Fig. 4: Graves of the Boian Necropolis from Popești, Romania (after Șerbanescu 1995)

Fig. 5: Graves of the Boian Necropolis from Popești, Romania (after Șerbanescu 1995)
Fig. 6: Burials of the Vârsti Necropolis, Gumelnita Culture, Romania
(after Comşa E 1995a)
Fig. 7: The Necropolis from Kubrat, Bulgaria
(after Comșa 1960a)