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ARCHEOLOGICAL FINDINGS OF MUSICAL INSTRUMENTS IN YUGOSLAVIA

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This survey of initial archeomusicological research on the territory of Yugoslavia is based on published and unpublished sources, that is on the archeological findings of musical instruments and objects that have not been identified as musical instruments but as "cult-magic tools". The article presents archeological findings of musical instruments according to the Hornbostel and Sachs classification system and defines them typologically. Musical instruments are presented from three basic groups: idiophones, aerophones and chordophones. The author reinterprets certain archeological findings, pointing to the plausible application in music of the "cult-magic tools", finding occasional parallels with contemporary traditional instruments and beliefs preserved with individual types of musical instrument, presenting the facts and assumptions on the specific functions of these instruments in the prehistoric and historic age, and registering certain phenomena of continuity in usage of certain types of musical instruments on the territory of Yugoslavia.

Before embarking on a survey of archeological findings of musical instruments in Yugoslavia, it is necessary to stress the value and significance of archeological findings of musical instruments for etnomusicology in general as a science. We find its value and meaning primarily within the historical approach to ethnomusicology. Quite some time ago, Bruno Nettl (1956, 90) noted that "the study of musical instruments (is) an aspect of

ethnomusicology that is related to archeology" and that it is possible to learn a little about prehistoric music styles and practice from the archeological findings of musical instruments. All the skepticism and argumentation that historians have for the historical approach in ethnomusicology that was presented by Walter Wiora (1965, 188) evaporates before the material evidence of bygone music cultures that archeological artifacts are testimony to. Actually, most of the historians' reservations are still valid today for vocal folklore music, because the written sources are lacking that could document the traditional vocal practice, and ethnomusicology that studies it is limited, for the most part, to the oral tradition which does not reach further into the past than fifty to a hundred years. It is clear that ethnomusicology has not managed to resolve many of the tasks of historical study such as the absolute chronological process of emergence and change in certain phenomena and traditions. Contrary to the stated reservations of historians and the assumptions that ethnomusicologsts can only add the occasional fact, and not a picture of overall development, we have ethnoorganology which is an ethnomusicological discipline supported by archeological findings of musical instruments, which in certain cases of major findings of the same type of musical instrument over a longer or greater period of time can show and establish a continuity of usage of a certain musical instruments over several thousand years in a specific geographic area, thus precisely defining in time the duration of certain symbols, aesthetics and function of a typical sound of a specific musical instrument within one or more music cultures, as well as definite ethnic groups. Archeological findings of musical instruments are also quite valuable for ethnologists and cultural historians, outside the realm of ethnomusicology, because they make it possible to explore their origins as a process of changes, cultural influences, processes of acculturation, etc. Of course the greatest value are archeological findings of musical instruments when one establishes identical function and form of musical instruments from the prehistoric period and those that are used in living folklore practice, on the same geographic territory. Using such a comparative method we can reconstruct prehistoric and historic instruments as well as music culture, certain processes of interaction among various cultures, the processes of transformation and processes of historical development or degeneration of certain forms of musical instruments as well as millenia-long lines of continuity in certain traditions.

Reacting to the skepticism and critical position that historians maintain towards the historicity of ethnomusicology, Walter Wiora contended (1965,188) that critics did not take into consideration the contribution of ethnomusicology to the pre-history of music. I quote his words: "It is true that the music of non-literate cultures has no historical existence in the same full sense of the word as western art music. It is lacking in elements such as a proper theory, an elaborated notation and higher forms of consistent evolution from stage to stage, like the evolution of opera and symphony. It lacks consciousness of evolution and with it 'historia' in the sense of 'res scriptae'. But no people is so lifeless that it has no history at all. At least it lives in elementary categories of history, such as origin, change, influence, acculturation, suppression, decline." On the need for a historical ethnomusicology, Walter Wiora says (1965, 192) "Historical research is not an addition to but a principal task of ethnomusicology. It has to consist of historical as opposed to semi-historical studies such as the mere enumeration of sources. It includes critical interpretation, investigation of absolute chronology and causality, wherever that is possible, and finally a conception of historical development. For the general history of World music the contribution of historical ethnomusicology is no less necessary than the contribution of music history in the conventional sense

of the word. This contribution is indispensable. Let us aspire and hope that it will become important and essential too."

In spite of all exactitude in dating the use of a certain artifact, however, due to the lack of sophisticated laboratory methods in Yugoslavia, microscopic analysis, the use of the x-ray in this field of archeomusicological research, dating continues to be a problem for identification, i.e. interpretation of certain archeological findings as musical instruments, especially for individual types of idiophonic and membranophonic musical instruments. Regardless of this technical lack, we can expect that such doubts or hypotheses will, in the near future, be possible to determine as definitively valid or out-of-the-question.

The survey that follows of archeological findings of musical instruments from Yugoslavia considers the place that individual musical instruments or their types hold in the Hornbostel-Sachs classification of musical instruments (1914) which has been accepted internationally and has an elaborate system of numerical signs.

Along with a typological determination of the musical instruments I provide a quite detailed description of the forms and materials that the instruments are made of, as well as all the sizes and physical measurements and the site where the instrument was found, because these are standards taken from archeological literature and science. These facts are of comparative importance and they are significant to the further interpretations on function and so forth.

This article is the first attempt at a systematic presentation of individual types of musical instruments unearthed in archeological findings from the entire territory of Yugoslavia. The survey includes the three largest groups of musical instruments: 1. idiophonic, 2. aerophonic and 3. cordophonic. I have intentionally decided to omit presentation of the fourth group of membranophonic instruments because the risk of interpreting certain artifacts as musical instruments is the greatest in this group. Without visible proof, i.e. a membrane whose life span is brief, it decomposes underground, one can only guess or postulate the music function of some clay or wooden vessel, the opening of which might at some time have been covered with leather.

Archeological findings are presented in the survey from each individual republic, in as much as the available published material made this possible.

Since the original basis for this contribution was presented in a much more abbreviated form at the second conference of the study group for musical archeology at the International Meeting for Traditional Music in Stockholm (November 19-23, 1984) I consider it indispensable to dedicate a few lines to an explanation of the notion of musical archeology, within the framework of whose intentions this paper was designed and written.

According to Ellen Hickmann (1984, 5), *Musical Archeology* or *Archeomusicology* are terms for the interdisciplinary field and science that studies the means for producing sound as well as the way of producing sound in past societies, using methods from archeological science accompanied by musicological and historical methods and other related fields. Studying these means for and ways of producing sound, archeomusicology has as its objectives, aided indirectly by archeological findings of musical instruments, the description and interpretation of music and music practise in prehistoric ages (the subject of study for "historical archeomusicology"), using archeological artifacts and iconographic sources as its primary sources.

Since archeological findings of musical instruments, a subject of material culture that is at once a materialization of spiritual culture, from that fact the possibility and task of

archeomusicology arise, which are as follows:

1. archeological facts, i.e. artifacts, in combination with iconographic sources can prove the continuity of usage for certain types of musical instruments, and in doing so, the continuity or changes of music culture through the centuries.
2. Archeological findings of musical instruments make it possible to date, precisely or within a range, the continuity of existence or interrupted usage of certain musical instruments and music traditional cultures.
3. Music archeology makes possible an historical reconstruction of music traditions much further back into the past, over the borders set by oral, or oral and written sources.
4. Music archeology, conducting a detailed typological investigation of regional forms of individual musical instruments, and their findings, makes it possible to reconstruct, i.e. build musical instruments on which the sounds can be played, i.e. produced, that closely approximate those from prehistoric or historic periods.

The existing, published and accessible literature on archeology permits us the following survey of archeological findings of musical instruments on the territory of Yugoslavia.

In the group of *idiophonic musical instruments,* the previously mentioned problem of interpreting a certain artifact as a musical instrument arises at the very start. Visible traces of ritual beating on "skiptars", known as "bats" (or mallets) in earlier literature, from Lepenski Vir (D. Srejović-Lj. Babović, 1983) give us the right to treat these cult-magical instruments, i.e. ritual objects, as concussion sticks (HS-111.11) or directly struck idiophones. The artifacts have been found at a large number of shrines: the1st skiptar, settlement IA-b, amphibolitic shale with granites, 39.5 x 4.8 cm, (IB. 843, cat. 90, Srejović D.- Babović Lj. 1983, 185); the 2nd skiptar was found in the corner of the right wing of shrine no. 47 (settlement Ic, rugose chlorite-muscovite shale, 25.4 x 5 cm, SM. 575, cat. 96, Srejović D.-Babović Lj., 1983, 187); the 3rd skiptar was found by the hearth of shrine no. 27 (settlement Id, silty fine sandstone, 22.5 x 5.6 cm, IB 679, cat. 97, Srejović D. - Babović Lj., 1983, 197); the 4th skiptar (Fig. no. 1) was found at the site of shrine no. XVIV, in the vicinity of the hearth (settlement II, siltstone without calcite, 21 x 4.2 cm, IB. 720, cat. 99, D. Srejović - Lj. Babović, 1983, 188). In the cases when Srejović (1979, 55) considered that these "mallets" or "skiptars" "should be certainly connected with stone pestles (Fig. no. 2), deep or quite shallow, found in individual settlements", we must allow for another possibility of classifying these artifacts as percussion vessels (HS-111.24). On the basis of the decoration on these mallets and their location next to the hearth of a shrine (Lepenski vir) or in graves (Vlasac), D. Srejović (1979, 61) concludes that these specimens are not cult, but rather magical instruments. I would put forth the assumption that these artifacts could be used as musical rhythmic instruments, just as we know for the wooden sticks used by Australian tribes (Pitjantjara) and the tribes of New Guinea, Melanesia and Polynesia where they are used in rain-making magic, where one stick symbolizes thunder, and the other, a cloud (P. Collaer, 1974, 86). We can postulate the likelihood that the same can be said for Lepenski vir on the basis of certain parallels with the Australian concussion sticks. On the northern shore of Australia, concussion sticks have been found in the form of fish, i.e. only one stick. Paul Collaer (1974, 90) cites the opinion of Marius Schneider, that these sticks came from rain-making magic, which is based on symbolic connections: water-fertility-fish. The

artifacts in Lepenski vir may have been used for similar magical purposes, because Srejović (1979, 61) finds one case of a fish depicted, along with complex designs and interrupted enigmatic signs. These concussion sticks are in the form of "pebbles and gravel in cylindrical, spindle-like, parallelepipedic or triangular forms". and they sometimes reach a length of 60 cm (D. Srejović, 1979, 55). Srejović dates these stone artifacts to the period of the proto-Neolithic, i.e. around 6,000 B.C.

Metal hollow cylinders hung on a chain, date to from the late 3rd century to the early 4th century A.D., and can be classified as individual gongs. (HS-111.241.1). For now only two localities are known with such artifacts. Carl Patsch (1902, 79, Fig. 12) found such an artifact in Gorica, in Dalmatia,from the Roman imperial period. Another archeologist, Živko Vidak (1961, 117-179) found several specimens in Vršac (Vojvodina) of such gongs (Fig. no. 3) in necropolis which can be attributed to the ethnic group of the Sarmats. Exceptional and typical of these Sarmat bronze gongs was the fact that they were small in format and often attached to the inner side of the left knee on a skeleton, along with kauri shells and a small bronze cup-shaped bell, like a pendant. When attached in this manner, they represented, as a group, indirectly struck idiophones, or shaking rattles made of rows of rattling objects strung on a taut string (HS-112. 111). Vidak's interpretation that these objects had an apotropeic or magical power seems acceptable. Marius Schneider (1969, 54) interprets the special symbolism that wearing rattles in the knee region has. In the group of archeological findings of idiophonic musical instruments, specimens of jewelry that can be classified as shaking rattles made of rows of rattling objects strung on a taut string hold a special place (HS-112.111). Such findings are so numerous that a separate study could be devoted to them, which would cover the many forms of fibula with amber grains, pectorals (chest ornaments), worn as earrings. In this paper, in the limited space available, we will present a few specimens of earrings typical for the Liburnian culture of the early Bronze Age. The most beautiful specimens of earrings were found in Viča Luka on the island of Brač (Croatia) which date approximately to 1500 B.C. (Marović-Nikolanci, 1977). The finding includes linked rattles (Fig. no. 4), bell-shaped pendants (Fig. no. 5). The bell-shaped pendants were known to the Iapods as well, an Illyrian tribe that inhabited the area of Lika. Iapodic archeological findings of bell-shaped pendants are from Prozor near Otočac (A. Stipčević, 1981, 139). The findings from Viča Luka abound in numerous, particularly lovely basket-shaped pendants (Fig. no. 6) and pendants in the shape of hollow discs with a loop (Fig. no. 7) or with pendants in the shape of hollow triangles.

There are more recent findings (almost 1500 years old) of frame rattle-pendants (HS-112.121) that can be attributed to the Roman cultural level. In Ribič near Bihać (Bosnia and Hercegovina) a bone plate was found with bronze rings (Fig. no. 8) in an Iapodic necropolis (V. Čurčić, 1900, 28). Carl Patsch and Čiro Truhelka (1895, 228, Fig. 6) found quite a similar bone plate, though without the bronze rings in a Roman site at the locality in the Lašva River Valley near Zenica (Bosnia and Hercegovina). It seems quite likely, due to the shape of the plate, that it had rings which rattled as the earlier specimen did. Both specimens could be dated, due to other grave findings, to the Roman antique period, from the 1st to the 4th centuries, A.D.

Three bone objects from the Bronze Age can be classified in the group of scraped idiophonic musical instruments.

Two findings of toothed bones from a prehistoric pile dwellings in Ribič near Bihać (Bosnia and Hercegovina). The objects date to 1200 B.C. (V. Čurčić, 1908, 159) and several

guesses are ventured as to the possible function of these objects. I quote: "...they are painted on the same board as the little saw. These devices might have been used as combs or perhaps they were even more suitable for combing fibers (threads) on a loom". I would like to put forth the assumption that these toothed bones could have been used as instruments, scrapers. With a branch or bone or other object, sound could be produced by scraping along those teeth (Fig. nos. 9, 10).

The finding (V. Čurčić, 1902, 52, Fig. 13) of a scraping idiophonic tube (HS-112.22) from Gradina by the source of the Rama River in the Prozor district (Bosnia and Hercegovina) is almost a thousand years older. This bone tube (Fig. no. 11) with a square external shape, has a row of horizontal carved channels. I assume that a sound was produced by scraping these channels with another hard object. The object dates to the Bronze Age in the period between 2200 and 900 B.C.

There are a few of very nice examples of srapers from the site of Lepenski Vir. One example, called "skiptar" (D. Srejović-Lj. Babović, 1983, 189) is made of a stone, and has a very good depiction of a fish on it (Fig. 12). Another example, very similar to a stone sculpture of poetically named "water bug", was found to the left of the hearth of shrine no. 21 (D. Srejović-Lj. Babović, 1983, 131). Because the "face" of the sculpture is showing damages caused by ritual actions (knocking or scraping), I interpret this artifact as a cult/ritual scraper. Two another examples belong to a group of scrapers-amulets, which primarily were hung on a rope, probably around the neck. One amulet (Fig. no. 13) is made from a marble stone (D. Srejović-Lj. Babović, 1983, 193) and was probably found in settlement no. I. Another marble amulet-scraper (Fig. no. 14) was found near shrine no. 64 in settlement Ib-c (D. Srejović-Lj. Babović, 1983, 190).

There are a great number of archeological findings of BELLS which we classify as idiophonic musical instruments, in the group of bells with a clapper, i.e. with a striker (clapper) attached inside (HS-111.242.122). Bells can be divided into four groups according to shape: a) *pyramidal* bells made of bronze, with variations (I. a bell without small feet; II. a bell with small feet attached at each corner of the rectangular lower opening) b) bells made from iron sheet metal, usually called the *antique type,* with an oval lower opening that may still have the form of an irregular rectangle; c) bronze bells semi-spherical in shape i.e. hollow ball bells; d) bells with a protruding lower lip.

The oldest specimen of a pyramidal bell without feet was found in Gomolava (Serbia, southeast of Sirmium) in the Roman strata, which dates to the 2nd century A.D. (Fig. no. 15). Although she has no information on the dimensions of the bell, Olga Brukner (1971, 108), archeologist, puts forth the supposition that Gomolava was a cult place in the 3rd century A.D. She also considers that the earliest inhabitants who came at the time of the Roman conquest in the early 1st century A.D. were Italics, who continued with their production in the tradition of southern Gallic manufacturers, all the way to the time of Claudius. Olga Brukner concludes that objects of material culture testify to the first contacts between the Scordiscae (an Illyrian-Celtic tribe) and Roman culture, as well as a coexistence of the strong traditions of the autochthonous population (Scordiscae) with Roman imported culture (sometimes Gallic in origin) which persisted up until the 3rd century A.D., when it was interrupted.

The first specimen of a pyramidal bell with feet was found in Poreč, western Istria (Croatia), dating to the period from the 2nd to the 5th century A.D. (Lj. B. Popović-Đ. Mano Zisi-M. Veličković-B. Jeličić, 1969, 142, catalogue no. 296). The dimensions of this bell

(Fig. no. 16) are as follows: height=12 cm, diagonal lower opening = 9 cm. The bell is now at the Regional Museum of the Poreč Region (Zavičajni muzej Poreštine) in Poreč (no. of sked= A.R. 254). The next bell, with quite a similar pyramidal shape, also bronze is from the town of Županjac (in the vicinity of the Illyrian town of Delminium) on Lib Mountain (Bosnia and Hercegovina). Carl Patsch (1901, 118) provides us with the following measurements for the bell: measurements of lower opening (3.2 x 2.5 cm), height including handle from which it is hung = 5.1 cm, height without handle = 3.2 cm. The bell dates to the Roman period. The third pyramidal bell with feet comes from the village of Bašagića Greda near Golubići (Bosnia and Hercegovina). The dimensions given by W. Radimsky (1896, 185) are as follows: height = 6.3 cm, height with handle from which it is hung = 8 cm, measurements of the lower rectangular opening = 4.2 x 3.5 cm. The Archeological Museum in Zagreb has several similar pyramidal bronze bells in its collections (still unpublished) that were found in Sisak, when dredging the Kupa River bed, and they probably date to the Roman period (this information is courtesy of curator Valerija Damevski).

We find iron sheet metal bells of the antique type (as many as four) among archeological findings in Bosnia and Hercegovina. One specimen was unearthed by Dimitrije Sergejevski (1954, 198) at "Župnica", a spot near the village of Klobuk, in the commune of Ljubuški. This bell (D. Sergejevski, 1954, 198, Table XIV, inv. no. 2194) has the following measurements: h = 7.3 cm, o (opening)=5.4 x 4 cm. The internal clapper has been preserved on this bell (Fig. no. 17). The artifact dates to the period between the 5th and 6th centuries A.D.

The second iron bell was found by Dr. Čiro Truhelka (1893, 232, Fig. 11) at the Roman excavation site of Lašva river valley, in the ruins of Malo Mošunje. The settlement is tentatively dated to the second half of the 4th century. There are no data about the measurements of this bell.

Among the ruins of a Roman villa in Lisičići, the Konjic site, archeologist Irma Čremošnik (1955, 114) found a cylindrical-shaped bell made of iron sheet metal, with a ring-shaped handle, but missing its internal clapper. This specimen has the measurements: height = 9 cm, diameter = 5.5 cm. The bell (I. Čremošnik, 1955, 114, Table V, Fig. 5, inv. no. 2247) dates to the 3rd century A.D.

Excavation of a Roman settlement in Mala Rujiška in the commune of Bosanski Novi (Bosnia and Hercegovina), conducted by Vl. Skarić (1928, 106, Table 7, Fig. 16) brought to the light of day a bell of iron sheet metal, but with a bronze internal clapper. The bell is dated to the late Roman imperial period. The author of the article does not provide information the dimensions of the find.

Živko Vidak (1961, 117-149) excavated a large number of bronze hollow ball type bells from Sarmat necropolis in the village of Vršac (Vojvodina). The bells date (Ž. Vidak, 1961, 140) to the period between the 3rd and 4th centuries. One specimen (Fig. no. 18) is exceptionally beautiful and quite nicely decorated with concentric circles (Ž. Vidak, 1961, 133, Table XII, Fig. 2, find from grave no. 16). The same bell is quite a bit larger than the other bells of the same shape which were found in five other graves. It is interesting to look at the combinations of various objects with which the bells were unearthed in the grave findings, as well as at the place inside the grave where they were found, identical in each. The bell was a) with a kauri shell and pendant gong (see page 4 of this paper) in grave no. 11; b) with a pendant gong in graves nos. 10 and 6; with a kauri shell in grave no. 16. All these artifacts were found exclusively on the inside of the left knee or upon the knee itself.

Archeologist Živko Vidak (1961, 139) assumes that the bell with kauri shells and pendant gongs had a magic apotropeic force, due to the fixed position. It is possible to attribute to these bells the function of adoration of the dead i.e. a cult of the dead, as Marius Schneider put forth in his paper (1969, 54). Analogies to these Sarmat bell findings, especially the larger ones, can be found in Banatski Karlovac (Vojvodina) where a bell identical to those mentioned above is kept, in the archeology division of the National Museum in Vršac (no. 12,621, information taken from paper by Ž. Vidak, 1961, 139).

A small bronze bell ball-shaped bell was found by archeologist Nagy Sandor (1971, 245, Table XXVIII, Fig. 12) at necropolis from the early Middle Ages in the town of Vrbas in the Bačka region (Vojvodina). In a grave without number (N. Sandor, 1971, 2114) this bell was found, tied to the waist of a small boy, 6 years old. The object is dated to the turn of the 8th century A.D.

A bell quite similar in shape is on exhibit as part of the permanent collection of the City Museum of Sombor (Gradski muzej u Somboru). This bell was used as part of a horse's decorative gear.

In current folklore practice the use of the bell in similar stated functions for a cult of the dead, or magical apotropeic function for small children are not known. Bells are used as part of a horse's decorative gear in the Banija Una River Valley, as well as pellet bells which are used as part of the gear of a horse; they, however, are classified as rattles, and not bells). The folk song of the Molise Croats (Croats living in the Italian Province of Molise) is familiar with and mentions bells as part of a horse's gear. Italian author Alberto M. Cirese quotes texts of folk songs from the towns Acquaviva Colecroce, Montemitro, and S. Felice del Molise in his work *I canti popolari del Molise* (Rieti, 1957), in the 16th chapter, "Songs of the Slavs", with the following verses which mention bells as part of a horse's gear:

"Čula Mara svonitze do konjić" (Mara heard a bell of a horse, A.M. Cirese, 1957, 202, song 612) as well as the version "Čula Mara zvonic do konjića" (Mara heard a bell of a horse, A. M. Cirese, 1957, 202, song 612 a) and later (A.M. Cirese, 1957, 204): "je pitala: Što je te zvonec? -Te su svonec do konjića do Jivana Karlovića" (she asked: What is that bell? - That bell is of the horse of Jivan Karlović)

I registered the only specimen of a bronze bell with internal clapper, that has a characteristic protruding lower lip like the rim of a hat, at the locality of Drenje near Zaprešić (Croatia). The bell (Fig. no. 19) was found by archeologist Darko Škoberna when excavating Roman villae rusticae (unpublished). The bell dates roughly to the 5th-6th century A.D. (my own estimate) and it is probably an import because it is not typical of the Roman culture of that period.

In the next group of idiophonic instruments we can find quite a large number of CLAY RATTLES (HS-112.13) from a period covering a vast time range of 2000 B.C. to the beginning of A.D. Specimens of these rattles can be categorized by the criterion of age, combined with the morphological criterion and the function criterion. The criterion of function seems the most suitable for the principle division, while the morphological criterion can be used to help in subdivisions.

According to the function criterion, clay rattles can be divided into four basic groups: a) *utilitarian rattles,* in the form of *cup,* i.e. a vessel with a foot in which there is a pellet, or in the shape of a *vessel;* b)*pendant amulets* (shapes: 1. anthopomorphic; 2. zoomorphic / stylized birds); c) hollow idols; d) *rattles like a child's toy* (shapes: 1. pear-shaped or pin-shaped; 2. squash-shaped; 3. mushroom-shaped).

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ad a) Utilitarian Rattles

We can interpret an object in the shape of a vessel with perforated base and five holes, and five holes on the side as the oldest specimen of such clay rattles. The object was excavated at the Vučedol-Gradac site (Croatia) and dates to roughly 2100-2000 B.C. Archeologist Stojan Dimitrijević (1979, 291, Table XXIX, Figure 2) interpreted the object as an "censer". I do not agree with such an interpretation of function for the object, because the same principle of puncturing the holes on the bottom of the object can be seen on a specimen, though fragmentary, of a vessel with foot.

This next fragmentary object is cylindrical, and in its hollow it contains a small stone that scrapes the side of the vessel, producing the sound of a rattle. The fragment was unearthed by Stojan Dimitrijević (1979, III, 292, Table XXXIII, Fig. 2) at the Vinkovci-Tržnica site (Croatia) and has been dated to the period from 2000 to 1900 B.C. It is attributed to the late classic phase (level B-2) of the Vučedol culture. This object is a prototype of sorts for the next rattle-cup with foot.

The lovely specimen of this type of rattle-cup with foot (Fig. no. 20), the dominant form at the Sotin site in Srijem (S. Dimitrijević, 1979, III, 306, Table XXXV, Figure 8) dates to the period between 1900 and 1800 B.C., and belongs to the Vučedol culture (level 3). These cups have a hollow conical foot containing the seed that produces the sound of a rattle by scraping the interior of the wall.

In contemporary folklore practise we find no parallels to these rattle shapes. Certain similarities are offered us by the preserved traditional technology of producing "black pottery" that the southern Slavs used, i.e. the Croats who live in Mohacs in Hungary. Their potters make a jug with a narrow throat that keeps the little stone from falling out. When the jug is used, the stone rattles. Belief still persists among the people that this little stone keeps the water cool and fresh longer. Today we can note one more possible function of this addition; when the jug with water is turned upside down, the stone lodges in the mouth and plugs it, so that the water can't pour out.

A second vessel-shaped rattle that was also interpreted as an "censer" (S. Dimitrijević, 1979, 297, Table XXXII, Fig. 2) was found at the Tržnica site near Vinkovci (Croatia). The rattle is also part of the Vučedol culture (late classic phase, level B-2) and it is dated to the period between 2000 and 1900 B.C.

ad b) Pendant Amulet Rattles

Ljubljansko barje (Slovenia) is known as a site for objects attributed to the highest level of development in the Vučedol cultural complex. Slovenian archeologist Josip Korošec (1950, 26) found a rattle in the function of an amulet pendant in three different shapes: 1) anthropomorphic (Fig. no. 21); 2) zoomorphic; 3) and biconical (Fig. no. 22). Several specimens of anthropomorphic rattle amulet pendants are shaped quite simply and crudely. The body is cylindrical, the head squashed and made by pressing the clay between two fingers and pulling out at the front. Zoomorphic stylization is associated with the shape of a bird. All findings have been situated in the period from 1800 to 1700 B.C.

b2) Bronze Age findings of zoomorphic rattles (Serbia) in the shape of stylized birds (unfortunately no illustration) are characteristic from necropolis east of the Đerdap gorge, from the Bronze Age. They can be attributed to the Meza group, which is historically probable (M. Garašanin, 1983, 529).

The Sombor museum (Vojvodina) has a specimen of zoomorphic rattle in the form of a bird. This clay rattle was discovered in 1902, it has prominent wings, a long neck and feet

with four class, while the surface is decorated with grooves. The rattle (inv. no. 4120) is 10.3 cm high, and dates to the Iron Age (phase Ha C) in the late 7th century and early 6th century B.C. (all information courtesy of Dušanka and Čedomir Trajković).

c) Idol Rattles

Some specimens of idolatrous sculpture from Ljubljana barje, i.e. antropomorphic figurines (S. Dimitrijević, 1979, III, 308) that are hollow can be interpreted because of that fact, with considerable probability as vessel-shaped rattles (the seeds may have been lost when the statuette was broken, and were not registered as part of the finding). The specimen (Fig. no. 23) quite nicely shows elements of folk costume ornament.

According to oral information from archeologist Jovan Glišić, anthropomorphic rattles from the Neolithic period have been found at three archeological sites in Kosovo. These rattles are thought to have been used as cult objects or toys.

d) The Rattle Like a Child's Toy

At a site in Donja Dolina near Bosanska Gradiška (Bosnia and Hercegovina) several forms of rattle have been found that date to the Bronze Age, precisely around 1000 B.C. Archeologist M. Mandić (1929, 38, Table III, Fig. f) provides a description of a rattle with a pear- or pin-shape: "Of clay we found: children's toys in the shape of a pin, perforated in three places, with five balls inside that rattle and thus entertain the child (Fig. no. 24). These objects were mostly unearthed along the embankment by a pile settlement, about 0.50-1.80 m deep. The length of the rattle was all that was recorded, 5.3 cm."

Archeologist Čiro Truhelka (1914, 99) found two more rattles at the same site which are squash-shaped. The first specimen (Fig. no. 25) has an elongated handle, while the second (Fig. no. 26) has a rather short handle, i.e. a base, and is perforated all over the surface of the round part with little holes. Čiro Truhelka's description and commentary (1914, 99) on the contemporary use of such a rattle is important: "Two pellet bells are quite prominent (an erroneous term for rattle, author's note), they are hollow earthenware balls with pebbles, of which one is full of holes like a sieve. Village children play with similar toys even today".

There is one example of a clay rattle (Fig. no. 27) from Dalj in Croatia in a mushroom shape (Hoffiler, V. 1938, 17).

We can divide METAL RATTLES by the morphological criterion into two basic groups: a) PENDANT PELLET BELLS (1. ball-shaped or biconical with sieve-like sides; 2. ball-shaped with solid sides and a cross-shaped slit at the lower end) b) PENDANT chest box.

The oldest known finding of a ball-shaped pellet bell with solid sides and a cross-shaped lower slit is a bronze specimen found at a prehistoric pile settlement at the Donja Dolina site (Bosnia and Hercegovina) near Bosanska Gradiska (M. Mandić, 1929, 39, Table V. Fig. j). This bronze pellet bell with loop dates roughly to 1000 B.C., and has the following dimensions: diameter=2.3 cm, height 3 cm.

Bronze pellet bells appear as part of a horse's gear in the graves of horses, and they show the Tracian and Cimmerian features. The sides of these pellet bells are sieve-like. The pellet bell in the shape of a sieve-like hollow ball with a loop (Fig. no. 28) was a requisite part of a horse's harness from the Dalj necropolis (Croatia) and it is similar to findings of pendants from a secret cache of the Balkan circle at the sites of Krehin-Gradac and Gajina pećina near Drežnik (also Croatia). The pellet bells date to a time when the culture of the field with jars is ending, the lat HaB as well as the HaC level (K. Vinski-Gasparini, 1973, 162, Table 119, Fig. 6). We find another pellet bell also latticed, but biconical in shape (Fig. no.

29), in the secret cache of the site at Šarengrad-Baščina, Ilok Commune, Vinkovci district (Croatia), dating to the HaC phase, i.e. in the second half of the 8th century B.C. (K. Vinski-Gasparini, 1973, Table 131, Fig. 3), i.e. in the early Iron Age.

As the basic forms of rattle pendants, i.e. pellet bells of the Liburnian culture (a tribal name from the prehistoric period) of the Iron Age, we can define three findings of pellet bells from the region of what is Dalmatia today (Croatia). All these specimens can be dated to the late Iron Age, more precisely to the time between the 4th and 3rd centuries B.C. The first ball-shaped bronze pellet bell of quite crude and simple make, cut circularly on the lower side, with a loop on the top (Fig. no. 30) was found at the Ljubač site (grave 8, inv. no. 14,365). The measurements of the pellet bell are: height=3 cm; diameter=2 cm (Š. Batović, 1981, 137, Fig. 14, no. 19, p. 135). A second specimen of a ball-shaped pellet bell is decorated with ray-like furrows, covering the two opposite halves (Fig. no. 31) and there is a loop on the top for hanging. It was cast in a two-part mould (inv. no. 149). The site is unknown, but the measurements are as follows: height=3.5 cm; diameter=2.4 cm (1981, 137, Fig. 4, no. 20. p. 135). The third specimen of a bronze pellet bell is a pear-shaped pendant (Fig. no. 32) from the Đevrska site in Dalmatia (inv. no. 935). This specimen is special because the lower half is cut into 8 triangular parts-sections, each with a furrow through the middle, bordered from above, horizontally by two indented lines. The measurements are: height=3.6 cm; diameter=3 cm (Š. Batović, 1981, 137, Fig. 14, no. 21). A silver pellet bell was found in the region belonging to the Liburnians from the site of Stinica near Senj (A. Glavičić, 1967-68, 16, Fig. 3, no. 6). This pellet bell is described by Glavičić (1967/68, 17): "A round pendant or button for the clothing cast in silver. A cross has been engraved in the lower part. Horizontally in two halfs is an ornament of thirteen small grooves. On top of the button is a small perforated appurtenance that served to affix it to clothing (inv. no. N 4.293)". The pellet bell is dated, with the help of the other contents of the grave to the late La Tene or early Roman period, more precisely in the late 1st century B.C. Aside from these stated assumptions that the pellet bell served as button on clothing, Aleksandar Stipčević (1981, 139) postulates their magical, apotropeic, i.e. protective function: "The largest number of pellet bells come from graves. Their presence in graves can have only one interpretation: pellet bells, that is their sound, was to insure peace for the deceased in the other world from evil demons. The pellet bells are usually egg-shaped, ball-shaped or biconical in shape..." and furthermore, "Of course, we musn't attribute symbolic character to each pellet bell, because the Illyrians certainly did not do so, however for some of them we can be sure that they had such meaning. We are thinking of those specimens from the southern Illyrian regions (Albania and Macedonia) which end in their upper part in a bird's figurine". The recent work in folklore provides support for the interpretation of the magical apotropeic role that pellet bells have, as presented by Aleksandar Stipčević. According to Professor Zvonimir Toldi, curator of the museum of the Brod Sava River Valley area in Slavonski Brod, the custom is still intact today of tying a little pellet bell over a baby's cradle on a red thread (because it provides further protection with the red color, the color of life-giving blood), that is supposed to protect the child from evil spirits, while at the same time lulling the baby to sleep with its jingling.

It is interesting that we record an interruption in continuity of pellet bell findings in graves in archeological findings from the onset of the Roman period in Illyria, until the 4th century A.D. Is this because bronze cast and iron forged bells were introduced to this area with the Roman conquest and culture?

After the Roman period, archeological findings of pellet bells re-appear with fre-

quency. The Zagreb Archeological Museum has a bronze pellet bell (unpublished, information courtesy of curator Valerija Damevski) that was found around 1950 when dredging the floor of the Kupa River at Sisak (Croatia), and it probably dates to the period between the 6th and 9th century A.D. This dating is further supported by the finding of a very similar pellet bell in the village of Ždrijac (Croatia), near Nin in Dalmatia, which we can date with utter certainty to the early 9th century A.D. (Šime Batović, 2, 1981, 189) and it belongs to a specimen of decorative object from the 1st phase of the medieval, Early Croatian period. The pellet bell (Fig. no. 33) was found in grave no. 322 (inv. no. 1198, cat. no. 66, p. 187, Fig. 2, no. 23); it is ball-shaped and made by casting. It has a loop at the top for hanging, and along the middle of the lower side it has a cross-shaped slit. The measurements are as follows: height=4 cm, width=3 cm. Quite a similar pellet bell was found in the same grave on the same site (inv. no. 1199), but its loop is more massive. The measurements are: 3.2 cm, width 2.5 cm.

A number of findings of pellet bells have been recorded that date to the turn of the 10th to the 11th century A.D. At Šenkovec near Čakovec (Croatia) a pear-shaped, hollow, cast perforated pellet bell was found with seeds (Ž. Tomičić, 1978, 216, Fig. 8, on p. 218) which is considered a decorative object of the Bjelobrdo type. It can be reliably dated to the late 10th and early 11th century A.D.

A bronze pellet bell is kept at the City Museum in Sombor, from an unknown site in Vojvodina, part of the collection of Dr. Imre Erey (Nađ. I. - P. Nađ., 1964, 40, Table LIV, Fig. 7). It is described as follows: "A bronze pendant in the shape of a pine cone with a ring-shaped link of uneven edges. The lower part is ornamented with slanted, curved ribs and crosswise cuts. Dimensions: length=30 mm, width=20 mm, the diameter of the link=7 mm. Such pendants are quite frequent in the culture of the 10th and 11th century. "

Pellet bells have been found in the medieval necropolis known as Hinga in the Vojvodina region as well, near the town of Jankovo Brdo in the Subotica vicinity (O. Šafarik-M. Šulman, 1954, 36, Table IV, FIg. 11; Table VIII, Fig. 7) I quote: the first specimen - "In child's grave 35 (Table IV, Fig. 11) the pellet bell lay by the skeleton, so it was not possible to ascertain exactly how it was worn". The second specimen "In boy's grave (no. 45, Table IV) it was found under the neck", while the third specimen "Lay by one fragmented child's skull" (Table VIII, Fig. 6).

"We can therefore merely suppose that the pellet bell was worn at the throat like a button. In Grave 35 it was found with coins of Ladislav the Holy, which would mean that it dates to the end of the 11th century".

All these pellet bells are quite distinct from those of Bjelo brdo, which are pear-shaped and have a grooved upper lip and a circular cut on the bottom. They are undoubtedly later in origin than the Bjelo brdo culture pellet bells (O. Šafarik-M. Šulman, 1954, 36). The possibility exists, i.e. the postulate, that the pellet bells and the forehead ribbon found in the graves of younger people, is the result of influences and population migration from southern Russia (O. Šafarik-M. Šulman, 1954, 48).

In Sarajevo (Bosnia and Hercegovina) at the National Museum (Zemaljski muzej) the medieval jewelry collection includes an "egg-like pendant of bronze (inv. no. 449) with engraved twisting lines", i.e. a pellet bell (I. Čremošnik, 1951, 263, Table III, Fig. 12). This pellet bell has only one recorded dimension, its length which is 3 cm. The pellet bell is marked as an object of unknown origin, but similarities have been noted with the pendants found in Bijači near Knin in Croatia (Ljubo Karaman, 1940, Fig. 31).

Underwater finds of pellet bells from a sunken galley boat near the island of Gnalić in the Pašman Channel near Biograd (Croatia) are also quite rich in number and size, dating to 1583 (B. Juraga, 1981, 201). Sofija Petricioli (1980-81, 6/7, 42) speaks of a hoard of about one hundred well preserved brass pellet bells in three different sizes, while Branka Juraga (1981, 201) published 5 specimens, but only in two sizes. Three of the pellet bells (inv. no. 263-2NB) are the same size, i.e. with the following measurements: height=2.5 cm, diameter 2 cm; while two of the pellet bells (with the same inventory number 263-2MB) are somewhat smaller in size, with the measurements: height=1.7 cm, diameter=1.5 cm. The pellet bells are made of brass sheet metal, ball-shaped and consisting of two horizontally seamed spheres. The larger specimens of pellet bells have a lip decorated with two engraved circles, while the smaller specimens have two a ribbon-like upturned lip along the seam of the two spheres. The bottom of the lower sphere is cut and has a rounded ending. Ribbon-like loops are added at the top. It is quite likely that the submerged galley was a boat called Gaciana that set out from Venice on its way to Constantinople, so this hoard provides us with insight into the trade relations between Venice and the East, as well as in the material culture of the late Renaissance at the end of the 16th century. In the words of Sofija Petricioli (1980-81, 42): "The place of production ought to be sought among the other brass objects" while she makes several assumptions about the possible function of the pellet bells: "such pellet bells were used in a number of ways: on clothing, on musical instruments (drums), on horse gear, attached to the leg of a falcon, and so forth". All these assumptions about the possible function of pellet bells, as well as more complex objects of material culture, are supported by findings in actual folklore practise. We still find the pellet bell as a composite part of the frame drum with a single membrane in Istria, in Galižana and Vodnjan in the Italian minority, known as the "simbolo". Pellet bells as a part of horse gear, or the harness, have been preserved in the vicinity of Kostajnica, Croatia. We have mention of the use of pellet bells as part of a falcon's gear in a folk song: "On a rooster he attached pellet bells, while bells were affixed to a falcon" (the Academy Dictionary, III, 1887).

A large bronze chest box pendant (Fig. no. 34) that served as a chest ornament was found in the central Illyrian region (now Croatia, Lika) in the village of Kompolje (Latin Avende) that used to belong to the Iapods (S. Dimitrijević, R. Drechsler, M. Malez, K. Vinski Gasparini, 1980, 56, Fig. 37 on p. 59). On the large bronze disc there are seeds that rattle. The object dates to the late late Iron Age, i.e. the period between the 8th and 6th centuries B.C. Similar findings of bula pendants have been recorded in Croatia at the sites of Dalj and Sv.Petar Ludbreški.

A silver pellet chest box has been found in a Roman grave at the Han Potok site near Mostar (Bosnia and Hercegovina) with seeds of amber stored inside, that might be interpreted as a rattle. V. Radimsky (1890, 341, Fig. 7) provides the following description: "And in the same fashion in the area of the chest there was a flat round little box (bula) of silver, 40 mm high, 60 mm in diameter. On one side, both halves of the box are attached with a tongue-like hinge, through which a wire was threaded, its ends twisted to form a little ring that the box was hung from. On the other side it has a small clasp for closing, but the leather strap, of course, has gone".

The oldest specimen of an archeological finding of a *bull roarer,* a simple curved aerophonic musical instrument (HS-412.22) made of stone, was found at the site of Potočka Zijalka in Slovenia (Fig. no. 35). The artifact dates to the period of the Aurignacien late Paleolithic, which in terms of absolute chronology comes to roughly 35,000 to 20,000 B.C.

(M. Broader, 1979 168). Brodar left the question unresolved of the function of this artifact, but he attributes it to Paleolithic hunters. There can be no doubt that the stone bull roarer must have been quite a powerful defense and offense weapon at that time, but there can also be no doubt that this weapon or tool, when spun above the head at considerable speed, produced a sound quite similar to the sound of wind whistling or thunder. The preserved names for this tool, such as "grmavica" or "germjavica"–(thunderer) in Vrbnik on Krk Island (K. Galin, 1983, 717) hint at the possible function of the bull roarer as a ritual requisite in fertility magic, or the sympathetic magic of rain-making in the prehistoric age. On the territory of Croatia, the oldest archeological finding of an artifact that we interpret as a bull roarer is made of bone, from Smilčići, east of Zadar (Fig. no. 36). It dates to the period of the late Neolithic of the Adriatic zone, which covers, in absolute chronology, the period from 6000 to 4600 B.C. Archeologist Šime Batović (1979, 503) presents the supposition that this object might have had an ornamental function (pendant) or it might have been used to smooth earthenware vessels (1979, T. LXXVII, Fig. 5). A somewhat earlier finding would be a stone plate, or bull roarer, from the Danilo site, east of the city of Šibenik in Dalmatia. Šime Batović (1979, II, 537, Table LXXXII) dates this artifact to the period of the middle Neolithic, which in terms of absolute chronology means the period between 5500 and 4500 B.C. The earliest finding is considered a stone bull roarer from Velika Gorica, in the immediate vicinity of Zagreb (I. Vinski-Gasparini, 1973, Table 102, Fig. 14). The object was found as in a grave (grave Iž1910) and belongs to the urnfielder culture. It is dated between 1000 and 900 B.C., i.e. in the Bronze Age. The bull roarers of the early Neolithic correspond to comparative specimens of bull roarers found in Bosnia and Hercegovina, from the site of Obre (Fig. no. 37) (A. Benac, 1979, 363), but also from Serbia, at the Vlasac site (D. Srejović, 1979, 75) This example is made of wood (Fig. no. 38). The finding of bull roarers in the Donja Dolina site along the Sava River near Bosanska Gradiška in Bosnia and Hercegovina (Č. Truhelka, 1909) is also part of the finding from Tešanj (Č. Truhelka, 1909, 64, vol. 11, Fig. 17) from the Bronze Age. Another finding of bull roarers from the La Tene period is comparatively somewhat more recent, from the late Iron Age, from the Mahrevići site in the Čajnice district of Bosnia and Hercegovina (Č. Truhelka, 1909, 430, Table XI, Fig. 2).

On the teritory of Yugoslavia two examples of buzzing discs were found. The first find (Fig. 39) comes from Lepenski Vir. It is a buzzing disc found on the site of shrine # 55 in settlement I, made of bone, and its dimensions are 5.6x3.1 cm (D. Srejović-Lj. Babović, 1983, 195) The archeologist Srejović classified it as an amulet. The second find is a limestone disc (Fig. 40) decorated on both sides with two scratched circles which are connected by curved lines. The dimensions of the artifact (radius 5.5 cm, thickness 0.9 cm) support the interpretation of this example as a buzzing disc. This disc was found in a grave (nr. 367) in the Jezerine necropolis in Pritoci near Bihać (W. Radimsky, 1985, 147, Fig. 422).

Two archeologically very early findings can be classified as open single end-blown flutes without fingerholes. The first such flute-whistle (Fig. no. 41) was found in the Bukovčeva Cave near the town of Lokva in Gorski Kotar (Croatia), dating to the period of the Aurignacien (from 35,000 to 20,000 B.C.) (C. Brade, 1975, 15, Table I, m).

The second finding of a similar flute-whistle is much more recent. It dates to the middle Neolithic in a time span between 5500 and 4500 B.C. This bone whistle (Fig. no. 42) has been attributed to the Danilo culture group, and it was found at the Smilčić site, near Šibenik in Croatia (Š. Batović, 1979, II, 538).

We can consider the hollowed tooth (Fig. no. 43) from the Adriatic cultural zone (Š.

Batović, 1979, II, 539, T. LXXXIII, 10) rather small flute-whistle, i.e. an open single end-blown flute with fingerholes (HS-421.111.22), which dates to the middle Neolithic, i.e. the period from 5,500 to 4,500 B.C. The second example of an end-blown flute with fingerholes (Fig. no. 44) is from the site Potočka zijalka in Slovenia (Brodar 1928; C. Brade 1975, 13).

The bone fife-whistle (xxx, 1981, 131, Fig. 165) that can be classified as an open single side-blown flute without fingerholes (HS-421.121.1) was found at Ohrid (Lychnidos) in Macedonia, and dates to the Roman imperial period. This wind instrument was probably a lure for animals, we can assume. It is possible that this artifact was used in antique theater (because it was discovered during a probe of an antique theater) as an actor's prop. Comparatively, an almost identical form of musical instrument was found at an archeological site in Sweden (C. Lund, 1974, 17) from the period referred to as Viking (Iron Age, A.D. 900), known as an "otter pipe", or a whistle for luring and hunting otters. The specimen from Ohrid was made of a slightly bent hollow bone (Fig. no. 45), cylindrical in section. The middle of the upper part is elliptically perforated. The dimensions of the artifact are: length 6 cm; inner diameter of the bone 1.2 cm; outer diameter of the bone 1.8 cm.

There is an aerophonic musical instrument with fingerholes (Fig. no. 46) that we can not classify, because the artifact was found as a fragment. It is a bone wind instrument with several fingerholes, found at Bukovčeva Cave near Lokva in Gorski Kotar (C. Brade, 1975, 13). The finding dates to the period of Magdalenien-Gravettien, between 20,000 and 15,000 B.C.

Within the group of aerophonic musical instruments unearthed in archeological findings, the double clarinet instrument made of bone, is found in an Avar-Slavic necropolis at Bijelo Brdo in Slavonia (Croatia). The finding dates to the second half of the 7th century (grave no. 16). Ethnologist Đurđica Palošija (1960, 63-84) considers that these double wind instruments with a 3:4 distribution of holes or possibly 4:5 (which comes from the supposed greater length of the pipe as noted on other specimens from Avar necropli in Hungary, Janoshida and Alartyana) which originate with Asian nomad herders. Đurđica Palošija (1960, 77) postulates that these herders "may have been those from central Asia, or perhaps they are from further regions further eastward. As far as this is concerned the connection with the Avars is not far away, whether they brought this musical instrument with them from somewhere in inner Asia, or if they assimilated it at the stage when they were living in central Asia". Regardless of the hypothesis as to the origin and the hypothesis on possible ethnic groups who used these instruments, one fact is certain, that the double clarinet instruments (Fig. no. 47) were brought to this territory in the 7th century A.D. during the migrations of peoples. This proof does not, of course, exclude the possibility that the same type of musical instrument existed earlier in this area. In contemporary folklore practice we can find a similar specimen of this type of instrument in the Istrian "surla".

There are relatively few findings of aerophonic musical instruments resembling the trumpet or animal horn. A "hollowed out piece of horn" that according to archeologist Vejsil Čurčić (1908, 159) "served without a doubt as a shield for a knife handle " can be classified as a pipe-shaped end-blown lengthwise trumpet without mouthpiece (Hs-423.121.11). This archeological finding of a trumpet (Fig. no. 48) is from the Ribič site near Bihać (Bosnia and Hercegovina) and dates to the Bronze Age, around 1200 B.C. A small, short trumpet, almost identical in shape but made of wood can still be seen in the Imotska region (information courtesy of Krešimir Galin from master's thesis). The next artifact comes from the same site, a Bronze Age pile settlement, specific in form, made of wood. It has a wide opening at its

lower end that narrows abruptly into a rounded and twisted pipe with a ridge on one side (Fig. no. 49) (V. Čurčić, 1908, 173, T VI, Fig. 9). This specimen as well as the two following should be classified as edge-blown horns without mouthpieces (HS-423.121.21). We should also designate the finding of a "glass trumpet" (rhyton) in a grave that "might be Avar-Slavic origin" in Srbobran (Vojvodina) as a edge-blown horn without mouthpiece, and the probable dating is the 1st half of the 7th century A.D. (K. Hađmaš, 1957, 237/238). Archeologist Hađmaš, author of the article, wrote that "Its narrow section starts near the left hand and bends INWARDS... In a shape similar to a trumpet or horn or rhyton of metal... It ends with a small opening, the outside edge of which was slightly rounded, thus avoiding the cutting edge of the glass". This description of the place that the artifact was found suggests the way the horn is held, and not the rhyton (because in that case it would be held by its wider end). For such an interpretation the fact is important that the narrower end is slightly rounded on the outside, to avoid a cutting edge, which indicates all the more that this was a musical instrument and not a rhyton-shaped vessel. Fig. no. 50 shows a grave finding of a glass horn as well as sections. The dimensions of the glass trumpet are as follows: length in a straight line=270 mm, length of outside curve=330mm, diameter of lesser opening=4 mm, thickness of the glass=1.5mm. A deer horn (Fig. no. 51) found at the Gradina site near the source of the Rama in the Prozor district (Bosnia and Hercegovina) and worked with ornamental carved lines can be classified as a side-blown horn (HS-423.122.2). Found by Vejsil Čurčić (1902, vol. 8, 52, Fig. 12) dates to the Bronze Age (2200 / 900 B.C.). The horn is richly decorated with five groups of three parallel carved lines diagonally along the lengthwise axis of the horn. The special feature of this horn is the fact that it has a rectangular opening cut into the side for blowing, for which there is no analogy in Yugoslavia in contemporary folklore. We can only find an analogy in South America (K. Izikowitz 218 and 220) and Africa (J.H.K. Nketia, 1974, 95).

Archeological findings of CHORDOPHONE MUSICAL INSTRUMENTS in Yugoslavia are few in number, and some are still quite questionable as to interpretation. Such uncertain interpretation refers to wooden artifacts from the Ribič site near Bihać (Bosnia and Hercegovina) which were found by Vejsil Čurčić (1908, vol. XX, 2, T VIII-Fig. 6 and Fig. 12) when excavating a Bronze Age pile settlement whose inventory can can be dated with certainty to 1200 B.C.. One wooden object might be interpreted as a peg, i.e. the tuner used to tighten a string (Fig. no. 52), while another (Fig. no. 53) can be interpreted as a fragment of the long-necked lute (HS-321.32), i.e. gusle, with a much greater degree of probability than the likelihood of interpreting them as parts of a tamboura.

The findings of TUNERS (i.e. PEGS) FOR A LYRE (Fig. no. 54) date to the historical period, more precisely to the period from the 1st to the 4th century A.D. Vesna Šaranović-Svetek (1981, 162 and 150) found two lyre pegs (1981, 162 T IX, Figs. 3 and 4) and categorized them morphologically according to the shapes of the head in version 1a, with the following text:"Two specimens of this version, both without information for dating. The head of the peg is fashioned in the shape of a three-sided prism. One specimen is preserved in entirety, while the other is made of ivory and is quite fragmentary. The closest analogies are shown on a fresco from Pompeii (in the book: *A. Man*, Pompeji in Leben und Kunst, Leipzig 1900, capitel LV, ABB. 273) which according to the content of the composition bears the title 'Frauen, von denen ein zwei Instrumente stimmt'". The authoress in a later part of the text finds elements on the basis of which these pegs can be dated to the abovestated time. "The third group consists of imported objects of ivory made in specialized workshop

Nar. umjet. S. I. 2, 1988, pp. 123-148, K. Galin, Archeological Findings of Musical Instrum...

centers quite distant from Pannonia, which were permanently arriving through trade from the 1st to the 4th century B.C." On the basis of these notes we can conclude that the lyres were imported to Sirmium. Vesna Šaranović-Svetek provides several more facts about the lyre pegs that ought to be quoted here. "The sole function of the lyre pegs was to tighten the lyre strings, in such a way that the string was wound around two pegs that are lodged in the upper and lower cross bar of the lyre. Using the keys the string was tightened, the traces of which can be seen on them. Regardless of the appearance and model of the lyre (with a resonant box or without), pegs were used of very simple shapes. Their average length was 75-95 mm, and thickness 9/12 mm, they have a thick spindle-like shape. As a rule they are made of ivory or ordinary bone, because this material is quite suitable, since it does not effect the tone or quality of the sound.

This survey on archeological findings of musical instruments in Yugoslavia has only covered a small number of the types and shapes of musical instruments, because its underlying purpose has been to point to the relevance of this topic. In closing we can state several conclusions that can clarify the entire picture of this multitude of findings.

In this first excursion into the musical expression of the distant past on the territory of the South Slavs, it becomes quite evident that rattles are a musical instrument which appear in continuity for almost four thousand years in various shapes and materials, from the clay ones up to the metal kind we call pellet bells. Clay rattles have persisted in the function of children's toys, and pellet bells in the function of equestrian gear, while also in their original magical function, as apotrpeic or protective, i.e. to ward off evil spirits. The jingle, i.e. strung objects or metal plates, survives today as part of the jewelry on folk costumes that jangle with dance steps of the famed dances without accompaniment (mute dances) from Vrlika or Glamoč, as well as the popular Bunjevac circle dance from the Vojvodina where tambourica musical accompaniment is not the central musical characteristic, rather it is rattles attached to the dancers' boots.

The appearance of livestock bells on the territory of Yugoslavia made of iron can be attributed to early importation from Italy, i.e. the Roman Empire, in the 1st century, and it has a continuity of almost two thousand years, as well as a current life in the ritual and festivities of bell-ringers (zvončari), masked ploughmen (kurenti) and other Carnival merrymakers (bušari).

We can consider the bull-roarer the earliest musical instrument on the teritory of Yugoslavia, which has been used via continuum from 35000 years B.C. to the present day.

These are only the first steps that have led us to a new scientific discipline and a field that we call musical archeology or archeo-musicology, and we are certain that our insights through further research will multiply, and this will further enhance our understanding of the music culture or cultures of these areas in the distant past.

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