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**Astral symbols in archeology
in the carpathian- danubian- pontic.
Ethno-astronomic issues**

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Chapter I: Argument , The Objectives Of The Research, Necessity, Opportunity

The thesis proposes a research of the universe astral symbols in the Carpatho-Danubian-Pontic, more precisely how the great cycles of nature and the great frame of nature, essentially astronomical cycles - time and space - determined and modeled the existence of our ancestors. Specifically how they represented these cycles, their materialization and their relics, architectural and spiritual, then going into the present in an attempt to find possible ways of representation similar feeling and thinking .The objectives of our approach were many:

1. an attempt to present as concise and synthetic as possible astral symbols and representations in Archeology in Romania;
2. achieving an open database for collecting information from different informants, including amateurs, positioned within a website;
3. completion of case studies as complex for the village Loman (Alba county)), Cunta (Alba county) and Dragus (Brasov County);
4. familiarization and facilitated knowledge in the development of astral symbols in ethnography and popular meteorology;
5. attempt to present the benefits of using multidisciplinary research in archeology.

Area of our investigations will necessarily be very large, the Neolithic and even today, in an attempt to have an overview of this type of human events, which seems to have always existed.

Keywords : symbol, Astra, archeology, astronomy, sanctuaries, ethnography, popular astronomy, meteorology popular databases

Chapter II. Astrology symbols (sun, moon, stars) - universal symbols

Presents the distribution and representation of the astral symbols. As a space extension, solar cult doesn't cover the whole world, but it was presented in almost all the major civilizations of mankind, being one of the fundamental elements of culture. On a map of one continents it is easy to see that the solar cults are disposed on a narrow strip beginning in the East of Pacific archipelagos, including Indochina peninsula, India, Middle East, Egypt to the South of the Atlantic coasts of Europe including the British Isles and has continued in the Two Americas with Peru, Mexico and Chile. This includes the old cradles of civilization developed in the so-called "three Mediterranean" of Asia, Europe and America.

There are two deviations from this geographical unit of the cult solar spreading: it is known in Madagascar and south-eastern Australia, eccentric points of solar worship area, and it isn't met in the large islands of Indonesia. Huge areas of China and Siberia, Europe's extreme north, central and southern Africa and large parts of the Two Americas

have experienced the cult, cantoned mainly ,as shown, between certain degrees of latitude (0-50 degrees) to Northern hemisphere.

Chapter III. The Man and the stars - short chapter of astronomy

In this chapter we briefly presented some general notion of astronomy. We considered necessary to introduce this theory chapter for two reasons: for better understanding of the dynamics of the Solar System and to familiarize with it. The chapter is structured into five subsections. The first subchapter presents the organization of the orb and the following subsections deal with the movements of the stars regarding their role in the evolution of the Solar System and the impact on it.

Chapter IV. The Man and the stars – an anthro- astronomical view

This chapter deals with cultural behavior and cultural domination that the stars had on human beings since the begin of human life. We presented all the significant relations between man and stars(the Sun and the Moon included): rites of passing and magic control to stars movement.

Chapter V. Symbols Astrology in Archeology in Romania from prehistory to antiquity

The fourth chapter was consacred on the development of representations in the Romanian Astrology. The most common solar symbols are spiral (with hook or false), twists, incisions or cross-shaped bands, straight or chained, the wheel with "teeth", concentric circles, votive chariots, triangles, diamonds, ellipses, vortex, zig - zag, swastika incisions in wood, bones and stones. In this chapter we presented in tabular form vases with representations in the cross, Cassiopeia, M and W.

Chapter VI. Astronomical orientations of tombs

The chapter presents the astronomical orientations of the grave from Sveshtary (Bulgary) which confirms that the ancient builders were familiar with the geographical latitude of the place where construction took place. I also presented the 17 Thracian tombs investigated by Bulgarian scientists.

Chapter VII. Astronomical orientations in the Cernica necropolis case

In 1967, was discovered in Cernica, near Bucharest, a Neolithic cemetery, dated 4400 - 4200 BC which is one of the oldest prehistoric cemeteries. From the 327 graves

examined, a total of 314 (96%) are strictly oriented within the annual oscillation limits of sunrise azimuth. Hence it was concluded that Neolithic people worship the sun and they buried their dead in the morning at the sunrise.

Chapter VIII. Astral representations in the Parta sanctuary. Astronomical orientations in the sanctuaries of Sarmisegetusa – Regia

The Shrine of Parta has two separate compartments: the altar room and the room where they brought offerings. In front is the altar, with two statues stuck on each other, a female deity and a bull, symbols of fecundity and fertility. The temple was used as a solar calendar. On the east wall is a double statue – the mother goddess - lined with two columns, symbolizing the link between sky and earth. On the west wall are two holes symbolizing the sun and the moon's sickle. On September 23, on the autumn equinox, the sun shines through this hole and its light falls on the back of the double statue. On the day of autumn and spring solstice, the sun pierced through a hole of the temple and it perfectly lightens the altar. In the Parta sanctuary two columns are guarding the opening in front of a monumental statue, columns ended with bull heads and edges between the horns, considered to be the Moon and Sun.

The Dacians' interest towards astronomy, mentioned by several ancient authors, is confirmed in the sacred precincts of the capital of the kingdom, where a series of sanctuaries are obviously astronomically oriented, linked to the orb movements and to the extreme points of the movement of the sun, solstice respectively.

On the sacred terrace of Sarmizegetusa-Regia among astronomical lines marked inside the sanctuaries there are two north-south alignments. One of them is made from the center of shrine known as Sun of Andesite (one of the most original and representative parts of the complex) - and two blocks from the axis of the small rectangular "destroyed" shrine in total length of 32 m. The second case of North-South direction marked in stone, is given by rows of columns of the small rectangular andesite sanctuary, in the immediate vicinity of the Sun of andesite, and they focused on the axis of the world as the ancients called this alignment. The best known type solstice orientation in the Dacian world is, of course, the orientation to the winter solstice sun rising large of the axis of the central apse of the Great Round Sanctuary of Sarmizegetusa-Regia.

The type of astronomical orientation that marks the extreme points, respectively solstice solar orientation, is present in two of the four shrines of Costesti, for both solstice, winter and summer.

Another type of solstice orientation, present in the sanctuaries of Costesti is the moon rising on the two solstices, summer and winter.

Chapter IX. Astronomical orientations of the sanctuaries from other parts of the world

In the late Neolithic, the megalithic era, the menhire, dolmen and alleys were oriented as follows: 75% to sunrise, 15% to sunset and 10% to south. Besides the sun is

the heavenly body that influenced most of the myths and religious traditions of the people around the world.

The subchapter *Astronomical orientation of the tombs* presents a summary of astronomical orientation in the tombs of the central, western and northern Europe, and the Americas.

The second subchapter, *Astronomical orientation in the megalithic constructions and formations* presents archaeological monuments oriented following stars movements in Europe and America.

Stonehenge - is one of the most important and enigmatic megalithic monuments in Britain. The monument is located in Salisbury Plain, about 3 km from Amesbury town west in the southwestern of Wiltshire county. The region recorded the largest concentration of remains from the same period as Stonehenge - or even earlier. Construction took place in three phases covering a period between 2000 and 1500 BC. The subchapter *Astronomical Orientation of the temples, shrines or urban settlements* was dedicated to Greek and Roman temples in the world, and those from Malta and Egypt.

The last subchapter *Settlements orientation* presents data on tracing settlements which was subject to certain rules and it was not only urban but largely a principle common to all construction rules: limits of the settlement should be determined in relation to religion and universe. So, the Romans, following the Etruscan tradition, the two main axes of a city, *decumanus maximus* and *cardo maximus*, were drawn with the help of the shadow left by the first ray of sunlight appeared on the physical horizon of the place, the day fixed for the inauguration.

Chapter X. Astrological Symbols in Romanian ethnography

This chapter consists of three subsections which highlight the issue that the geometry inherited and transmitted as ancient art is understood by the modern man as a language, a moving language put into practice on popular art objects as well as painted eggs.

In the first subchapter entitled *Astrology representations on wood (gates)* showed that sun signs are placed in certain well-defined architecture, tools, having just meant to invoke the powers of beneficent and defender. True peasant triumphal arches, wide by 7 feet and 4 feet high, the gates of Saskatchewan (Oltenia), Muscel and Buzau (Wallachia), Maramures and Ciuc (Transylvania), Bacau and Suceava (Moldavia) are decorated with rosettes, torsades. In other regions, Ploiesti (Wallachia), Cluj, Hunedoara, Crisana, Brasov (Transylvania), Iasi (Moldova) the small gates are also marked with different types of solar signs, mainly rosettes. The gates from Transylvania, especially in the regions of Maramures and Cluj, solar rosettes, circles with cross, wake vortex, appear in combination with a highly stylized tree of life (Maramures) or the tree of life-vase with flowers (Cluj).

We have shown that sun signs are almost always found in rural church setting. It should be remembered that sun signs are found on great number of the famous Romanian trinity crosses. Even more the crosses on large areas of Romania, including Oltenia, Wallachia, Transylvania, are characterized by a large circle linking the arms of crosses.

The Subchapter, *The Astrological Representations on Romanian folk costumes and carpets*, stresses that the astral motives exist in whole 90 areas covering the ethnographic Romanian historical provinces: Maramures, Bucovina, Moldova, Bessarabia, Dobrogea, Muntenia, Oltenia, Banat, Crisana that surround the heart of the country: Transylvania. Solar signs have a decorative and functional importance in the Romanian peasant house – they are very numerous and belong to the category of rectilinear motives closed (on diamond) or open (meander – plu or double). In Oltenia, Muntenia and southern Transylvania, a traditional carpet, made by the old tradition, woven exclusively concentric rhombs that continues to rivet is called; cover to wheels. The same sun signs in a very wide range, are woven on towels .

Woven in white cloth, hemp and cotton, these towels have long ends trimmed with a strictly geometric decoration, mainly based on combinations of the meander, broken cross or vortex. A very high frequency of solar signs is recorded on the component parts of the costume. They are placed on head covers, chest and sleeves, on pieces of cloth that wrapped the body and, of course, the ornaments for the neck, hands and waist.

The subchapter, *The astral representations of decorated eggs*, we underlined the predilection for the sun and stars motives in decorating the Easter eggs. The sun is imagined by the peasant designer through a series of concentric circles with various radii, circles commonly located on the two poles of the egg.

The star motif (with four or eight corners) is usually enclosed in a broader composition with geometric motifs.

Chapter XI Astral symbols in popular astronomy

A large part of the chapter was assigned to the case study. The chapter was made from three subsections, and the etnoastronomical investigation outlined my research . Subchapter, *Case Study: Loman (ALBA)* is the fruit of labor of a long period of investigation on the existence popular astronomy. Loman, a hamlet of shepherds, lost by Sebes Mountains, is a living proof that for our ancestors, the sky had a cyclic behavior. In the past people imagined that the stars formed different figures of the sky. These figures belonged to various animals, objects or heroes. That's how legends were born and the idea that what is happening in the sky affect our lives appeared.

Shepherds from generation to generation, the people from Loman having more free time and curiosity, studied the day, the night, the sun, the moon and the stars. They found out that these astral bodies move in such a way that can help us determine the exact time, and finding out where we are. They were familiar to the 22 constellations on the sky map and they used them to find the position on earth. The variety of names assigned to each constellation, and parables are just a few guidelines of the present study.

The subchapter, *Case study: Dragus village (Brasov County). Following the footsteps of Professor Dimitrie Gusti* we remade the table with informants in 1923, which recounted their year of birth and death. The first impulse was to make a comparison between current conceptions about Astra of those villagers in 1923. Unfortunately I have not found any informant for this purpose, such popular beliefs about stars of the people from Dragus got lost. At the end of the subchapter I sketched the portrait of the professor Dimitrie Gusti and his role in the history of Romanian sociology.

Subchapter: *Astral symbols in rituals. Case study: Cunta village - hodaitatul* is a local custom on the Sunday before Ash Wednesday. Fires are lit since ancient times and it still is an irresistible attraction. Fires are lit on the heights of the top of the hills, which shows its mythical-magical substrate. The name of the custom has its origins in the name of a cloth mop, which is spun above the head. There are several places in the village where the fires are lit. The boys lit *hodaitele* and draw figures in the air, especially circles symbolizing the victory of Sun over the darkness at the vernal equinox.

Fires are not lit by the whole community, or by individuals but by individuals, but by groups made by age or gender. You might say there is a ritual specialization in the sense that each kind of behavior belongs to a specific category of individuals.

As a conclusion the symbolism of the wheel is identified with that of the circle associated with the sun, with continuous dynamics of life, the cycles of nature, of history and human life, the wheel became a symbol of the sun.

The subchapter *Astral Symbols in the Bulgarians popular astronomy*, we briefly exposed the constellations of Bulgarian folk astronomy.

Chapter XII. Astrological symbols in the popular meteorology

In this chapter I briefly exposed mythical weather, religious feasts used as meteorological landmarks, the magic meteorology of the brickmakers, rituals invoking the rain and last but not least the stars in the peasants' meteorology (with the help of field data and specialized bibliography). Romanian peasants granted the skies a magical-mythical role. They have known what sort of weather will be following the signs of nature, not listening to the weather forecast on the radio or TV. Without using calendars, farmers over 60 years old still know when to sow, when to mow, or to harvest the crop. I was amazed when I met the village's social life as it preserved the traditional mentality for the people over 70 years old.

Chapter XIII. Symbols Astrology in Romanian folklore

The chapter shows the impact of astral symbols in literature. Celestial universe, foreshadowed in folk ballads and especially in carols reveals a special world, a universe which is never final, because by the various interpretations it became a flexible creation. The sun, moon and the stars from the ballads and carols acquire new facets (mythical human, humanized myth) besides highlighting the attributes of celestial bodies.

Chapter XIV. Constellations of Romanian ethnoastronomy (according to Romulus Vulcanescu)

The Result of the interpretation of the made by Romulus Vulcanescu is the following

- a) Identical stellar configuration and identical name 9 constellation
- b) identical configuration but different name: 17 constellations
- c) Different stellar configurations and different names: 11 constellations (6 in ethnoastronomia mythical, and 5 in general astronomy).

There is a total of 37 constellations found in Romanian ethnoastronomy.

Chapter XV. Astral representations database in archaeological finds from prehistory to antiquity

The first part of the chapter contains all information required in the development of a database and its end is exposed to the actual application of the database.

Chapter XVI. Theoretical and practical conclusion . Proposals. Research perspective

Following the developments in the use of astral symbols in time and space we can reach several conclusions. The origin of the astral symbols, namely the spiral and meander is circumscribed to the Carpatho-Danubian area, namely the contact area between the historical provinces of Banat, Oltenia and Transylvania, which means by a geographical point of view the western half of the Southern Carpathians and Sub-Carpathians and the area recognized by everybody as the cradle of the Dacians civilisation; in the middle of which is the most important religious and administrative center Sarmizegetusa Regia.

In the area of origin the astral symbols never disappeared, they are used today by Oltenia, Banat and especially Padureni (Poiana Rusca Mountains residents) on rugs, holiday clothes, wood inlay, although the sacre significance has been forgotten, and especially the dead man's candle custom, practiced in Northern Oltenia, is undoubtedly an atropaic symbol. During it's more than 8000 years of existence the astral symbols expanded, reaching a peak during Cucuteni culture and during the middle and late Bronze Age and Iron Age.

The long persistence of astral symbols proves, if proof were needed, the continuity of the population living in the Carpathian-Danube-Black Sea area, favored by the mountainous terrain. This persistence finds its explanation in the sacrality of the symbol signifying the regeneration and the vital energy; attributes belonging to the Great Goddess and the Sun God, became the supreme god during the Bronze Age. The long existence of the astral symbols proves better the early formation of a religious system in the Carpatho-Danubian territory, as well as the particular religiosity of the Dacians recognized for in the whole ancient world.

The perspectives of astronomy knowledge at Geto-Dacians, appear to the researcher with very few initial data, except several references from ancient authors as Herodotus, Strabo, Jordanes, Porphirios and sanctuaries from the sacred terrace of Sarmizegetusa - Regia. It is clear that protoastronomy can be changed in astronomy if several conditions are met:

Good opportunities for astral observation - a clear sky for the most of the year

At least a small group of people to have free time which is, for that time, a priestly class. Ability to record astronomical events for continuing study, transmission of knowledge to future generations, and not least, the justification of their duties in the, celebrated worship not only going to mark the agricultural cycles and large ceremonies, but also to provide the astronomical phenomena. In other words, to have an astronomy for at least a medium level of knowledge of writing and arithmetic elements, or any element of marking, are absolutely necessary.

In the Dacians respect the first two conditions were met. A remarkably clear sky in the Orastie mountains and a powerful priestly class are things known and proven. The third condition, the writing is also supported by some evidence. We believe however that the Dacians demonstrate the existence of astronomers, would be a further argument for the existence of writing among the priestly class.

Following the case studies conducted we concluded that the Romanian villages now goes through a prolonged period of cultural redefinition. In such moments there's search for models, to appeal to values which withstood time. Our identity is linked to tradition and this is inseparable from the folk culture and the emblematic figure of the peasant.

Are we considering ourselves a traditional, peasant society? Often, but not always. Moreover, sometimes we revolt against such a definition: "we don't want to be the eternal peasants of the history exclaimed Constantin Noica, on behalf of his generation. And then? We must therefore turn back to these worlds and see the difference between them – from our research perspective. In order to find traces of traditional peasant mentality there is only one way: remote mountain villages that have been partially circumvented from the reorganization of the communist and democracy after 1989 and poorly understood up to nowadays.

In the last two decades the dissolution of folk costumes speeded. Traditional costume was almost totally abandoned, the few old people who have continued to wear it are almost an exception. In parallel we can notice a transfer of meaning, popular port being reserved for special occasions of the rural communities life.

Due to the psychological impact the folk costume has continued to be valued not only by the rural residents but also by those who left the country area. The modeling power of the costume decreases due to the socio-economic transformations occurred in our society and the mixing between the urban and rural types of materials and clothing. On the other hand, due to the characteristic values of the Romanian port we can remark the large use of some traditional clothing elements (e.g. sheepskin coats) even outside the country.

As in all forms of folk art, we witness here too a number of changes of the old data, inherited from our ancestors. Once the ethnographic village is gone, the new, modern civilisation melted with it and the "mainstream" art(or cult art) limits and sometimes bannishes the folklore, such a phenomenon can only be in the natural order of things. It is natural that the clothing industry replaces the hand made folk costume, which is found either in a museum, or rarely in some rural homes. The same happens in the art of drawing and painting of eggs. For some time the regular eggs were replaced by wooden eggs, rounded to the lathe; on which the wax adhere better and makes their keep to be virtually unlimited.

There are also some kitsch techniques, but fortunately but they have not yet contaminated the artistic creation as the rural artists(women in general) respect the classical canon, the ancient techniques, the rigorous traditional styling and severe chromatic code, defending them as a sacred treasure. When they innovate, do not reject, but enrich the traditional means, correcting the effects and crystallizing them.

Romanian peasant from the mountains areas(as in our case at the Loman ones) live in a perfect cosmic order, in which all the things are naturally and permanently fixed in; the mind and the deed are borned and consumed by immutable laws. The great order of nature is reverberated at the whole, as the sun is in a drop of dew, in the smallest things

and actions of the Romanian villager. Combination of religion and magic, music and charm, the spiritual life of the Romanian peasant has deep meanings, real prices of things and human nature, the meaning of life and its content.

All these essays for explaining the peasant representation and natural phenomena covering the distance from the stars to the leaves of grass and to the man himself to bringing the purity and the freshness of a hardly tried people.

After the research we can say that the pastoral environment is better for the acquisition and the diffusion of astronomy than the agricultural environment. There is an information gap between the laborer and the sheppard, even if he had this job only for a small amount of time. The world of sheep guardians is a bigger interest to stars, given by the working conditions.

It is interesting to notice the great amount of data related to stars that the shepherds have, overcoming the unit of a village or of a road that they regularly use. My best informants Ion Poenaru and Valeria Petrascu are a living proof that among the shepherds the spreading and the storage of the data was made through oral tradition. "Uncle" Ion Poenaru was a disciple of such shepherds long time ago.

The research aimed primarily the reconstruction of the stellar world of this nomadic hamlet, the fact that the migration of the constellations was made along these "sheep roads". I discovered a whole system of observations on the stars of whose main keeper is that group of sheperds.

Practical observations of the Loman villagers regarding the movements and the being of the stars present a very simple and often clumsy in the way of human thinking that leads to the beginning of science, but may not reach it.

Today, the development of modern technology among the small number of youth in the environment we are studying and the fact that the young generation is not interested in keeping and spreading the oral heritage of our ancestors about the role of stars make us believe that it will be lost once the old people will die (as in the case of Dragus village).

Anyway, what is the use of playing with the identification of the subject matter, if we don't understand that all ground data, all the information from the archives useless if those who have not gain yet this mysterious clear-view which only the actual living in rural area may gave. Only that way all the rough notes from the archives can gain their true significance, bringing to put in a different light the whole universe of peasant world.

I propose the introduction of a popular astronomy extracurricular course in school education which the specialists should design for high schools and middle school teachers.

I also propose in order to revival the folk astronomy summer camps projects in which young people would have the main role. Tourism can be another alternative to bring the folk astronomy into people attention.

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