

THE BRONZE-AGE ASTRONOMICAL FINDS IN THE TERRITORY OF SERBIA

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SUMMARY: In the present paper it is shown that among the archeological finds at Vatin, some 50 km north-east of Belgrade, there are primeval astronomical instruments: gnomon, metron along with the calendar records, belonging to the proto-astronomic age, which by their ornamental analogies are linked with the contemporaneous Mycenae culture (around 1500-1250. B.C.).

1. INTRODUCTION

The particularity of the archeological finds in Vatin (about 50 km north-east of Belgrade) published in 1905, are a subject under consideration for several dozens of years in the archeological literature. Within the framework of typologic analogies the influence has been established of the Mycenae civilization on the kind of decoration but not on the function of objects and the meaning of the specifically structured ornamentation.

The Vršac-Vatin phase of the Vatin culture of the Middle Bronze-Age of the Panon-Danubian region whereto the objects here discussed belong, is placed under Br. B2-Br. C of the Reinecke modified system. Thanks to the noticed and studied connections with the Mycenae world, the lower absolute date is set at about 1500 B.C. On the other hand, thanks to the whorl with an engraved inscription found in Vatin, which has its direct analogies in Cyprus, with an inscription in Minoy-Crete lettering *terminus post quem*, is set at 1250/1075 B.C.

The wider time span within which the older bone finds are linked up in the present paper with the more recent ones (the whorl, the calendar) without an archeological context, opens a whole range of problems. Yet, a study having as its purpose to

point to the knowledge and the spirit of a time and culture, may overcome that handicap through the awareness that the Vatin objects have their origin in the Aegean Bronze-Age civilization, which on its part is connected with the civilization of the ancient Egypt and Mesopotamia.

2. DESCRIPTION AND IDENTIFICATION OF THE ASTRONOMICAL EQUIPMENT

Among the bony and ceramic finds of Vatin, designed for utilitarian or decorative use, such objects are noted of which one is led to suppose as having been applied as instruments, or parts of instruments, for the needs of chronometry, astronomy and calendarography (Milleker 1905, Garašanin 1983). Thus we recognize in the minor ceramic plate a calendar, in the ornamented bony plate a gnomon, in the three bony plates a sun-dial and a module which probably belong to the complete set with the two cylindrical and an open-spherical objects.

The bony spool-screw with a horizontal opening for pulling through the needle – the support of the indicator; the open cylindrical object – for fixing the plumb-line with spikes for attaching – to (and

with horizontal opening in the body?) all of them except the plumb-line, ornamented in a specific style (Figs. 1a-k, Figs. 2k-l).

Looking at the shapes and the ornamentation of the "objects for special purpose" made of backed earth, apart from the known ball-shaped whorl with inscription, one finds the rest of them as not typical, either (Fig. 1j). The whorls bi-conic with rounded-off contiguous cones, elliptical, cross-shaped with four hemispheres, are ornamented with effects of plastic, three-dimensional presentation (Fig. 2a, b, d, h). Two whorls in the shape of truncated cone and one of a cylinder shape, ornamented with garlands: in the form of hatched triangles, short notches, circles and pricks, might, all of them, have had the function of height regulators or auxiliary elements in the applications of the above mentioned instruments (Figs. 2, c, e, f). Two whorls-tops, with specially highly holed out and fortified opening for the pole, one of which is ornamented with a field of garland with zig-zag cuts, might have had a function similar to former ones (Figs. 2, i, j). All the referred to objects might be regarded also as eight whorls, a small spool (Fig. 2. g). and a small auxiliary support for the pole (Fig. 2. f) (Milleker 1905).

Because the scope of the present theme is rather reduced and the possibilities of analyzing the related archeological objects not great (Fig. 1. c), the discussion will accordingly have its limitations.

3. CALENDAR AND ORB

The orb of world has from above the shape of truncated cone and from the underneath it is gently spherical, made of delicately purified earth, grayly burnt, polished off only on its underside while being ornamented on both sides ($R = 7$ cm, $h = 1.9$ cm, Fig. 2k, l) (Milleker 1905). On the underside, girded with a two cuts circular band, there is in the middle a luni-solar symbolic grapheme, represented by a pair of recurrent spirals in N-S direction, coming out from the central hatched rhombus. On the east and west rhombus sides are athetically represented the lunar "crescents". In the circular belt toward the edges, enclosing the band, 25 holes are perforated, the one to the west being the largest and the seventh one to the south being larger than the neighbouring ones.

The upper side, more richly represented, is organized canonically. Around the central circular disc the area is divided by two circular bands, formed by two cut in lines, into two belts, only one of which ornamentally treated. The central disk contains a cut in, seemingly symmetrical linear composition of shorter notches, which by its ornamental elements and motives does not have any parallel, but is closer to the known inscription on the ceramic whorl originating from the same locality (Fig. 1j).

In the first belt, whose ornament is composed of spirals, running circularly around the disk, one notes an organization and rhythm on two sides: to the east and to the west, which meet in the north and south as a pair of the recurrent, confronting each other spirals. These spots are marked also by the

square crescent motive, turned inward. Two other spots, one directed from E to NE and the other from W to SW are marked by the same symbols, whereby the array of 6 spirals on the right-hand, eastern side, is divided into two rhythms: $4 + 2 = 6$. The left-hand west side has 5 spirals, running in a rhythm $3 + 2 = 5$. There are in this belt altogether 11 spirals, the "markers" in the shape of lunar crescents, coinciding mainly with the orientation of the back side. The described belt is closed by the circular band indicated by two notches. The next belt contains 25 perforations, serving for pulling through them the threads during the reckoning and following the passing of time as involved by this calendar.

The sidereal cycle of the Moon takes 27 days and 7 hours. The synodic cycle of the Moon takes about 29 days and 12 hours. The difference of the two cycles amounts to about 2 days and 5 hours. This cycle of the Moon in the course of a year (not leap year) makes, cumulatively, 11 days (11 spirals). This rhythm of the Moon, as well as the one of the Sun, taking 365 days and 6 hours, are selfunderstood and require the reduction of the two time rhythms to one single.

Two days and 5 hours lasts the disappearance of the Moon around its conjunction with the Sun, making 24 days and 60 hours in the course of a year. Since these days and hours must be calculated from one month to another during a year, and not summed, the 25 perforations serve just that purpose; 24 perforations for the days in the difference and the 25th for the hours in that difference. The largest perforation, the one to the west for the hours threads, shows that the time reckoning was started at the sunset.

The reckoning of the time passing is easily accomplished with the days, but more difficult with the hours, this the more so if the beginnings are sliding and the rhythms are different, as is just the case here. One may well imagine that there were no complications with the days but the hours were to be carefully brought into accord in the recalculation. Then the two lunar cycles are reduced to one synodic cycle at the straightening with the solar year, but the hours of all the three factors are separately denoted and followed: 6 hours of the solar year, 7 hours of the sidereal and 12 of the synodic lunar cycle, summed together amount to 25 hours – precisely the number of perforations on the above described calendar. The bringing into accord of the two lunar rhythms, as well as arrangement of the 11 days of the difference of the synodic lunar cycle during the year, are perhaps expressed by the inscription in the central disk. This orb of world by which the days of the Moon are put in accord with those of the Sun, shows that there have existed the luni-solar calendars for different temporal spans, in the present case the annual solar cycle (Babović 1999).

4. GNOMON

Among the Vatin finds standing apart by its shape and ornamentation is the minor bony plate-like object, marked as decorative, whose purpose is

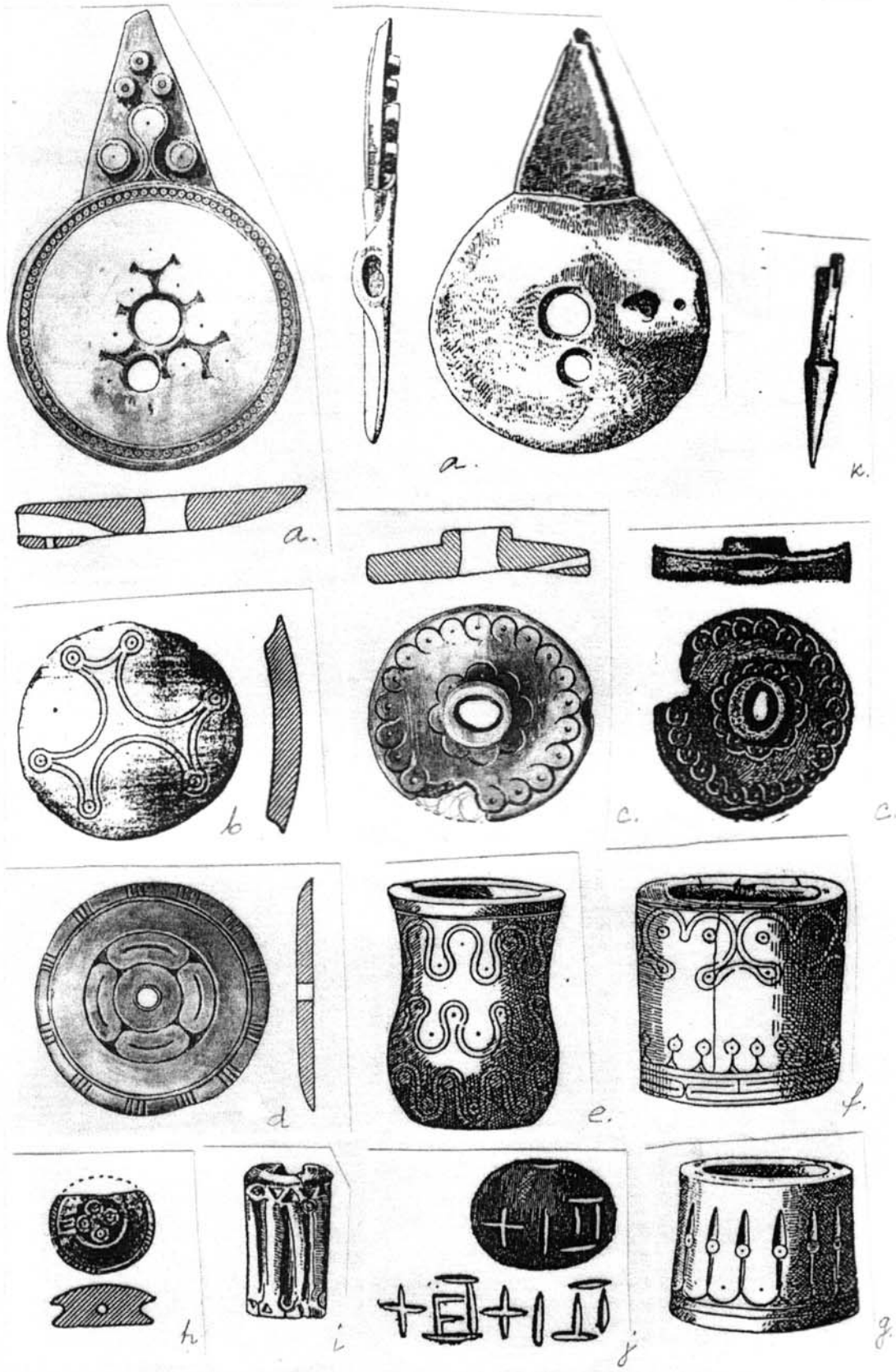


Fig. 1. Instruments and equipment of Vatin for astronomical measurements: a- gnomon; b- metron; c-sundial; d-module; e, f, g- a part of the equipment; h- spool carrying the sundial handle; i- object for fixing; j- the whorl with inscription; k- the plumb-line (according to Milleker).

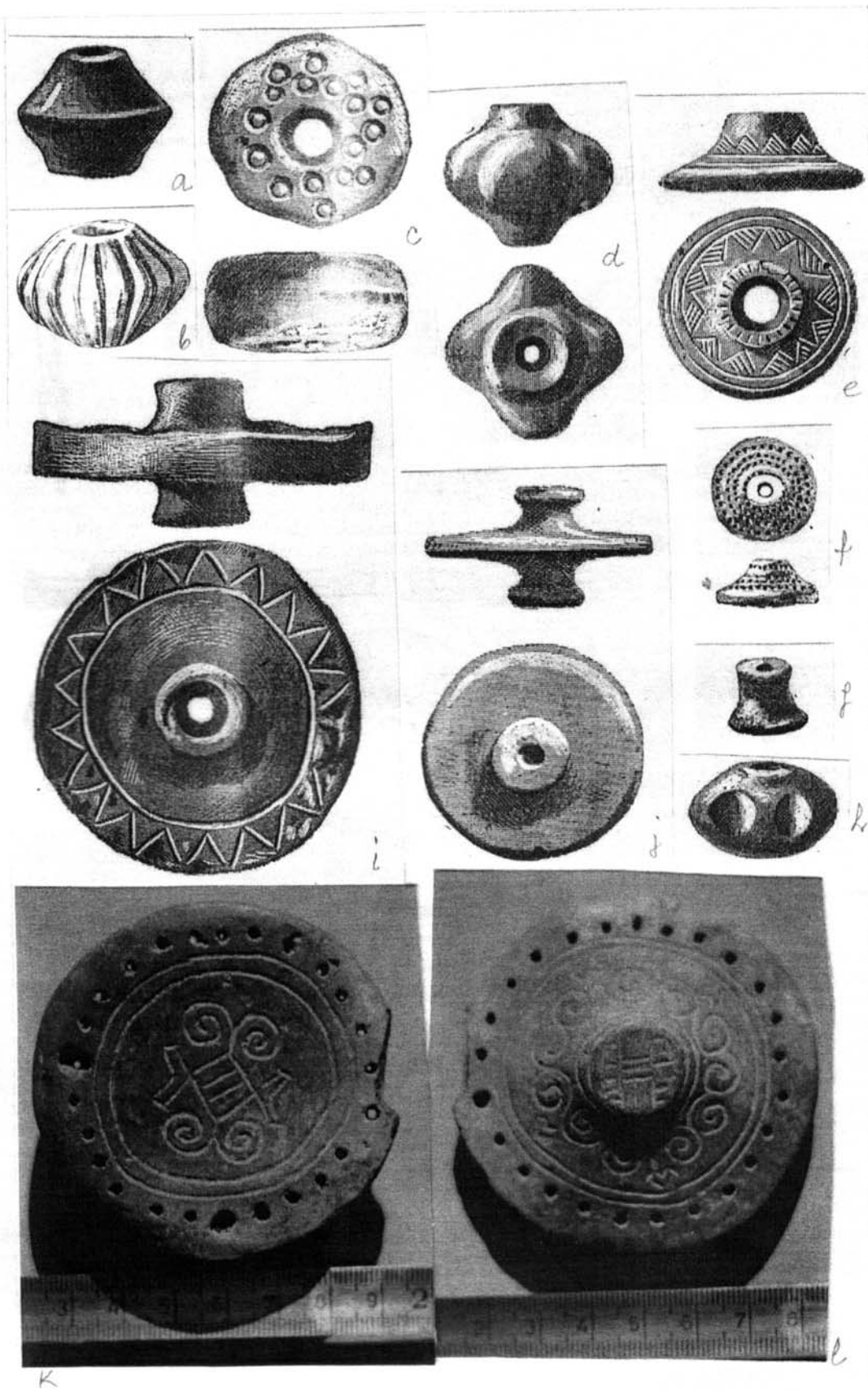


Fig. 2. A part of the equipment found in Vatin, serving for astronomical purposes: a, b, c, d, e, f, g, h- the whorls; i, j- the whorls-tops; g- the spool; k, l- luni-solar calendar; k- upper side, l- lower side (from a to h according to B. Milleker, k, l photos by Lj. Babović).

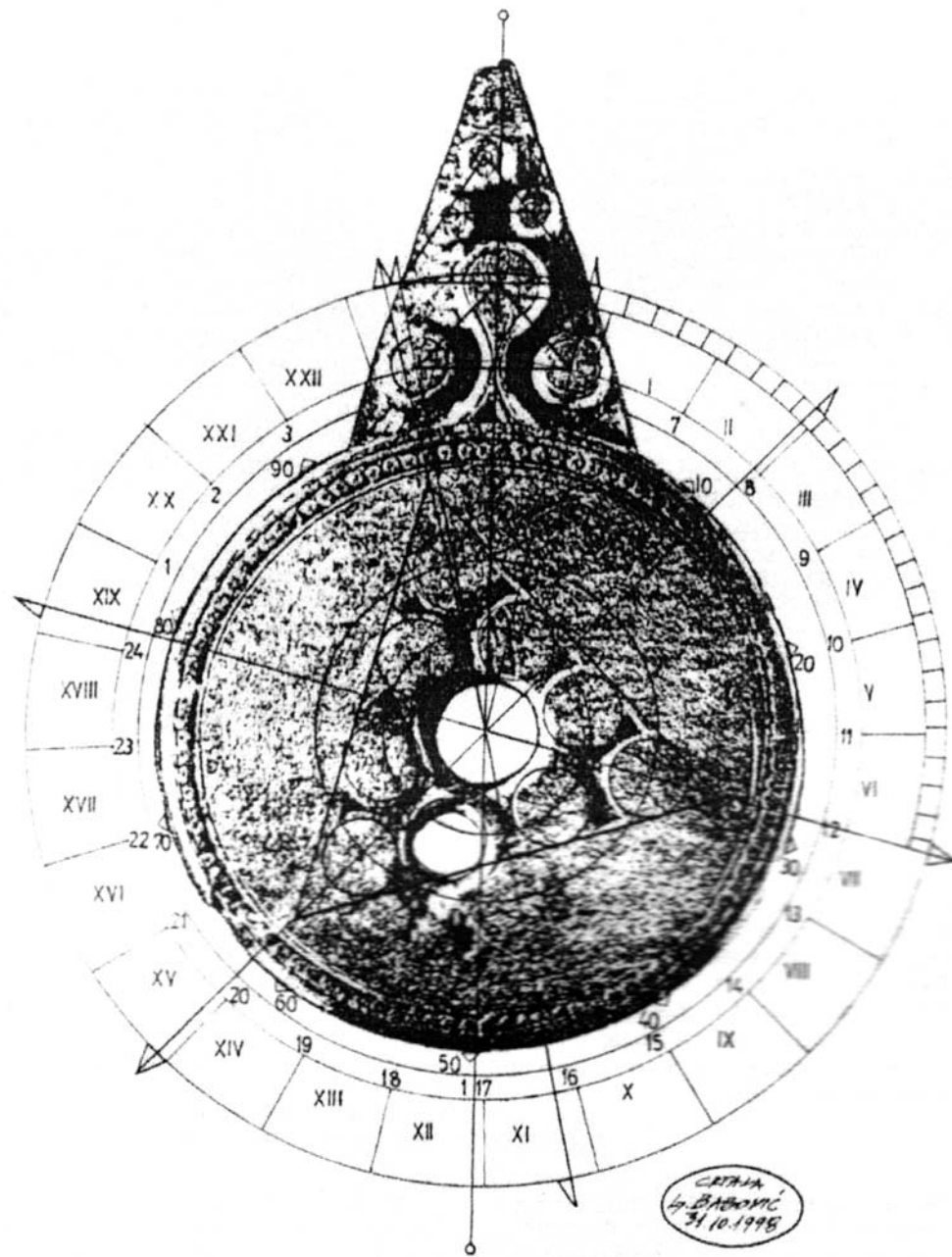


Fig. 3. *The gnomon of Vatin. (Analysis by Lj. Babović, photo by J. Pap).*

not clear (Figs. 1a, 3, 5a) (Milleker 1905, Garašanin 1983, Uzelac 1975, Brukner, Jovanović, Tasić 1974). The question here is about a circular minor plate ($R = 5.4$ cm, $h = 8.8$ cm, $th = 0.4$ cm) in the centre of which there is a regular circular opening ($R = 1$ cm) next to which there is another smaller one ($R = 0.7$ cm). On the central part of the plate's circular body enclosing the openings, a picture of *Tetractys* is formed, consisting of four circles at the base. Upon

these four circles are laid three circles, upon these another two and finally, upon the two is installed on the top one circle ($R = 0.7$ cm), all of them forming an equilateral triangle (sides about 2.6 to 2.7 cm), within which the openings occupy their planned, calculated place (Fig. 5a-a'). The added circles by their centres, yield the number 10 ($4 + 3 + 2 + 1 = 10$) (Whitrow 1933, Riffard 1989, Chevalier, Gheerbrant 1983).

These circles, not stressed, form by their interspace, a dominating regular figure, which also fits into a triangle (Fig. 3, 5a-a'). As a geometric figure it has at its apexes a representation of consecrate horns, in between one horn –*cornu*. As a picture it corresponded to the number 3 along all of the three sides and as a figure it can be considered as a sum 7: $3 + 1 + 3 = 7$ at the base, plus 2 in the middle, plus 3 at the top, yielding 12 in all. As a relation between what is the external and what is the internal, the same is composed in the form of: $3 + 3 + 3$ horns along the external sides, yielding 9, plus three horns inside, resulting in the sum total 12. The mutual interconnection of this picture is not destroyed by the openings and one has the impression that the construction of this figure *Tetractys* – is discretely indicative, which must be born in mind. Here the number 12 would be an expressive one, following from the relation of the numbers 3 and 4. (Divković 1900, Shevarlier, Gheerbrant 1983).

Along the rim bordering the circular field ($R =$ about 4.9 cm) runs a circular band, about 0.2 cm wide, shaped by two cut in circles, containing 100 circlets, each with a dot in the middle. The ornamental markings of the circular face of the plate left its surface flat. On the left-hand rear side, perpendicularly to the triangle figure, a horizontal opening is made, serving for inserting the handle, necessary for holding the object (Fig. 1a). The small opening in the handle for a spike prevents it from moving. In the direction toward the upper apex of the "inner triangle", in the circular plate's part, a triangular plate-like supplement (3.5 cm long, probably 3.8 cm, the basic side 2.8 cm) marked by $2 \times 3 = 6$, plastically shaped circles with dots in their middle (Fig. 3). The central, largest circle ($R = 0.8$ cm) is leaning by the plastically shaped triangle on the circular body of the gnomon, placed along the vertical object's axis. Two smaller circles, to the left and to the right ($R = 0.6$ cm) are placed in such a manner as to form with the central circle a triangle (base 1.4 cm each). Above this triangle there is another one formed by three smaller circles, with dots in their middle (each side 0.7 cm). Accordingly there are, inside the triangular area, $3 + 3$ circles, making 6; or the triangles of such magnitudes which make the screens on the circular body of the object.

The object here described in detail, might be identified as *γνώμων* – an instrument for astronomical measurements and a sundial (Fig. 3) (Senc 1910, Whitrow 1903, Pollio 1990). Not entering into problems connected with the symbols one might here point to the facts which determine it as a gnomon: the flat circular plate with engraved measuring units, by which the circle is divided into 100 parts, each unit comprising $3^\circ 36'$. The hundred units comprise 10×10 decans, suggesting the system of time measuring in the ancient Egypt as it was practiced about 2150 B.C. (Whitrow 1993, Sachs, Willatte 1905). The opening in the centre is meant for the pole about which the instrument can be rotated. The small opening served for the plumb-line without which the correct measuring is impossible. The inserter for the handle, insuring the correct position of the in-

strument when it is used manually, completes the ensemble. The pointer, the triangular part of the instrument, by which the instrument was directed toward the object, is used by means of a thread, extended from the pole toward the triangular addition over a visor in the shape of a tiny notch, here damaged. All of the mentioned objects of the astronomical equipment (the plumb-line, the hand, the spools, the whorls) are found in Vatin.

According to the known evidence, the Egyptians have divided the day-night time into 24 hours, relying thereby on registering the "heliacal" rising of certain stars at 10 days intervals. The division of the constellations into decans was brought in accord with the solar year by means of $36 \text{ decans} \times 10 = 360 \text{ days} + 5 \text{ days}$. The night was divided into 12 hours and the day into $10 + 2$ hours of the morning and evening twilight. The determination of the time of day may most simply be performed by following either the path of the shadow or of its length: both variants being only broadly accurate without the astronomical knowledge.

By the drawing in Fig. 3, as a model, the metric of day hours is indicated; by Roman numerals are indicated the series of hours (I, II, III, ..., VI marking the noon etc) and by Arabian numerals only supposed time reckoned from the sunrise. The applied metron ($15^\circ = 1^h$) is contained in the length of the lateral sides of the larger triangle on the base of the pointer (Milošević 1985, Velev 1988). It can be gathered from the illustration that one hour comprises four gnomon units. The direction of the middles of the consecrate horns (or the directions of the lines of symmetry of angles and the lines of symmetry of sides) determine the division of hours into three sections. Because the times of the Sun's risings and settings during the year are variable, the beginnings and endings of the day had to be brought into accord with the directions marked by the central triangular figure of the instrument, as well as with the mutual relations of the geometric figures on the instrument. If we make use of the information that the sundial on the obelisk Sety I, dating from about 1300 B.C., marks 10^h between the Sun's rising and setting and compare with the gnomon, then 10^h would fall onto the middle of the basic side of the triangle between X and XI hours, where some ceasure might appear. The instrument being, evidently, calculated the shadow, by falling onto the dials and the metric of the central figure (in which the diameters of 10 circles determine the hour arcs) can express the measured time and the horizontal angle of the observed object.

5. METRON

That the parameters in the time reckoning are variable and that this has been taken into account is indicated by the bone plate belonging to the same ensemble (Fig. 1b, 4) ($R = 4.1$ cm, $th = 0.3$ cm) (Garašanin 1983, Brukner, Jovanović, Tasić 1974). By analyzing the drawing it is proven that the structure of this plate and the gnomon are, by their ori-

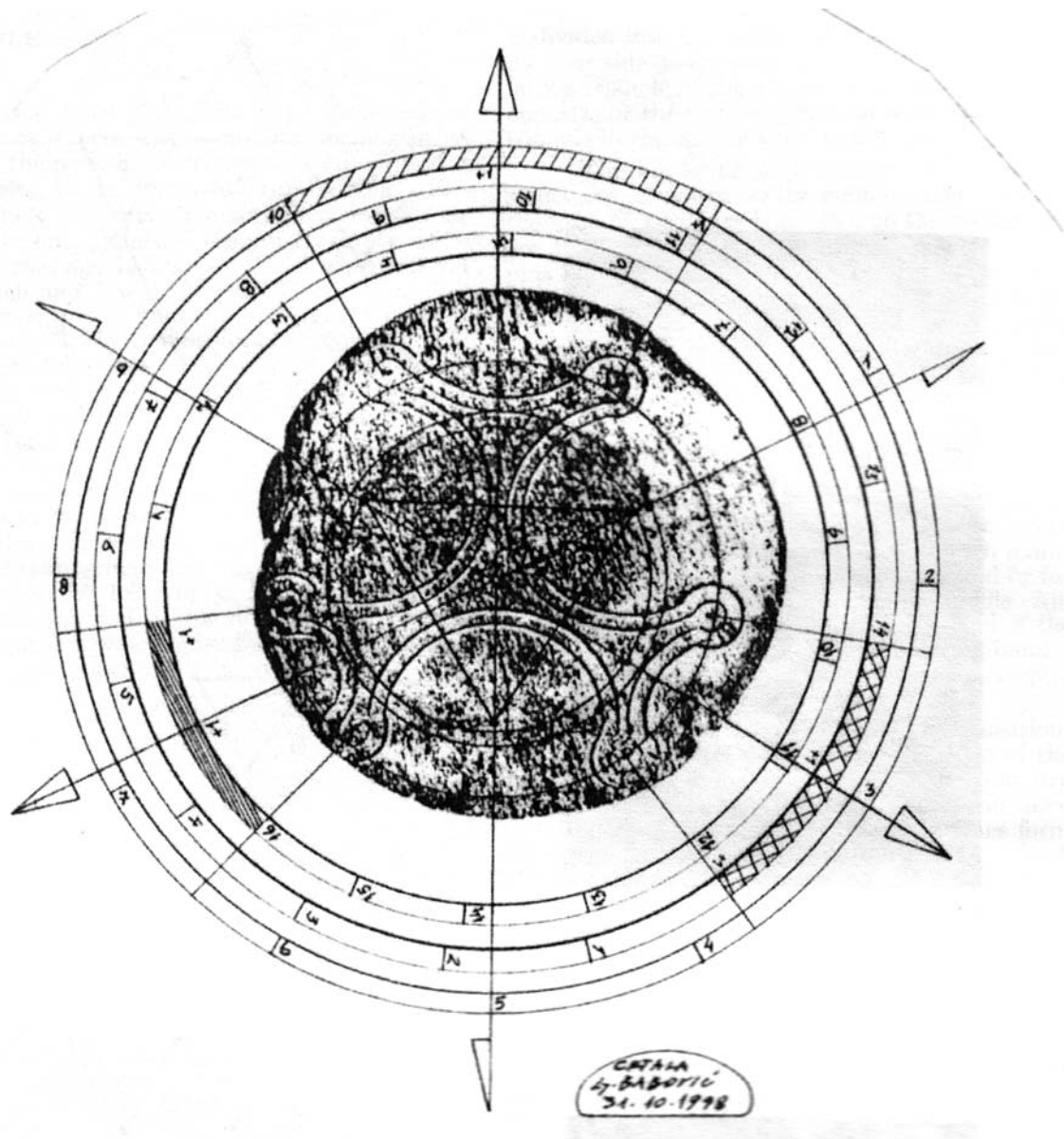


Fig. 4. Metron-modul of Vatin. (Analysis by Lj. Babović, photo by J. Pap).

gin the same (Fig. 5a, b). This small plate-module-*μέτρον* has the calculated positions of the consecrate horns, whose intervals in all the three pairs, are different, but corresponding to the radius of the given circle (Senc 1910, Whitrow 1903, Pollio 1990). Three different intervals between the pairs of concentric circles with dots, in three metrics, divide the three circles into: $16 + 2 = 18$ parts; $14 + 2 = 16$ parts and $10 + 2$ parts.

6. SUNDIAL

The Vatin metron, being shaped as a gently spherical cover ($R = 4.4$ cm) might have had some

connection with another object of the same diameter, equally exceptional (Fig. 1c). The matter is about a circular little bone plate ($R = 4.4$ cm, $th = 0.5$ cm), with an oval opening in its middle and with a strengthening for the pole, around which there are cut in 10 semicircles with centres in the middle. Along its ring there are engraved 24 circles (Babović 2001, Milleker 1905). On its lower side this gently spherical plate contains an opening for the inserter - handle. In view of what has been said so far, this object might have been a sundial on judging after the numbers - $10 =$ decan and $24 = 24$ hours, the difference being that this sundial might have been used for following the shadow only of a pole whose height was calculated, which is in itself obvious with the former gnomon.

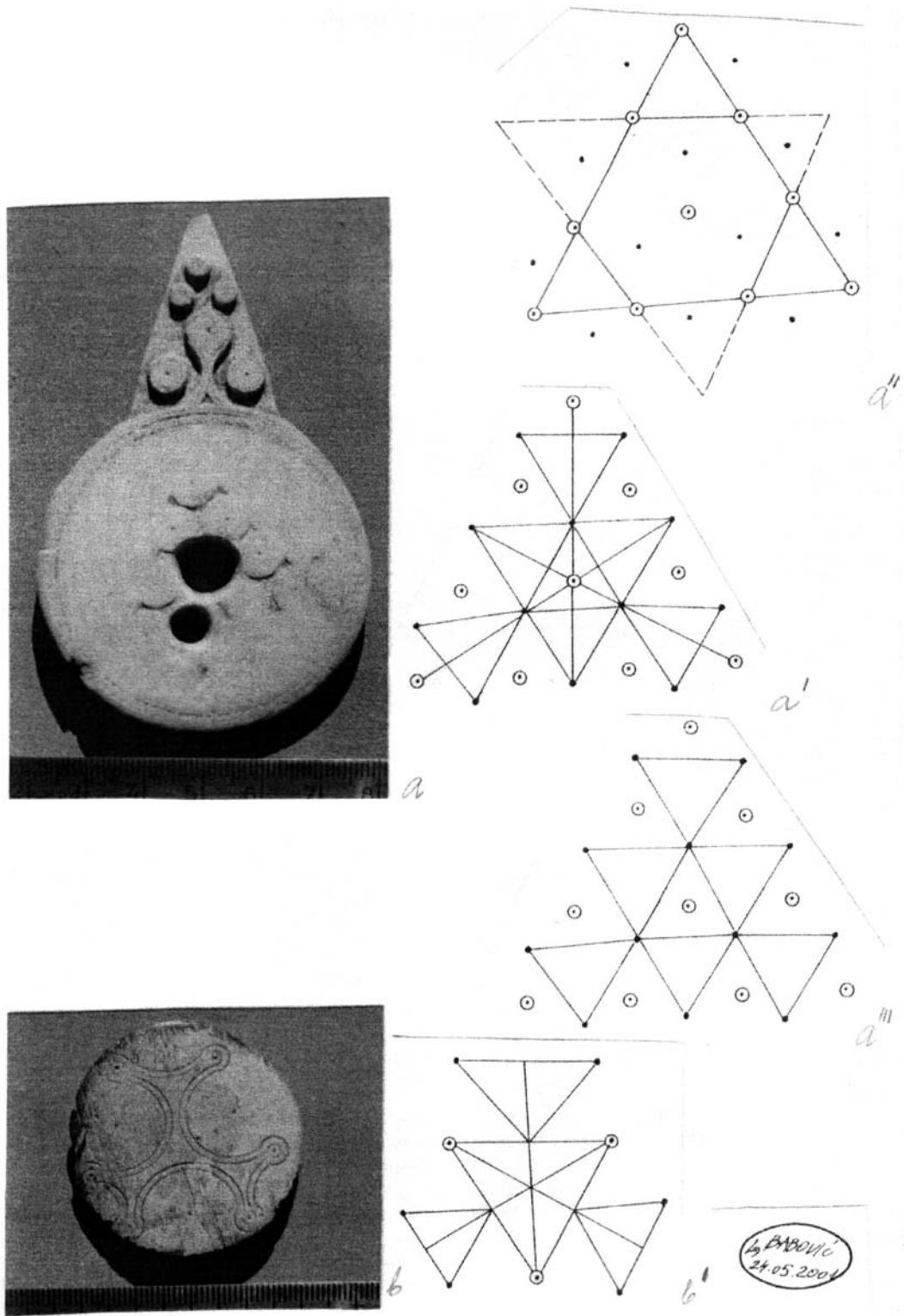


Fig. 5. a - a' - a'' - a''' gnomon of Vatin; b - b' - metron of Vatin. (Photos and analysis by Lj. Babović).

7. MODULE

The flat bone plate with a 4.4 cm diameter and thickness 0.2 cm with a circular opening in its middle for the pole, has ornaments executed in four circular belts, in an empty-full rhythm (fig. 1d). The first belt is empty; the second contains four oval non-touching segments; the third is empty, while the fourth contains 12 bundles, 10 of which with 4 hatches each and 2 with 3 hatches each. One has to point here to the numbers involved: the number of belts = 4, the number of oval elements = 4, the number of hatches $40 + 6 = 46$. Having regard to the numerical values and the pictorial elements, one might assume this plate module to have been used for following the passage of time and the rhythms of phenomena connected with the Moon, within the framework of a solar year of 12 months. If it is kept in mind the obligatoriness of human actions linked with the lunar phases, well known in the history and ethnography one might form a complete picture of everyday following of the phenomena and consequences imposed by the deity of this celestial body, the traces of which appear even in the present-day calendar (Heziod 1970, Čohadžijev 1984, Nikolov 1990).

8. ANALOGIES

The common base of presentations on the *γνώμων* and *μέτρον* of Vatin is found on the golden panelings of the upper hemisphere of the pommel fixed on the handle of the ritual dagger from the tomb in Staphylos in Skopelos as well as on the well-known golden discs found in the tomb III in Mycenae (all about 1500 B.C.). That common base is visible in as much as it is graphically reduced to the composing structure by which is substantiated the particular visualization of the presented objects and the metarality (Marinatos 1960, Gimbutas 1965, Babović 2001).

The recognizing of Tetractys, depicted on the gnomon of Vatin, in an exemplary form in the same manner as this "holy figure" was defined and presented by Pythagoreans in the second half of the 6th century B.C., as well as the finding of analogous mathematical structure in the archeological material of the Mycenae world in about 1500 B.C., opens several questions concerning, in the first place, the manner of the transfer and nature of colonization of Aegean world onto the subsequent times of Mediterranean (Koplston 1988, Hoddinott 1989).

9. MATHEMATICAL STRUCTURES AND TETRACTYS

On the gnomon, metron, ritual dagger and three golden disks (Fig. 5a-a', 5b-b', 6a-a', 6b-b', 7a-a', 7b-b') in a circle a figure of an equilateral triangle is presented (by whose lines of symmetry the surface

is divided into 6 corresponding triangles) placed by its basic side down-ward, with the inscribed, or overlapping triangle of the same characteristics, but with opposite or the same orientation with the described triangle in the case of the ritual dagger.

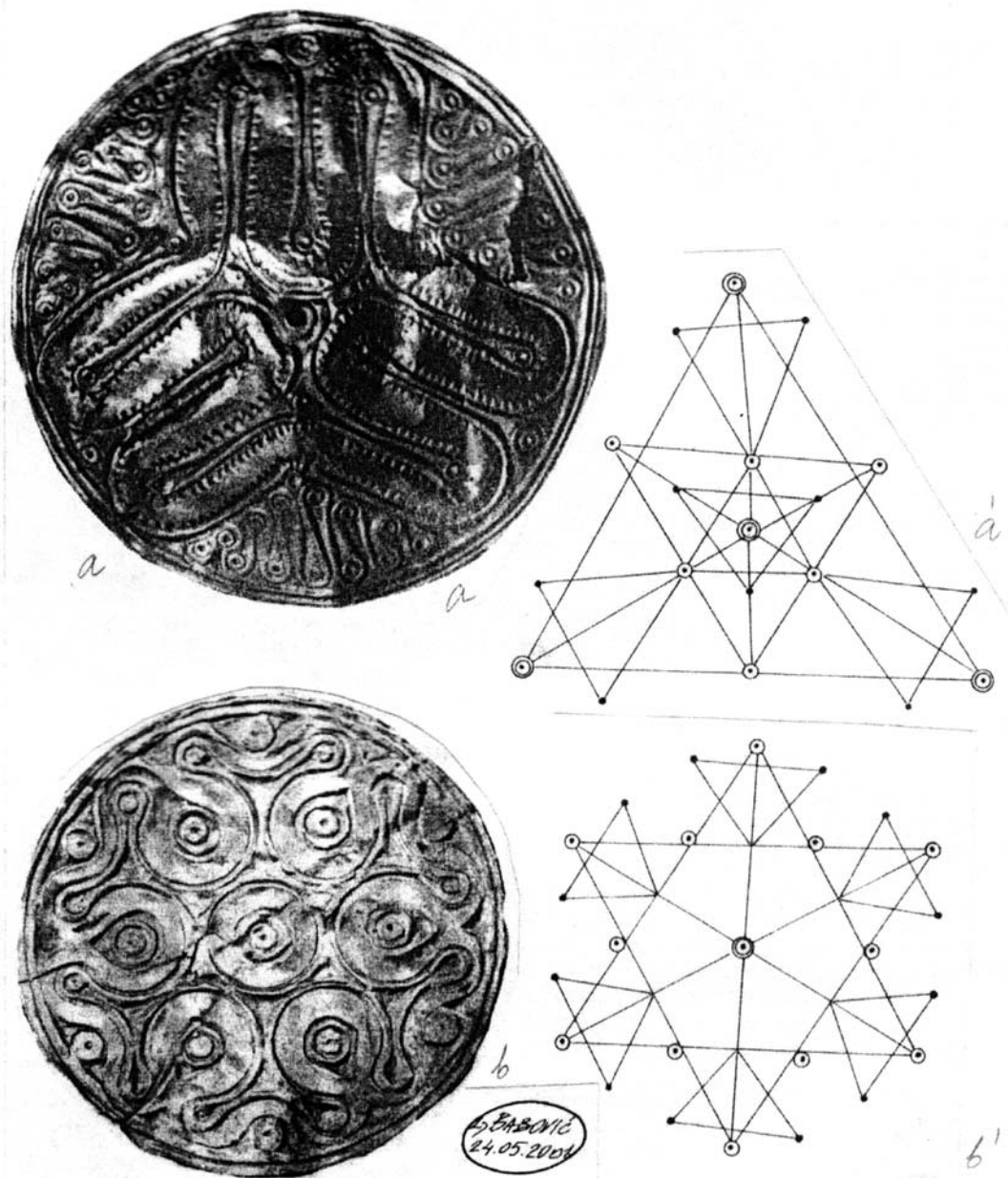
The bordering and touching points of these structures, of which on the gnomon there are 10, in the form of Tetractys (Fig. 5a); on the metron there are 3; on the dagger $3 + 1 = 4$ of the large triangle, plus $2 \times 3 = 6$ of the minor internal triangles, yielding in the sum 10 circles, with dots in the middle. With the disc from Fig. 6b', where two triangles – Tetractys – with opposite orientation, there are $6 + 7 = 13$ such points. On the disc in Fig. 7a' there are 7 points of the same rank. In the most indented presentation of the structures we are dealing with, the one on the disc in Fig. 7b', in which also two triangles – Tetractys – with mutually opposed orientation, are presented, there are $7 + 6 = 13$ circles with dots in their middle. These points on the object treated here are presented: as a point, a circle with a dot in its middle, a concentric circle and threefold or fourfold concentric circle with a dot in its middle. All of these points of one or several triangles and of these structures, are embraced by a meandering band – a curve, which always puts them, without exception, on its outer side.

In the place or in the places, of transition of the lines of symmetry across the structure of these triangles are formed also triangular or circular structures which with one of their apexes rest on the described structure and with their basic sides form a pair of consecrate horns. These horns are, by the meandering band, always placed on its inner side.

Thereby, depending on the presented idea-structure, its complexity and value; simple as $2 \times 3 = 6$ points on the metron (Fig. 5b'); $3 \times 2 = 6 + 3 = 9$ on the dagger (Fig. 6a'); $2 \times 6 = 12$ points on the disc in Fig. 6b'; $2 \times 3 = 6$ on the disc in Fig. 7a' and $2 \times 6 = 12$ on the disc in Fig. 7b'; the meandering band-curve features simple figures (metron), up to "magically" complex ones as on the disc in Fig. 7a. Here the dynamics of the presented reality is dominating, with the central circle in which the symbolic swastika motif rotates in direct sense (7a). The meandering, closed curve itself, which is the borderline of the building structures, is presented as a band limited with notches (Figs. 5b, 6b, 7a), or as a body distinguished by its corporality (Fig. 6a).

10. TETRACTYS – HEXAGRAM – SWASTIKA

As a structure the Vatin gnomon is composed, as described and here visualizes (Fig. 5a', a''), of two independent dovetailed structures. The one of these structures forming the Tetractys, as a part of the symbolic motif "David Star" – hexagram; the triangle with its base turned downward and the structure forming consecrate, with the same orientation, shape and rhythm, but with alternating and oppositely turned triangles – structure elements, of which in both cases there are 6 (Fig. 5a'').



Symbols used: \odot – point on the outer curve's side
 \cdot – point on the inner curve's side

Fig. 6. *a-a'*- golden covering on the handle pommel on the ritual dagger from the tomb at Staphylos in Scopeles; *b-b'*- golden disc from the tomb III in Mycenae (*a, b*- according to *S. Marinatos*; *a', b'*- analysis by *Lj. Babović*).

The symbolic structure here termed "David Star", in addition to extending over a flat surface, which is an appearance, canceled by the real presentation on the corresponding golden discs (Figs. 7c-c', 8a-a', 8b-b', 8c-c'), appears in four different forms, realized by the symbolics: sevenfold concentric cir-

cles, rotating swastikas and the living being – octopus. Thereby the motive of concentric circles as parts of the perfectly executed spirals, variously composed in the Mycenae culture, here by means of a "vine tendril" curve, is alternately situated inside/outside, making the "David Star" appearing here and there

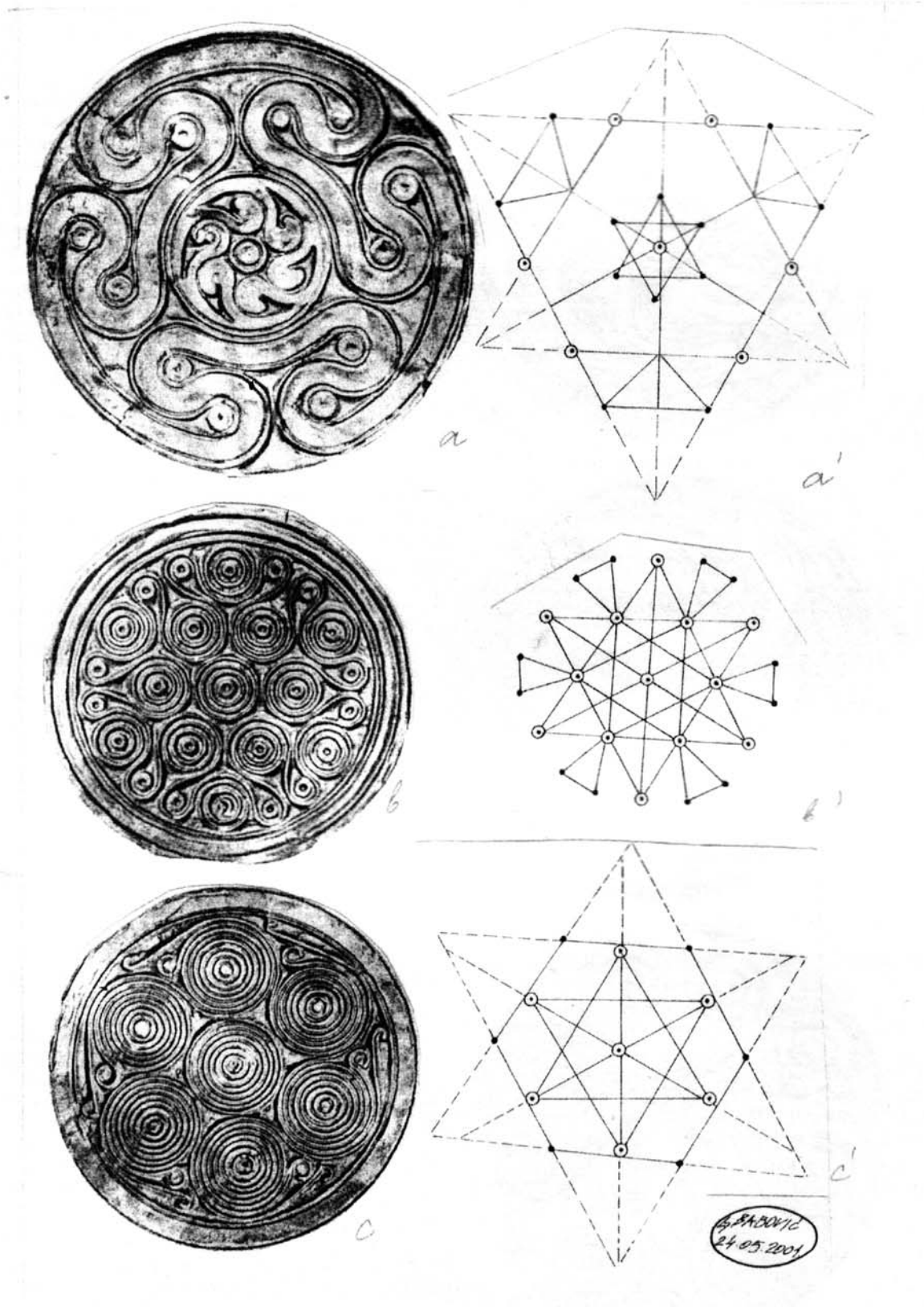


Fig. 7. a-a', b-b', c-c'- golden discs from the tomb III in Mycenae. (a, a', c- according to S. Marinatos; a', b', c'- analysis by Lj. Babović).

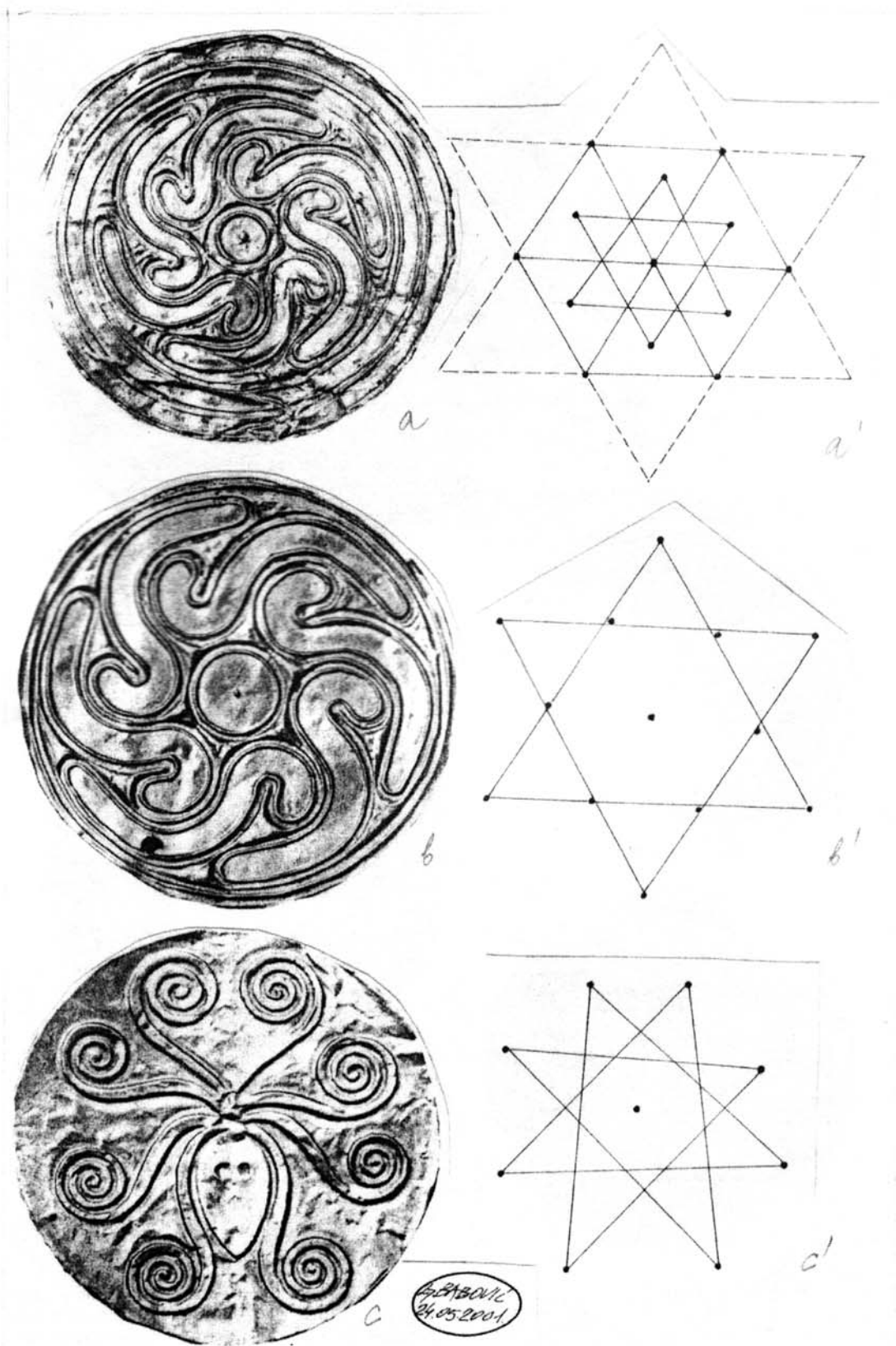


Fig. 8. a-a', b-b', c-c'- golden discs from the tomb III in Mycenae; (a, b, c- according to S. Marinatos, a', b', c'- analysis by Lj. Babović).

(Fig. 7c.). The identification of the swastika motif with the "David Star" in the structure points symbolically to the Sun as a mysticall divine history present in the spritual world of Crete and Mycenae.

As a sum of numbers of the marked points, outside plus inside; the curve, the structure here under discussion might be expressed in the following way: the gnomon: $10 + 12 = 22$, metron: $3 + 6 = 9$; the ritual dagger: $10 + 9 = 19$; the disk in Fig. 6b: $13 + 12 = 25$; the disk in Fig. 7a: $7 + 12 = 19$; the disk in Fig. 7b: $13 + 12 = 25$; the disk in Fig. 7c: $7 + 6 = 13$; the disk in Fig. 8a: 13; the disk in Fig. 8b: 13; the disk in Fig. 8c: 9. One notices that the symbol of the "David Star" is identified by the number 13, and all of the structures, except the gnomon, by odd numbers.

11. CONCLUSION

In this connection one is led to invoke the analogy to the Pythagorean doctrine according to which the things are numbers and the principles of mathematics are principles of all things. The element of the number are even (unlimeted) and odd (limited); the one resulting from both. The number is conceived spatially; the sum of the first four numbers of the natural series is ten. Each material body is an expression of the number four (Tetractys) because it comes into being as the fourth in the series out of three constitutive elements. The notion of $\tau\omicron\ \pi\acute{\epsilon}\rho\alpha\varsigma$ (the limit) is introduced which gives the form of the unlimited. By the numbers is expressed the notion of the soul and its fate (Aristotel 1971, Koplston 1988, Riffard 1989).

Although the questions opened by this analysis are not brought to an end, it is indicated that the answers might perhaps be found in the inheritance of the classic Greece.

Instead of conclusions, facts noticed on the analysed objects might be pointed out:

- all of the objects, by their form, contents and function are based on, and expressed by, the language of mathematics;
- the number and the natural series of numbers are carried by *Numen* and the geometric figure of triangle and out of it derived circle - symbolize the cosmogonic act and the cosmologic order;
- the time and the times (immanent in the deities of the Sun and the Moon) are recurrent and cyclic;
- the sanctity of the time and space is expressed theologically, ritually and symbolically, being transmitted through the sacerdotal status and act.

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БРОНЗАНОДОВНИ АСТРОНОМСКИ НАЛАЗИ НА ТЕРИТОРИЈИ СРБИЈЕ

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Прегледни рад

У раду се показује да се међу археолошким налазима из Ватина (око 50 km североисточно од Београда), налазе инструменти палеоастрономског прибора, који се, по орнаменталним аналогијама везују за истовременску Микенску културу (око 1500-1250 година старе ере).

Особена ликовност гномона и метрона нађених у Ватину, златне оплате ритуалног бодежа из

Staphylosa и златних плочица из Микене, условљена је, како се показује анализом, математичким структурама – симболским сликама ствари и метафизичке стварности.

Идентификација Tetractys-a на њима води интерпретацију приказаних структура ка учењу Питагорејаца (друга половина VI века старе ере), који су вероватно претходна херметична и езотерична знања, делом, својим учењем исказали и пренели.