University of Hradec Králové

Philosophical faculty

Department of Archaeology

# Burial Rites and Social Structure of the Maros culture in Northern Serbia

Diploma thesis

Author: Aleksandra Jovanovi

Study program: N7109 Archaeology

Study department: Archaeology

Mentor: Prof. PhDr. Ivan Pavl DrSc.

Hradec Králové, 2016

### University of Hradec Králové

Philosophical faculty

### Work assignment

Author:	Aleksandra Jovanovi	
Study program:	N7109 Archaeology	
Study department:	Archaeology	
Title of the thesis:	esis: Burial Rites and Social Structure of the Maros culture in	
	Northern Serbia	
Title of the thesis	Northern Serbia	
Title of the thesis in the Czech language:	Northern Serbia Poh ební ritus a spole enská struktura kultury Maroš v	

The aim, methods. literature, hypothesis:

Reconstruction of the Maros culture burial rite based on published data and recent unpublished research. The aim of the work is the reconstruction and interpretation of the Maros communities, including gender identity and social distinctions in Central and Southeastern Europe, on the threshold of the Bronze Age.

Methods: heuristics, database processing, data analysis, synthesis of structures, interpretation.

Literature:

Giric, M. 1971. Mokrin I. Nekropola ranog bronzanog doba.

, . 1959.

Kristiansen K. 2011. Constructing Social and Cultural Identities in the Bronze Age.

O'Shea, J. M. 1996. Villagers of Maros. A portrait of an EBA society.

Rega, E. 1996 Age, gender, and biological reality in the EBA cemetery at Mokrin.

Supervising department: Philosophical faculty, Department of Archaeology Mentor: Prof. PhDr. Ivan Pavl DrSc.

Date of the thesis: May 24, 2013

# Declaration

I hereby declare to have written this thesis led by Prof. PhDr. Ivan Pavl DrSc. independently and to have cited all of the used materials.

In Hradec Králové, date:

#### Abstract

JOVANOVI , ALEKSANDRA. Burial Rites and Social Structure of the Maros culture in Northern Serbia. Hradec Králové, 2016. Diploma Thesis at Philosophical faculty University of Hradec Králové. Thesis Supervisor Prof. PhDr. Ivan Pavl DrSc. 77 p.

Adding gender to the study of the past broadens the content of other interpretive frameworks in considering the sociocultural interpretation of sex/gender and age distinctions as structural principles in society. This approach has promoted a critical review of archaeological practices and narratives, and has also proposed a new hypothesis for interpreting and reinterpreting the archaeological record. The early Bronze Age Maros cemeteries were particularly suitable for this kind of study, because the bio-anthropological analysis was done for most of the graves. An additional advantage was that the archaeological and anthropological data was available for eight Maros cemeteries which allowed creating a more coherent image about the topic, and made the interpretation of the gender/age issues possible. The aim of the thesis is to discover whether and what elements of burials were used to express differences between people along the axis of sex/gender and age respectively. Obvious patterns in the material were identified in an attempt to direct the analysis towards the social constructions of differences. It was possible to determine some solid gender indicators and to get an insight into different possibilities of gender relations in the society which buried their dead in these cemeteries. The particular relevance of the Maros analysis is seen not only in the study of gender in the past but also in the contrastive representation of chiefly and tribal forms of social organization.

#### Key words

Early Bronze Age, Maros culture, Mokrin cemetery, funerary treatment, grave goods, sex, gender, age, social distinctions.

#### Anotace

JOVANOVI, ALEKSANDRA. Poh ební ritus a spole enská struktura kultury Maroš v Severním Srbsku. Hradec Králové, 2016. Diplomová práce na Filozofické fakult, Univerzity Hradec Králové. Vedoucí diplomové práce Prof. PhDr. Ivan Pavl DrSc. 77 s.

Zohledn ním genderu p i rozboru minulosti se rozši uje obsah interpreta ních rámc v souvislosti se sociokulturní interpretací pohlaví/genderu a v ku, jakožto princip strukturalizace spole nosti. Tento pístup podporuje kritickou revizi dosavadních archeologických postup a výklad, dále pak navrhuje novou hypotézu, která by vedla k novým interpretacím a reinterpretacím archeologického záznamu. H bitovy kultury Maroš z období mladší doby bronzové byly pro tento typ studie obzvlášt vhodné, jelikož u tém všech hrob byla provedena biologicko-antropologická analýza. Další výhodou bylo to, že archeologická a antropologická analýza byly k dispozici pro osm h bitov kultury Maroš, což umožnilo sestavit souvislejší p ehled na toto téma, a krom toho dále rozvést problematiku genderu/v ku. Cílem této magisterské práce je zjistit, zda a jakých poh ebních prvk bylo užito k vyjád ení jednotlivých rozdíl mezi lidmi, co se pohlaví/genderu a v ku tý e. Byly identifikovány jasn z etelné modely užívání materiál, ehož bylo cílem pro tuto analýzu ji zam it na spole enskou stratifikaci rozdíl . Poda ilo se rozpoznat n které spolehlivé genderové indikátory, díky nimž bylo možné pojmout rozdílné možnosti genderových souvislostí v dané spole nosti, která na t chto h bitovech poh bívala své zesnulé. Hlavní význam této analýzy nespo ívá pouze ve studii genderu v historii, ale také v kontrastivní reprezentaci ná elnických a kmenových forem spole enské stratifikace.

#### Klí ová slova

mladší doba bronzová, kultura Maroš, h bitov Mokrin, poh ební zacházení, poh ební p edm ty, pohlaví, gender, v k, spole enské rozdíly.

# Aknowledgments

My gratitude goes to Prof. PhDr. Ivan Pavl DrSc. and Mgr. Jan Turek Ph.D. for guidance and advises. I only wish to have talk to you more. I'm sincerily grateful to my friends for selfless support. And to my love, for endless understanding.

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# 1 Introduction

# 1.1 The aim of the work

The aim of this thesis is to identify and examine central problems with different approaches to biological sex/gender<sup>1</sup> and age issues in the Early Bronze Age Maros society in southeast Europe.

The discussion of the burial data aims to discover whether and what elements of burials were used to express differences between people along the axis of sex/gender and age respectively. This inquire will explore obvious patterns in the material in attempt to direct analysis towards social constructions of differences. Also, our goal is to single out gender indicators crucial for provision of an insight into gender relations of the Maros society. Further, we are going to examine whether there is any difference in the status of males and females in death based on the grave goods they were buried with and how this is likely to reflect their horizontal and vertical status in life.

# 1.2 The overall scope of the project – main questions to be examined

Specifically for this study, an extensive collection of archaeological and bio-anthropological data and analysis results is created and used to mark off possible correlations between funerary treatment and sex/gender and age perceived as physical condition and the model of socially conditioned male/female graves in skeletons from eight Maros cemeteries. Additionally, a synthetic overview of the overall Maros funerary treatment is provided considering both normative and alternative burial treatment.

Main questions to examine are:

- Is there really a normative funerary treatment like the one defined by some scholars? Is it possible to consider gender ambiguous burials to be part of the normative burial treatment? Is there correlation between gender ambiguous burials and the age of the deceased?
- Can we identify gender indicators in the elements of the Maros funerary treatment? Are there gender and age specific grave goods?
- Is any difference in the status of males and females in death based on the grave goods they were buried with? What is that telling us about their horizontal and vertical status of in life?

<sup>&</sup>lt;sup>1</sup> A common definition of gender is that gender is cultural construction of sexuality. Sex is a natural, biological classification which is used primarily to distinguish male from female, man from woman. However, the male sex and the female sex are to some degree socially constructed categories: what is deemed to be *natural* is in fact a cultural decision (Skott 1996, 259, 261).

The aim of this work is not to prove or disapprove any of points of view given by different scholars but to examine how these different viewpoints are reflected on the interpretation of the Maros culture. Likewise, this study does not attempt to reconstruct gender in the Maros society, it is rather aiming to stimulate discussion on different trends and perspectives available to date, also looking for future research prospects.

# 1.3 Geographical distribution

The territory of the Maros culture includes southeast Hungary, southwest Romania and northern part of Serbia (Picture 1). This area is framed by river Száraz-ér on the north in Hungary, river Zlatica and Galadska on the south in Serbia and river Tisza on the west, forming the triangle through which central part flows river Maros. Sporadic finds of the Maros culture were recorded in the wider area on the north reaching river Körös in Hungary. The central area of the culture was along river Maros spreading from village Periam in Romania to its confluence in river Tisza near Szeged where the highest density of settlements and cemeteries is recorded (Giri 1967, 71; Draškovi -Johnson 1973, 1; Stefanovi - Dimitrjevi 2007, 417).

Culture was named Maros by J. Banner because of the significant concentration of archaeological sites discovered in the lower area of river Maros. In archaeological literature this culture is also known as Periamos (Periamus, Periam), Pécska (Pecica), Periamos-Pécska, Pitvaros, Óbéba, Szöreg, Mokrin-Periamos, Mokrin, Moriš (Draškovi -Johnson 1973, 1; Giri 1967, 71).

# 1.4 Method and material

This study is divided into several distinct portions relative to the elaboration of the theme and also to the research process.

First part of the study provides background of the topic and history of the research. Further, archaeological information describing general features of burial practices of the Maros culture is presented including catalogue of eight cemeteries considered in this thesis: Szöreg, Desk A, Deszk F, Ószentiván, Pitvaros, Óbéba, Ostoji evo and Mokrin. These cemeteries differ in number of graves, quality of available information and also in structure of the separate studies undertaken. Therefore, the aim of the catalogue is not to describe these archaeological sites in detail but to provide general information relative to our analysis.

Various authors have been dealing with the Maros material applying different approaches in search for the clues for understanding of the Maros society. Several among them provide information about the Maros cemeteries and results of studies involving issues of sex/gender and age. The most relevant data is found in works of M. Giri (1971), G. Farkas (1971), I. Lengyel (1972), O'Shea (1996), E. Rega (1996), L. Milašinovi (2008), M. Por i and S. Stefanovi (2009, 2013) and M. Por i (2010).

Second part of the study presents the analysis of data collection and results. For the analysis, series of elements of the Maros funerary treatment are identified and categorized. Description of categories is provided. Statistical analysis of all identified elements is presented in separate tables and graphs. Further, different categories of burial treatment and artefacts are analyzed in relation to age and sex, and conclusions of analysis are presented.

Above mentioned categories correspond to different elements of the Maros mortuary treatment. Each category includes a number of elements that describes variants of its appearance in the Maros cemeteries. Data is further treated in two ways: (1) available data on Mokrin cemetery is coded and entered into the Mokrin dataset; (2) available data on other Maros cemeteries is entered into tables defined by previously set categories of the mortuary treatment. Selected categories and elements are described in Table 1. The Mokrin dataset and the code sets are available in the Annexes 1 and 2.

Primary source for the information on the Mokrin cemetery was Giri (1971) and secondary was O'Shea (1996). Milašinovi (2008) and O'Shea (1996) were used as sources of data for other Maros cemeteries. The data on biological sex and age determination is found in works of Giri (1971), Farkas (1971), Rega (1996) and O'Shea (1996).

Third and final portion gives a critical overview of relevant interpretations of the Maros funerary treatment relative to issues of gender and age. Main questions are examined, problematic of the topic is presented and main viewpoints are compared and contrasted. Introduction of the Ostoji evo cemetery in the discussion about the Maros gender and age distinctions pointed out at the somewhat new possibilities.

Limitations of the study are recognized in unequal availability of data for different cemeteries, and in difference in size between analyzed samples, because of which the Mokrin cemetery was often taken as a case study to speak for the entire Maros community.

# 1.5 History of research

The Maros group excavations have long history that is going back more than 100 years and rich archaeological literature. First researchers dealing with the Maros group findings were L. Dömöter, M. Roska and F. Milleker, from more than 100 years ago, at the end of 19th century ( 1987, 71).

The most influential of early attempts at synthesis is work of V. G. Child in 1929 (*The Danube in Prehistory*). At that time, a number of the Maros group major sites have already been excavated: Perjámos, Pécska, Tószeg, Nagyrév (settlements), Ószentiván and Óbeba (cemeteries). Roughly 50 graves were known then. Until second major attempt of regional synthesis in the work of J. Banner in 1931 and 1942, four major cemetery sites were excavated: Szöreg, Pitvaros, Deszk A and Deszk F with several hundreds of investigated graves. In later years, two more sites, Mokrin and Ostoji evo were excavated: Mokrin in 1958-69 and Ostoji evo in 1981-1991, making the complete list of to date examined Maros culture cemeteries. In 1970s and 1980s new survey and testing in Hungary discovered settlements in Klárafalva – Hajdova and Kiszombor – Új Élet (Hungary) (2008, 38; O'Shea 1996, 28-32).

Mokrin cemetery was the first from the Maros group to be excavated using modern techniques of recovery and documentation. Mokrin was also the first to be radiometrically dated.

The Maros culture has been subject of major archaeological synthesis in all three countries where it is known: Hungary (Banner 1931, Bóna 1965, 1975), Serbia (Garašanin 1983, Giri 1971, 1984, 1987) and Romania (Soroceanu 1984, Sandor-Chicideanu and Chicideanu 1989). In later years, a detailed analysis of the Maros group cemetery remains and social structure is published by O'Shea (1996) and osteological material is analyzed by several authors that had different research goals (Farkas and Liptak 1971, Rega 1996, Stefanovi 2006).

The cemetery in Mokrin, among the Maros cemeteries, is the most often quoted in social studies of the Early Bronze Age archaeology (Bösel 2008; Harding 2000; O'Shea 1996; Parker-Pearson 1999; Por i 2010; Por i -Stefanovi 2009; Stefanovi-Por i 2013, Rega 1996, 2000; Schumacher-Matthäus 1985; Stefanovi 2006), as wide variety of data is present (Mati 2010, 170; 2010, 167-168).

### 1.6 Chronology of the Maros culture

### **1.6.1 Relative chronology**

First serious effort to the internal chronology of the Maros group was made by S. Foltiny (1941). He proposed threefold division (phase I-III) based on the ceramic styles from Szöreg cemetery. Foltiny also noticed somewhat different characteristics of findings from Pitvaros in comparison to sites closer to river Tisza.

Later, I. Bóna (1965, 1975) contributed to the research of the Maros group internal chronology. Bóna singled out five phases (I-V) and connected them with the equivalent stratigraphic levels in Pécska. He also separated Pitvaros group (Pitvaros, Óbéba) from Szöreg group (Szöreg, Deszk A). Phases I, II and part of the phase III of Bóna's periodization, correspond to Foltiny's phases I and II. In the phase IV, Bóna noticed the split in the Maros ceramic tradition, so he separated the region south of the river Maros from the region between rivers Maros and Körös. The phase V is a continuation of the previous phase where differences between southern and northern ceramic types are even more distinctive. Thus established, Bóna's typological system is widely used to date for the purposes of chronological comparisons within the Maros group and for linking the Maros sites to other regional complexes (O'Shea 1996, 29-32).

The Maros culture was dated in first period of the Bronze Age, marked as horizon of posteneolithic groups of the Early Bronze Age. Beside the Maros cuture, Somogyvár, Vinkovci and Nagyrév cultures were dated to the same period. This was done on the basis of strong connection of these cultures with autochthonous cultural base, and the fact that bronze do not have the same importance for social and economic relations as later in Vatin, Dubovac, Hügelgräber and Urnenfelder cultures. It is considered that the Maros culture is still connected with autochthonous Bodrogkeresztúr culture and that also has Vu edol culture elements. Further, Nagyrév elements are typical for the first phase, early phase of development of the Maros culture.

Beginning of the Maros culture represents also the beginning of forming of first Early Bronze Age cultures in the area of southeast Hungary, southwest Romania and northern part of Serbia. The oldest graves at the Mokrin cemetery are contemporary to Nagyrév and Pitvaros groups. Youngest graves at the Mokrin cemetery belong to the end of the Early Bronze Age and the final phase of the Maros culture. That was the time when the Vatin culture has developed in the south part of Vojvodina (northern Serbia) and Vatya and Hatvan cultures have developed in the north (Tasi 1972, 12-16, 24-27). New investigations (Rega 1989, O'Shea 1978) suggest that there is no systematic difference between Pitvaros and Szöreg group, supporting the original opinion of S. Foltiny that the cemeteries at Pitvaros and Óbéba belong to the early phase of the Maros development and that Mokrin and Desk F do not show significant use in later Maros sequence (O'Shea 1996, 35-38).

### **1.6.2** Absolute chronology

New analyzes and results of calibrated C14 dates indicate that cultures of the Early Bronze Age of the eastern Carpathian Basin, on average, are 700 and 800 years older from the dates that were previously derived with respect to the Aegean and Anatolia. New absolute chronology indicates continuity from the late Neolithic period, through Eneolithic to the Early and Middle Bronze Age.

C14 analysis was conducted on samples from the Maros villages Klárafalva-Hajdova and Kiszombor-Új Élet and the cemetery in Mokrin. Interesting is that the highest calibrated date is 2650 BC, while the lowest is 1520 BC. Dates for the Mokrin cemetery are within these limits: lowest date is 1807 BC while the highest is 2086 BC.

The early Maros culture and the Early Bronze Age are placed in the period around 2700 BC, with the possible maximum extent occurring around 2000 BC, while the late phase is between 1700 and 1500 BC. Divide between Early and Middle Bronze Are appears to fall around 1700 BC (Bóna's phase IV and V) (O'Shea 1996, 36-38).

### 1.7 Bronze Age in Europe

The question of absolute chronology of the European Bronze Age is often getting revisited due to appearance of new C14 dates. The beginning of the Bronze Age is questionable as different dates can be found in the archeological literature, for example: 2300 BC (Kristiansen 2005), 2500 BC (Harding 2000, 1), 2700 BC (O'Shea 1996, 3), 3000 BC (Nikolova 1989) and 4000 BC (Greenfield 2001). This transitional period is considered to be a very important milestone in the socio-cultural evolution of European societies. Common opinion is that the structure and scale of European societies has clearly changed. This change was not only social but also demographic and genetic, as recent evidence, although still sparse, suggests that the haplogroups that were introduced by Tripolje/Yamna/Corded Ware and Bell Beaker groups were transmitted to modern Europeans (Kristiansen 2014, 6; Stefanovi -Por i 2009, 259).

This period of transition from the Neolithic to the Early Bronze Age in Central Europe has often been considered as a supra-regional uniform process, which led to the growing mastery of the new bronze technology (Stockhammer 2015, 1).

During the Proto-Ún tice phase we could already observe a continuation of the standardization of burials in individual graves as known for Beaker cultures. The north-south orientation was assumed and the interment mode of crouched burials facing the right became common practice. This strong standardization remained stable during the entire Ún tice phase, and indicates constant ideological control within the greater part of the society, thereby also indicating the normative influence of social relationships on individual and familial lifestyles (Muller 2012, 259-261). In is worth to mention, that a fairly wide communication zone can be assumed between south-eastern Moravia and the northern Balkans on the testimony of a few more-or-less identical artefact types with a wide distribution (Kulcsar 2013, 645). It is suggested that some types of weapons and ornaments that are found in the Mokrin graves could have origin in the Ún tice culture (or a distinct parallel) (Giri 1971, 214-219; Foltiny 1972, 51-52; Jovanovi 1972, 41).

One of the most important and most hotly debated topics in European Bronze Age archaeology is the appearance of social hierarchy<sup>2</sup>. The rise of elites and complex societies is a widely discussed topic on the general anthropological level as well<sup>3</sup>. The most important problem, both in anthropological theory and in the study of Bronze Age societies, is the lack of an appropriate explanation as to why and how elites arose and how they managed to maintain their position in society. The main issue is vertical differentiation or ranking as a

<sup>&</sup>lt;sup>2</sup> For more on the topic see Harding, 2000; Kristiansen, 1999; Shennan, 1986.

<sup>&</sup>lt;sup>3</sup> For the discussion on the topic see Earle, 1987, 1989; Fried, 1967; Johnson and Earle, 2000; Johnson, 1982; Kosse, 1990, 1994; Service, 1971, 1975.

strong correlate of complexity and an indicator of socio-cultural evolution. Fried defined a ranked society as one in which positions of valued status are limited so that not all those of sufficient talent to occupy such statuses actually achieve them. In other words, ranking implies differential individual access to status and sometimes wealth (Stefanovi -Por i 2009, 259).

During the Early and Middle Bronze Age among communities using the same ceramic styles, burial rites seem to be more or less uniform: cremation is characteristically associated with the distribution areas of the Vatya, Hatvan and Transdanubian Encrusted Ware styles, while inhumation is dominant in the areas associated with Füzesabony (Otomani II) and Maros styles (Fischl 2013, 362-363). In regards to who is buried, some figures confirm that during the Bronze Age, generally speaking, there is a larger number of graves of males than graves of females and children (Fokkens-Harding 2013, 39).

# 1.8 General overview of the Maros culture

### **1.8.1 Settlements**

Maros culture settlements were permanent and of long use which is especially indicated by tell settlements (Pecica, Periam). All Maros culture settlements were built on the higher ground, on the places that were safe from floods, in the immediate vicinity of watercourses or swamps. No matter of the type of the settlement, their dimensions were, most commonly, 130 x 60-80m. Largest excavated settlements covered the area of about 2 ha. It is assessed that approximate number of inhabitants was 500-700. Settlement in Mokrin had around 500 inhabitants. Interesting is that during archaeological excavations traces of older settlements were not found below the Maros culture layers.

Houses were made from wood and mud, rectangular in shape, and their dimensions vary: 6-14m long and 3-5m wide. The walls were constructed from weaved reed, branches and mud. In majority of cases there is only one room in the house. Inside the houses, fireplaces and storage pits for food have been found. This type of the house, densely arranged with narrow passages between, was common to both types of settlement and probably represented the residence of a single nuclear or small extended family, opposite to the large multifamily houses of the late Neolithic period (O'Shea 1996, 43).

No palisades or tranches were found during archaeological excavations of settlements which indicates that this territory was safe at the Early Bronze Age (Giri 1967, 76-78). Only in Klárafalva - Hajdova and Kiszombor - Új Élet settlements, remains of ditches were identified that could serve as a border or for defense (2008, 12).

### **1.8.2 Cemeteries**

Cemeteries of the Maros group have always attracted more attention of researchers than the settlements. The largest and the most famous cemeteries of the Maros culture are Mokrin with more than 312 graves and Szöreg with at least 229 graves. Next to these cemeteries, in regards to the number of excavated graves is Ostoji evo with 285 graves, from which a total of 77 graves belong to the Maros culture. Group of smaller cemeteries (from 30 to 50 graves) includes: Deszk A, Deszk F, Ószentiván and Pitvaros. Partially explored are cemeteries Óbeba, Novi Kneževac and Deszk Veno. Burials found in the context of settlements or their vicinity are recored in Kiszombor-Új Élet, Klárafalva-Hajdova, Periam and Rabe-Anka Sziget.

Settlements and cemeteries of the Maros culture were located in areas of dry land close to rivers. This principle of locating cemeteries close to rivers and away from settlements was not common for the periods before the Bronze Age ( 2008, 13).

Investigations of association between cemeteries and settlements have shown an interesting situation. At Szöreg and Ószentiván there is no close association between the remains of settlements and the cemeteries, and more than one settlement existed in cases of each of the two cemeteries. Similarly, Giri (1971) has identified at least five Maros settlements in the vicinity of the Mokrin cemetery. One can conclude that large cemeteries like Szöreg and Mokrin may have served as the burial places for a number of communities within the locality. The same situation appears in cases of Ószentiván, Desk A and Deszk F. These multi-community cemeteries located in the vicinity of Tisza-Maros confluence may as well have had the role as visible territorial markers.

Similar separation of cemeteries from settlements and location of cemeteries along the major watercourses is observed among the contemporary Nagyrév groups along the Tisza river (Nagyrév, Tószeg) and among preceding Copper Age cemeteries in eastern Hungary (Tiszapolgár-Basatanya, Tiszavalk-Kenderfold).

While cemeteries are generally located apart from settlements, this does not preclude the occurrence of burials in or near settlements. Human remains occasionally are encountered within the villages and scattered burials have been reported from the immediate vicinity of several Maros settlement areas including Periam, Pécska and Rabe. These occurrences must also be considered as elements in the total Maros funerary program (O'Shea 1996, 57).

### **1.8.3 Material culture and economy**

Generalized division of the Maros culture ceramics is into fine- and coarseware. Coarseware ceramics encompass medium to large size storage containers of relatively simple form and finish. Fine ceramics constitutes of liquid containers, bowls and storage jars.

A full range of liquid containers, from small cups to large beakers, is found in the Maros settlements and cemeteries. These types of ceramics are chronologically the most sensitive. Bowls are usually biconical, but also represented by other forms, found in settlements and cemeteries. They are not chronologically sensitive. Last category, various forms of storage jars, is more frequent in the villages than in the funerary context.

Fine ceramics is very well made, polished and commonly characterized by a highly burnished surface treatment. The fine-ware conform to relatively strict norms of proportion which raise the possibility that it was manufactured in regional workshops rather that in individual households. Regularized local or regional exchange connections between Maros villages is also a possibility considered by some authors.

Copper and bronze objects seem to have significant role in the funeral ritual, and less significant in the context of the village. Among the weapons and tools the most common are axes, daggers and small awls. Among metal ornaments common are standard forms of the Early Bronze Age, such as torque, roll-headed and Cypriot arched pins, spiral bracelets, finger and hair rings, etc. All of them chronologically follow the existing *European* styles and the analysis confirms their belonging to a larger cultural area of the Central European manifestations. Also known are a number of small bronze artifacts which are typically grouped together on a leather or fabric backing to form a composite ornament, most frequently a head ornament (1972, 12; O'Shea 1996,45-49).

Proof of existence of metallurgy have been found in Pécska, Klárafalva-Hajdova and Kiszombor-Új Élet in the form of clay molds and tools for casting. Possible sources of metal were in the north, in Slovakia, and probably more often used in the east, in Romania. However, relatively little evidence of metallurgy raise the question on the extent of local production, and suggest that the majority of metal objects were acquired via trade with the classical Central European sources.

Besides copper and bronze, appearance of gold is important characteristic of the Maros culture. Gold appears most commonly in the form of hair and finger rings. Chemical analysis showed that the gold is derived from eastern sources in the Romanian Carpathians (O'Shea 1996, 46-49).

Further, it is suggested that the unique environmental conditions and the lack of direct sources of metal ores caused the emergence of a large number of tools made of animal bones and deer antlers, in comparison to stone, which is rarely used. Numerous appearance of Dentalium, Cardium and Columbella mussels and snails, as part of different types and forms of ornaments, could possibly originate from fossil deposits or be obtained in trade (2008, 14).

Productive economy of Maros villages implies mainly weaving of cloth, manufacture of ceramics and metallurgy. The remains of plants and animals point to the continuation of the system from the late Neolithic. The principal grains were barley and einkorn that are easy to maintain in a humid climate. Among the domestic animals, cattle, pigs, sheep/goats, horse and dog are all represented and their number varies from location to location. Among the wild animals, the most common is deer (O'Shea 1996, 44).

# 1.9 The Maros Culture Cemeteries

First investigated cemetery of the Maros culture was Óbéba in 1903, followed by Ószentiván (1926), Deszk A, Deszk F, Pitvaros, Szöreg, Mokrin (1958) and Ostoji evo (1981). Common characteristics of these cemeteries seem to be, except for the material culture, the whole system of norms of funeral practices.

Since the sites, excluding Mokrin and Ostoji evo, were excavated over a relatively short period of time, there is a high degree of consistency in techniques of recovery and reporting of the finds. Nevertheless, cemetery plans were not always drawn, descriptions of grave units are sometimes incomplete, recovery of small items and bones is uncertain, which is all not unusual for that time. Further, some discrepancies sometimes exist between field record and museum catalogues in the identification and provenience of artifacts (O'Shea 1996, 55-56).

As mentioned in the text above, the Maros culture territory spreads over northern Serbia, southwestern Romania and southeastern Hungary. Location of the cemeteries is as follows (Picture 1)<sup>4</sup>:

- o Serbia: Mokrin and Ostoji evo
- o Romania: Óbéba
- o Hungary: Szöreg, Desk A, Deszk F, Ószentiván and Pitvaros

### 1.9.1 Mokrin

The Mokrin cemetery is situated near village of Mokrin in northern Banat in Serbia. Largest nearby cities are Kikinda (Serbia), 13 km on the south, and Szeged (Hungary), 43km on the north-west. The burial ground was enclosed on two sides by water courses: river ukošin on the north and now dry river-bed on the south (Markovic-Marjanovic 1971, 9-15).

The first known records on archaeological finds in area of Mokrin originate from the end of 19th century. In 1939, M. Grbi was the first to class the findings into, what he then termed, the *Mokrin culture*. First excavation of the cemetery was conducted in 1958, led by M. Giric, and continued until 1969. Total of 312 graves were uncovered in the area of about 10080 m2 (Giri 1971, 30-36).

Mokrin represents the largest cemetery of the Maros culture and it is also exceptional for an extraordinary good documentation and professional excavations which puts this cemetery in place of the most detailed excavated sites of the Maros culture. The publication on the site, in the form of monographs, Mokrin I and II, is issued in 1971 and in 1972. This publication

<sup>&</sup>lt;sup>4</sup> Location of other Maros culture sites is as follows: Novi Kneževac, Rabe (Serbia), Periam, Pécska (Romania), Klárafalva, Kiszombor (Hungary).

contains a complete review of the site with detailed descriptions of the graves and artifacts, analysis of relative chronological relationships and also a series of analyzes of different experts in the field of anthropology, geomorphology, spectral analysis of metals and laboratory analysis of human and animal remains.

Absolute dates from Mokrin show that cemetery was used in period 2100-1800 BC, therefore around 300 years. A total of 24 absolute dates belong to period around 2000 BC, which was probably the period of the peak of the culture, while the late phase is dated in period 1700-1500 BC (Stefanovic-Dimitrjevic 2007, 417).

The Mokrin cemetery appears to have been utilized during the earlier half (perhaps even the earliest part) of the Maros sequence and to have been abandoned by the Middle Bronze Age portion of the Maros sequence. None of the baroque ceramic types of Bona's Szöreg phases IV and V were found neither metal objects typical for the Middle Bronze Age at the Szöreg sites. This confirms the opinion that this cemetery was abandoned before the beginning of the late phase of the Maros culture. Among the ceramics, which is not typical for the Maros culture, there are vessels of Nagyrév style (O'Shea 1996, 58).

Human osteological material basic age and sex determinations were reported by Farkas and Liptak (1972). These determination were largely independent of information on body orientation, although subadult sex determinations did rely on normative body orientation. Additional analysis of the Mokrin skeletal material has been published by Lengyel (1972), Rega (1996) and Stefanovi (2006).

After exclusion of all disturbed graves (in the past, as a result of later occupation of the site and possible grave looting, and in modern times as a result of agriculture), number of 278 graves remained for analysis (O'Shea 1996, 61).

### 1.9.2 Szöreg

The Szöreg cemetery is located in the village of Szöreg, east of Szeged in southeastern Hungary. It is the nearest cemetery to the Tisza-Maros confluence.

The cemetery in Szöreg was investigated in a series of excavations from 1928 to 1931. Total number of excavated graves is 229 and according to Foltiny's estimation the cemetery size could be in a range of about 600 graves.

The artifacts from the Szöreg cemetery were used in the construction of regional chronology. Szöreg cemetery provides cases from both early and late phases of the Maros sequence.

Foltiny (1941) provides documentation from the excavations, summarizes formal characteristics of the burials, and listing associated artifacts and their position within the grave. He also provides occasional information on the individual's apparent age. However, no drawings of individual grave is provided and there is no detailed plan of the cemetery and position of graves. The second published source on the artifacts from Szöreg is summary by Banner (1931) with special attention given to ceramic material. Third publication is by Bona (1975) who provided nearly complete photographic documentation of existing grave assemblages (O'Shea 1996, 61-65).

Two published sources of demographic data derive from Foltiny's (1941) and Farkas' (1975) reports. Foltiny provides anecdotal data on 29 graves while Farkas provides demographic data on 109 skeletons. Most recently, Rega (1989) reanalyzed remaining osteological material of 64 individuals. In total, 179 intact graves were identified at Szöreg cemetery from which 109 could be positively attributed to the Early Bronze Age and 45 that belong to late phase of the Maros sequence (O'Shea 1995, 65-67).

### 1.9.3 Deszk A

The site of Desk A is located on the east side of the village Desk, 12 kilometers east of Szeged, on a low terrace to the south of the river Maros.

The cemetery was investigated by the M. Ferenc in 1930 and 1931. Total of 83 graves is found including Copper, Bronze and Iron Age burials. Deszk A contains both early and late phase Maros ceramics.

The first publications with descriptions of graves and artifacts is issued by Banner (1931) and Foltiny (1941). Years later, Bona (1975) has published complete photographic record of surviving artifacts and one of the reconstructed plans of the cemetery. Second reconstructed plan was published by Trogmayer (1974).

Analysis of the osteological material was done by Foltiny (1941) and Farkas (1975). Comparison of different publications and analysis has shown that from the total of 83 graves, 49 intact graves belong to the Bronze Age, of which 24 can be attributed to early phase and 25 to the late phase of the Maros culture (O'Shea 1996, 67-68).

### 1.9.4 Deszk F

The site of Deszk F is located on the north edge of the village of Deszk, about 8 kilometers east of Szeged, near the meander loop of the river Maros.

The excavations were carried out by M. Ferenc in 1932 and 69 graves in total were recovered from the site.

First published information is the report by Foltiny (1942) based on the excavation diaries and his own examination of recovered ceramics including the position of the artifact relative to the body within each grave. The second publication is provided by Bona (1975) who gave overview descriptions and nearly complete photographic documentation of the artifacts. Trogmayer (1974) reconstructed the only plan of the cemetery.

Graves at Desk F can be attributed to Early and Middle Bronze Age. Great majority of the graves belong to early Maros sequence, with only two graves belonging to the later Maros period. From a total of 69 graves recovered from the site, a total of 57 were intact of which 52 belong to the Early Maros phase or are classified as unknown by O'Shea (1996). Two graves are attributed to the late Maros phase and 3 had intermediate ceramic forms (O'Shea 1996, 70-72).

# 1.9.5 Ószentiván

The site of Ószentiván is located on the western edge of the village Ószentiván (now the Tiszasziget), located 10 kilometers south of Szeged, on a former coastal embankment of the river Tisza.

The site was investigated in the period from 1926 to 1928 by Banner. Both Bronze Age cemetery and settlement were excavated. At least 40 graves were recovered within the zone with the Bronze Age burials at the cemetery. The primary published source on the Ószentiván cemetery is Banner (1928, 1931).

Majority of the Bronze Age graves in the Ószentiván cemetery belong to the early phase of the Maros sequence. Only one grave had ceramics of the late Maros style and second had ceramics of the intermediate type. Final Ószentiván sample of graves for analysis is 29 according to O'Shea (1996, 72-76).

### 1.9.6 Pitvaros

Pitvaros cemetery is located in the northern part of the Pitvaros village, 48 kilometers east of Szeged.

Rescue excavations were conducted by M. Ferenc in 1926. A total of 43 Bronze Age graves is recovered, all are attributed to the early stages of the Maros sequence. The primary published source is Bona (1965) who employed both field diary from the excavation and the museum catalogue in his descriptions.

The ceramics from this site are also diagnostic of Bona's (1965) self-standing Pitvaros group. Information on skeletal remains include field assessments of age (Bona 1965) and formal osteological analysis conducted by Farkas (1971, 1975) and Rega (1989). Only 14 Bronze Age crania survived for modern assessment and postcranial elements from 2 graves. O'Shea (1996, 76-77) utilizes 34 grave for his analysis.

# 1.9.7 Óbeba

The Óbeba site is located 3 kilometers northeast of the village Óbeba (today Beba Veche) in Romania, 20 kilometers southeast of Szeged.

The site was discovered during the construction of the road in 1903 when a total of 16 graves were recovered. All the Bronze Age burials are dated to the earlier half of the Maros sequence.

Óbeba cemetery was published by Banner (1931), Bona (1965) and Trogmayer (1974). Biological information on the Óbeba skeletons derived solely from comments in the field diary and unfortunately no material have been preserved for later analysis. O'Shea (1996, 77-79) uses a total of 15 graves for his analysis.

# 1.9.8 Ostoji evo

The cemetery in Ostoji evo is located northwest of the village Ostoji evo, 24 kilometers northwest of Kikinda, in the region of Banat, northern Serbia.

Systematic archaeological excavations were conducted from 1981 to 1991 leaded by M. Giri and S. Vojvodi . The cemetery was published only partially, in the form of articles and offprints.

Anthropological analysis was carried out by anthropologists Z. Zoffmann, however only preliminary results of this analysis were submitted to the National Museum in Kikinda.

A total of 285 graves have been recovered at the Ostoji evo cemetery including burials attributed to the Early and Middle Bronze Age. From this total, 103 burials belong to children buried in the grave-sized vessels (phitoi) that were probably used for storage of food. Based on the opinion of Giri , a total of 77 graves belong to the Maros Culture (2008, 38-46).

### 1.9.9 Other occurrences of the Maros graves

Sporadic occurrences of Maros graves outside the context of the cemetery appear mostly in the villages at the following locations: Kiszombor - Új Élet, Periamos, Rabe, oka, Nagyszentmiklós, Klárafalva - Hajdova, Novi Kneževac, Pe ska and Ószentiván (O'Shea 1996, 80).



# 2 The Maros culture funerary program

The approach adopted in this study was used to identify a series of elements related to the funerary treatment observed in the Maros cemeteries. In case of inhumation, the categories identified in the treatment of the body include body placement and orientation of body and face. Other, not so common burial treatments include cremation, urn burial, multiple burial, symbolic burial, hearth burial and secondary burial. Artefacts recorded in the Maros funerary assemblages are grouped into three categories: ornaments, weapons and tools, and ceramics. Furthermore, each category consists of elements observed in the Maros graves and it represents the finest level of distinction. Details of categories and elements used for analysis of the Mokrin cemetery are available in Appendix 2. Principal elements of this analysis are presented in Table 1.

Maros mortuary treatment including various identified categories of ornaments, weapons and tools, and ceramics is described in the text below. Further, the identified mortuary treatment elements are analyzed in relation to age and sex.

Just to touch upon the subject, it should be mentioned that there are many aspects of the funerary ritual that rarely leave any trace in the archaeological record. Such aspects are lavishness of the feast, the length of the oratory, the composition of the mourners and many other aspects that remind us of the fact that it is certain that more occurred than we have evidence to document. It should be kept in one's mind that, since our view is limited to a relatively small number of observable variables, social distinctions carried via aspects of body preparation and treatment may be obscured within a mortuary composition (O'Shea 1996, 140). For the purpose of this thesis, only categories and their elements that are archaeologically visible will be taken into consideration, and therefore the selected categories represent a rough estimation of the total treatment received by any individual.

In a total of 727 graves are employed as the basis of the study of the Maros funerary practices and the analysis of its elements in relation to age and sex. From the total amount, 312 graves are from Mokrin, 154 from Sz reg and 77 from the Ostoji evo cemeteries. Cemeteries with a smaller number of graves are Deszk A (49), Deszk F (57), Ószentiván (29), Pitvaros (34) and Óbéba (15).

Statistical analysis was carried out in three ways: considering all eight Maros cemeteries together, considering only the Mokrin sample and considering other cemeteries as a separate sample.

## 2.1 Overview of the funerary treatment

The term normative is commonly used to describe the Maros funerary treatment that includes individual inhumation, a flexed burial posture, the orientation of the body along the north-south axis facing eastward and the different orientation of males and females: males with their heads to the north and females with their heads to the south. Further, the body of the dead was placed in an oblong-shaped grave, within clearly defined cemeteries. In regards to the grave goods, the vessels in particular may form a base-line assemblage which is often supplemented with other symbolic goods (Picture 2-4) (O'Shea 1996, 140-141; Rega 1996, 231).

It is suggested that through this configuration of treatments, the Maros cemeteries can be distinguished from both the earlier and the later groups within the Tisza-Maros region and also from contemporary groups within southeast Hungary and the neighboring regions.

However, these rules were not universally applied to all the deceased in the Maros communities, nor were they applied with the same fidelity in all the Maros cemeteries. For each category of the treatment described as normative, multiple alternatives were also observed (Table 2) (O'Shea 1996, 141).

**Table 2.** Normative Maros funerary program and recognized alternatives (adapted from O'Shea 1996, 141)

Normative treatment	Alternative treatment(s)
Burial in cemetery	Burial in settlement
	Burial elsewhere
Primary inhumation	Cremation
	Body mutilation
	Cenotaph
Single burial	Multiple burial
Flexed posture	Extended posture
	Rhomboidal posture
East-facing	Non-east-facing
North-south axis of grave alignment	East-west axis of grave alignment
Male/female-specific	
orientation/placement	Incorrect orientation/placement for individual's sex

# 2.2 Grave construction

On the basis of the Mokrin and Ostoji evo samples, the shape of the grave could be rectangular or oval. In a small number of cases, the shape of the grave cannot be recognized as one of these two shapes.

The average dimensions are  $110 \times 90$  cm, smaller for children, and general impression is that they are adjusted to the size of the body. The average depth of the grave varies from 0,7m to 1m, however some can be up to 1,5m, but rarely more.

In Ostoji evo, evidence of organic material, that is assumed to be remains of leather, has been found in several graves. Leather may have possibly been used as a wrapping for the body of the deceased, or for the body to be laid onto it (2008, 39). There is no evidence for internal mortuary structures in graves from other Maros cemeteries (O'Shea 1996, 188).

It is notable that Maros graves do not intercept and the only disturbance is recorded in cases in which burials from later periods were dug into the Maros graves. This can suggest that some kind of marking of the graves existed. This assumption is supported by the finding of a stone above the grave 241 in Mokrin that could have served this purpose (Giri 1971, 201).

# 2.3 Grave offerings

The potential meaning and significance of grave offerings can be understood by the means in which they were deposited in the grave. The object could be either specifically placed in the grave, attached to the deceased's clothing, or accidentally incorporated into the fill of the grave. There is evidence of all three examples in the Maros cemeteries.

For the analysis, three main categories of grave offerings are identified: ornaments, weapons and tools, and ceramics. Inclusion of unmodified animal bone, presumably as a real or symbolic offering of food is treated separately (Table 1).

### 2.3.1 Ornaments

Category of ornaments is commonly subdivided into clothing and body ornaments. Copper pins and bone needles are commonly classified as clothing ornaments. Suggested function of both of these ornaments is as clothing pins that held garment together at the shoulder (O'Shea 1996, 188). Head ornaments were worn attached to fabric or leather forming a complex head piece or a cap (Picture 5-7). Also, some ornaments, such as coil rings and spectacle-shaped pendants, could possibly be worn directly in the hair, or as part of a less

complex head piece. Other ornaments found in the Maros graves were worn directly on the body.

### Bone needles

Bone needles have the appearance of an "eye". Its suggested function is that of a clothing pin, nevertheless. Such pins are documented in all eight Maros cemeteries and occur in 45 graves in total (Table 3). Bone needles appear in graves as a single piece or in pair.

### Metal pins

The category of metal pins is often attributed chronological significance within the Early and Middle Bronze Age in east central Europe. Several varieties of metal pins are recorded in the Maros cemeteries including two varieties of arched pins; those with beaten and rolled ends, and those with twisted wire ends, the so called "Cypriot" pins, some pin forms characteristic of southeastern Hungary, and other. Like the bone needles, metal pins may have functioned as garment pins which fastened the garment at the shoulders. Copper pins and bone needles occur in the same location on the body and in the same plane orientation, suggesting that they performed a similar function at least in terms of use as a clothing fastener (O'Shea 1996, 191, 194).

Metal pins are found in all Maros cemeteries in a total of 39 graves (Table 3). They are represented by the one- and two-pin occurrences, as in case of the bone needles.

### Neck rings

Copper or bronze neck rings (or torques) are known from only three Maros cemeteries: Mokrin, Sz reg and Óbéba in a total of 12 graves (Table 3). In all cases a single torque is found with an individual.

### Bracelets

Copper and bronze bracelets are the most widespread class of body ornaments in the Maros cemeteries, found in all cemeteries except in Deszk A. A total of 62 bracelets is recorded in the Maros graves (Table 3). Bracelets vary in terms of the size and the amount of metal they incorporate. Common division of this type of ornament is to single- and multi-coil bracelets. A Maros grave usually either has either a single-, multi-coil bracelet or several bracelets. These two variants are found together only in one case in Pitvaros (O'Shea 1996, 198-201).

### Hair rings

A total of 29 occurrences of hair rings were observed in the Maros graves in five cemeteries: Mokrin Ostoji evo, Sz reg, Pitvaros and Óbéba (Table 3). In Mokrin, the number of hair rings varies from one to five in a single grave. In other cemeteries, one or two pieces occur in single grave.

### Finger rings

Finger rings are distinguished from hair rings by their anatomical association with fingers. They are found in a total of seven Maros graves four cemeteries: Mokrin, Ostoji evo, Deszk A and Deszk F (Table 3). Finger rings are found as a solitary occurrence, except in one case in Mokrin and one case in Deszk A where three fingers in each of the graves are found.

### Head ornaments

Head ornaments in the Maros cemeteries were typically composite ornaments, i.e. items that were constructed from a number of distinct elements. They appear as arrangements of small copper pieces, occasionally with shell, faience or other beads, attached to fabric or leather backing. The components are most commonly found in an area near the head, particularly the occipital region and across the upper back. Components of a head ornament include: copper plaques, spectacle-shaped pendants, copper disks, copper strips, Columbella shell beads, salteleon, shell disk, bow pendant (O'Shea 1196, 101-104).

The results of Giri (see 1971, 219-224) and O'Shea (see 1996, 108, 112) show that there were at least three categories of head ornaments, on the basis of the Mokrin material: (1) those with plaques or spectacle-shaped pendants or both, (2) those with disks and (3) those with copper strips only (Table 4).

Non-Mokrin head ornaments seem to exhibit the same compositional structure recognized at Mokrin with one exception. Single copper strips (as diadems) are not found. Notable is that head ornament varieties are not evenly distributed among the Maros sites. Copper plaques and spectacle pendants in combination with copper disks occur only in Mokrin and Ostoji evo cemeteries. Sz reg had only copper-disk-type ornaments. Óbéba and Pitvaros had copper plaques and spectacle pendants but no copper disks. Ószentiván had both of these varieties.

A total of 105 head ornaments are documented in the Maros cemeteries, with the exception of Deszk A. Number and rate of occurrence varied considerably, with two thirds of all examples deriving from Mokrin (54) (Table 5; Figure 1). The second greatest number of

head ornaments is recorded at Ostoji evo (22) ( 2008, 53). The greatest number of elements used for a single head ornament is recorded at Mokrin (315 pieces). Also at Mokrin, examples show greater abundance in comparison to the other Maros cemeteries (O'Shea 1196, 101-104).

Other types of composite ornaments are necklaces, sashes and worry beads.

### Necklaces

Necklaces represent one the most common class of Maros grave accompaniments and by far the most common category of body ornaments. They are recognized according to their location within the grave (near the neck, chest area). The most common items incorporated in a necklace are: faience beads (round, star, tubular), shell beads (Columbella, Dentalium, Cardium) pendants, bone/antler beads, animal teeth, carnivore teeth, copper plaques, salteleons. Interesting is the finding of a doughnut-shaped ring made from human patellae that was found as an element of a necklace at Sz reg.

O'Shea is suggesting three modal combinations of elements for the Maros necklaces according to the shape (round, tubular and pendants) (O'Shea 1996, 125, 129-133, 213). The largest number of items used for a single necklace is recorded at the Mokrin cemetery (around 600 of beads from different materials) (Giri 1971, 224-226).

Necklaces are found in a total of 109 graves, from which 58 instances are found in Mokrin and 51 in other cemeteries (Table 6; Figure 2).

#### Sashes

Sash is the term used by O'Shea (1996, 211) for an ornament that consist of a series of strung elements located usually near the waist or hips of the deceased. He suggests that a sash was probably worn around the waist which is in line with the opinion of Giri (1971, 224-226) who described the strings of beads found in the pelvis area as a possible decoration for the waist.

This ornament is found in a total of 46 Maros graves (Table 7; Figure 3).

Sashes consist of various elements in different combinations: carnivore teeth, bone/antler beads (both occur in more than 50% of sashes), star faience beads, Dentalium shell beads (also occur in more than 50% of cases), round faience beads (occur in near 50% of cases in Sz reg and Deszk F), tube beads, Columbella shells, Cardium shells, bone rings, pendants (Table 11). The largest total number of elements in a single sash is up to 738 pieces as found

at the Mokrin cemetery. At Mokrin, sashes with more or fewer than 100 elements occur while at Sz reg and Deszk F it is more or fewer than 10 elements. Interesting is finding of doughnut-shaped rings made from human patellae found as an element of five sashes in Mokrin (1), Deszk F (1) and Sz reg (3) (O'Shea 1996, 115-116, 122, 213).

### Worry beads

Worry beads is the term used by O'Shea to distinguish ornaments that consist of a series of strung elements, commonly shells and faience beads, that were found in or near the hands of the dead. A total of 10 of these ornaments, if counted according to the place of finding, are recorded in Maros cemeteries (Mokrin, Ostoji evo, Ószentiván and Sz reg). Worry beads consist of the same elements as sashes and necklaces. All findings of worry beads fall within the compositional parameters of sashes or necklaces. Given their infrequent occurrence it is not clear whether they represent a distinct object or whether they should be treated as anomalously placed necklaces. Neither is clear on what basis such a determination could be made (O'Shea 1996, 135-137).

### 2.3.2 Weapons and tools

Weapons and tools represent the category of items that has been intentionally placed with the dead. There is a possibility that some of these artefacts may have been worn or contained within pouches or have been part of the individual's costume in some other way. It is suggested that while an object's primary functional role might be utilitarian, this role may not necessarily reflect the object's use or meaning within the mortuary program (O'Shea 1996, 222).

### Daggers

Daggers are found in a total of 14 Maros graves in six cemeteries (Mokrin, Sz reg, Deszk A, Deszk F, Pitvaros and Ostoji evo) from which six daggers are found in Mokrin (Table 3). In all cases, daggers occur as single items, placed near the hand of the deceased.

#### Axe

A total of 11 axes were recovered from the Maros cemeteries, four metal and seven stone axes (Mokrin, Sz reg, Deszk A and Ostoji evo). Of these, the largest number has been recovered in Mokrin: two metal and four stone axes (Table 3).

### Other tools

Other tools recovered at the Maros graves include a copper awl, copper chisel, bone implement, flint tool, flint chip, stone pebble, whetstone, spindle whorl and a pintadera (clay stamp) (Table 3).

Interesting is the finding of a blue clay mold or a model of an axe from grave 185 in Ostoji evo. This finding represents the only example of this kind in the Maros cemeteries. It was found placed near the head of the deceased who had marks of strokes on the skull (2008, 44-45).

The sewing and weaving function can be associated with the awl, spindle whorl and pintadera if used for imprinting design on fabric. Some of the other possible activities associated with recorded tools are ceramic manufacture and finishing, fishing and net maintenance and metal tool maintenance (O'Shea 1996, 226, 228).

### 2.3.3 Ceramics

At a very general level, Maros mortuary ceramics can be divided into presumed liquid containers and bowls, along with a small number of urns and jars (Picture 8). Urns and jars are not typical for the Maros group mortuary ceramics and are more known from settlements. These vessels have a presumed storage function.

Formal typology includes: mug, amphora and beaker for liquid containers, bowl and jar. Functional typology includes: cup, pitcher and jug for liquid containers, small, medium and large bowl and jar.

Pottery is presumably locally manufactured and readily available. Non-Maros ceramics is observed in a total of 12 Maros graves, mostly Nagyrév in style. Other non-local ceramics is associated with the Gyulavarsand groups in east-central Hungary, Vu edol-related traditions (Balkan) and western Encrusted ware tradition. Interesting is that in many cases not only analog but identical ceramics were found in different Maros cemeteries (Bankoff 1972, 57; O'Shea 1996, 96-98, 231-233).

Summary values of the O'Shea analysis of the metric attributes of Maros mortuary ceramics (conducted on more than a thousand vessels) show that the range of bowl sizes is somewhat greater, particularly in the maximum rim diameter, than that observed among liquid containers. The rim diameter was used by O'Shea (1996, 84, 96) as a means of estimating the bowl size and function, since the bowl diameter was more varied and was perhaps likely to be more directly related to possible functional differences between bowls.

Miniature vessels are not mentioned in analyses of the Maros mortuary ceramics. At Mokrin, only one vessel can be considered miniature and it is found in a subadult female grave. Both the height and the rim diameter of this vessel was less than 5 cm.

## 2.3.4 Food offerings

Food offerings occur archaeologically as unmodified and often still articulated elements of animal bone that would likely have represented food offerings if placed with the dead. While the offerings represent potential food value, some of them may relate to other symbolic associations of the particular species of animal (O'Shea 1996, 253).

The data from Mokrin shows that among unprocessed animal bones there are findings of pig, sheep and/or goat, cattle (ox/cow) and horse. Bones mostly belong to adult animals and are represented mostly by findings of a head of an animal, ribs (pig) and lower leg (sheep or a goat). Some of the findings probably represent food offers, however, mandibulae, horns and skulls carry a secondary importance as food in comparison with their symbolic meaning (Bökönyi 1972, 91; Stefanovi -Dimitrijevi 2007, 418-419).

Food offerings (unmodified animal bone) occur in 37 of the Maros graves, 17 of which are from Mokrin and 11 from Ostoji evo (Table 3).

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Graves without grave goods are not rare at the Maros cemeteries. The highest percentage of graves without any grave accompaniments is observed at Óbéba (no data available) and Mokrin (22%), followed by Ostoji evo (14%) and Pitvaros (no data available).

# 3. Results of analysis

In the previous chapter, we have presented a brief overview of what is considered to be normative Maros mortuary treatment and categories of artefacts found in the Maros graves. Further, our aim is to show who was buried in the Maros graves and to present the results of the analysis of the identified mortuary treatment elements in relation to age and sex.

# 3.1 Demographic composition of the Maros cemeteries

The first step in understanding the Maros funerary program is to determine who was entrusted with the burial in the community cemeteries. To answer this question, it was necessary to assess the demographic characteristics of the buried population and to understand if they approximate a natural population or there is evidence for the systematic exclusion of a particular age or sex groups from the cemetery.

The best documented skeletal sample is the one from Mokrin, which is also the one that received the most attention from different scholars when it comes to anthropological analysis of skeletal remains. Age and sex breakdown for the Mokrin sample is presented in Table 8 and Figure 4 based on the analysis done by Farkas (1971). Table 10 presents age categories and their spans as used by scholars for the Maros cemeteries.

As the figures show, there is major difference in the representation of males and females in the Mokrin cemetery in age categories Infants I and Adult. In the category Infants I there are more than twice as many females as males. In the category Adult, the difference in numbers is also significant and again there are more females than males. The mortuary profile for age-at-death in Mokrin is presented in Picture 9.

Additionally, it is observed that no infants younger than about 3 years of age (which is in general the time of relatively high mortality) are buried in Mokrin suggesting that all very young infants were accorded some alternative form of funerary treatment.

The other Maros cemeteries, show most of the systematic features described for the Mokrin sample. All cemeteries, excluding Ostoji evo, share the pattern of not including young infants and also there are fewer young adult males than females. This difference is significantly great at Sz reg and Ószentiván, however, because of the small number of sex-identified graves the significance test must be viewed cautiously. At Sz reg there are twice as many adult females as adult males (34 to 17 individuals). At Deszk A, proportions show 72% of female adults to 28% of male adults (O'Shea 1996, 147).

Neither of the two deviations mentioned above seemed attributable to normal biological processes, but instead appeared to reflect intentional social decisions affecting whether particular classes of individuals were buried in the community cemetery (O'Shea 1996, 142; Rega 1996, 236-237).

As was already mentioned, no infants younger than about 3 years of age are found buried at the Maros cemeteries. Immediately apparent is the total lack of individuals under one year of age. This is the category where the risk of death is typically high and one can expect to see a large number of deaths, perhaps 15-30 percent of the cemetery in total. Preservational factors, at least when it comes to the Mokrin cemetery, do not account for the absence of skeletal remains especially given the robust numbers in the next age category. This age group is also relatively easy to age accurately and thus unlikely to have been missassigned by anthropologists.

It is determined that at Mokrin, the relative proportion of age classes after one year of age is realistic and the slope of the survivorship curves for both males and females is consistent with the biological expectations for naturally-occurring non-catastrophic deaths. The age classes buried in the cemetery after one year of age are therefore experiencing similar mortality rates. Rega's (1996, 236-238) suggestion is that the statistically significant excess of female children between the ages one and six may be due to the fact that there is a greater number of females actually alive in this age group and therefore the pool of those dying is larger. Assuming an approximately equal number of male and females are born, mortality may be significantly greater for boys during the first year of life. It has been suggested that male infant mortality is naturally slightly greater in human populations. However, there is no a priori biological justification for this phenomenon, and modern demographic evidence in this regard is complex.

Further, Rega is searching for the probable reason for a discrepancy of this magnitude in cultural manifestations. The increased male mortality may be caused by the intentional killing or neglect of male neonates. The neonatal period is the time when something like this is more likely to happen, as infanticide and neglect are less likely to be employed as a population manipulator once older ages are attained.

O'Shea (1996, 142-143) has a different opinion. He believes that the disparity in Infant I numbers is not due to different mortality rate among male and female infants or targeted infanticide but rather due to different representation within the community cemetery. The figures also suggest that there was a culturally determined minimum age at which individuals were accorded a cemetery burial and that this boundary was different for female and male infants.

Notable is that excavations at the Maros settlements have provided evidence that at least some of the missing infants were buried in or near villages. Such burial is found in an early Maros settlement in Kiszombor, Hungary. This is an intact burial of a perinatal infant accompanied with a two-handled amphora discovered in the house floor (Picture 11). The infant was placed in a flexed posture and oriented in southerly direction facing west. The amphora has been placed on top of the skeleton. Another burial from the same site is that of a young child (roughly 1-3 years of age) that was discovered in the secondary position in the fill of the enclosure ditch. The grave itself was located in the midst of the main settlement area and appears to have been sited within a disused storage pit. No other graves were found in the vicinity (O'Shea 1996, 143; Rega 1996, 236).

Second marked surplus of deaths observed at the Maros cemeteries is between the ages 30 and 40. This is explained by Rega (1996, 236) as systematic underaging of adults rather than increased risk of dying in this interval, although culturally-based systemic overrepresentation of this group in the cemetery cannot be excluded as a possibility.

O'Shea (1996, 147) sees this difference in number of adult males and females as a deficiency of males. He interprets this deficiency as result of young adult males dying away from the immediate locality and their bodies not being recovered for burial. The clear evidence of regional and long-distance contacts maintained by the Maros people, and the evidence for warfare (such as trepanation, defensive works and human patella pendants), make such an explanation possible in O'Shea's opinion.

An interesting fact is that the Ostoji evo cemetery does not follow the pattern observed at other Maros cemeteries when it comes to the issues described above. Both Rega and O'Shea did not take Ostoji evo into consideration in their interpretations. The first difference is in the number of children graves. The total number of subadult burials in Ostoji evo is 17, which presents 22% from the total number of Maros burials in the cemetery. Another notable difference observed in the Ostoji evo sample is that the ratio of adult men and women is in contrast with the majority of other Maros cemeteries with the number of male burials being somewhat bigger than females (27 males to 24 females). The same applies to the Juvenile age group (4 males to 2 females) (Table 9; Figure 5) (2008, 61).

## 3.2 Normative funerary treatment

In the Maros funerary program, scholars are drawing a line between the normative and the alternative funerary treatment. Normative funerary treatment includes individual inhumation in a flexed burial posture and orientation of the body along a north-south axis facing eastward. The different orientation of males and females is also considered normative: males with their heads to the north and females with their heads to the south. Alternative funerary treatment includes all that is not fitting in the normative or represents its opposite.

The normative Maros funerary treatment is most clearly evident at Mokrin. The Mokrin sample consists in total of 298 graves that contain human bones.

Of 265 instances in which body orientation could be determined, only 1 case (0,4%) deviated from the general north or south orientation. From 258 cases for which the facing could be determined, only 7 (3%) faced in a non-eastward direction.

In all Maros cemeteries, except from Ószentiván, the alignment of graves along the northsouth axis represents the most frequent kind of alignment. The actual proportional breakdown varies from 100% of the graves at Deszk F, Pitvaros and Óbéba to 75% at Deszk A, Ostoji evo and Sz reg. Ószentiván has only 39% of the graves that fall within this model of the Maros alignment. At Ószentiván, the majority of individuals are oriented eastward. Not a single grave excavated at the Ószentiván is oriented northward or even northerly (Table 11). In Ostoji evo, almost an equal number of women are buried oriented to the south and the southeast. This situation is only comparable with the Óbéba cemetery (2008, 63).

Similar breakdown is observed in relation to facing of the body. Facing the body in an easterly direction is most common at Mokrin, Deszk F, Pitvaros, Ostoji evo and Óbéba. Sz reg and Deszk A exhibit the normative facing in an intermediate proportion (in the range of 65% as opposed to 80-100%), while Ószentiván falls outside of the range with only 33% of its bodies facing easterly (Table 12).

In regards to the relationship between orientation and sex of the deceased, Rega's results of the analysis at the Mokrin cemetery show that of the 146 adults where biological sex assignment was possible, 137 (94%) had a sex assigned which was in accordance with the grave orientation (Rega 1996, 231).

Similar results are shown for Mokrin. Of the 73 cases determined osteologically to represent males, 67 (92%) were oriented with their heads northward, while of the 105 osteologically determined females, 102 (97%) were oriented with their heads southward (Table 13).

Relationship between orientation and sex of the deceased is available also for Ostoji evo. Results show that of 72 instances for which orientation is determined, information about sex is available for 55 (76%). Of 31 males, 27 (87%) were oriented in the northerly direction, and of a total of 24 females (100%) all were oriented in the southerly direction (Table 14) (2008, 63).

When observed with regards to sex, the side on which the body was placed in the grave was a similarly consistent (Table 15 and 16). Mokrin, Sz reg, Deszk A, Pitvaros, Ostoji evo and Óbéba all follow the same pattern. At Deszk F, an alternative pattern is observed in which females are correctly positioned, but in which males do not exhibit a consistent orientation or side of placement. While the whole package of orientation, facing and aspect is followed strictly at Mokrin, Pitvaros and Óbéba, and slightly less strictly at Sz reg, normative placement at both Deszk cemeteries seems more limited to an easterly facing of the bodies. At both Deszk sites and also at Ószentiván, only female burials conform to the full Maros conventions.

Ószentiván is the most extreme case of deviation from the normative Maros program. While Ószentiván shares neither the model orientation nor the easterly facing, there is at least the suggestion that the side on which the body was placed was linked to the sex/gender: females were on their right side, males on the left side.

Children received the same funerary treatment as adults in the Maros cemeteries, suggesting that they may be symbolically gendered in a manner similar to that of the adults (Rega 1996, 232). Checking the correspondence between biological sex and the socially-assigned gender is very difficult for the skeletons of children due to the immature state of the bone features used to identify sex. The only fully adult structures in children are the permanent teeth which was used by Rega (1996, 232-233) to assess the sex of children from the Mokrin cemetery. She succeeded to estimate the sex of the 17 children, and results have shown that they are in accord with grave orientation in 71% or 12 cases. This result is not conclusive, but it is the best available evidence to suggest that the sex of the children also corresponds to the grave orientation.

Indirect evidence comes from one of the rare multiple burials in grave 122 (Picture 10) also at the Mokrin cemetery. In this grave, a child is buried with the orientation opposing that of the accompanying adults. This suggest that the body orientation of children was also deliberate and culturally significant, even when somewhat inconvenient.

## 3.3 Alternative funerary treatment

Commonly, all that does not fall under the normative funerary treatment is referred to as alternative in archaeological literature on the Maros group. Therefore alternative grave alignment and body placement, alternative body facing and alternative posture are recognized. Any other body treatment different from inhumation is considered to be alternative: cremation, urn burial, symbolic burial and hearth burial. The post-mortem mutilation of hands and feet is also one of the alternatives and settlement burial represents the alternative to the burial in the cemetery. Specific case represent individuals whose biological sex is not in line with the normative body orientation and placement: males buried placed on the right side of the body with the head toward south and females placed on the left side with the head toward north.

#### 3.3.1 Alternative grave alignment and body placement

There are two types of inconsistencies in orientation and placement: those that exhibit an internal consistency in relation to normative orientation and placement, but their biological sex does not match (termed type A) and those in which orientation and placement are themselves inconsistent (termed type B). Tables 17 and 18 present a summary of the type A and type B inconsistencies in the Maros cemeteries excluding the west-east axis of alignment which is considered to be opposing orientation and will be treated separately. Alternative body orientations presented in tables 17 and 18 are so called intermediate orientations. There is no information from Ószentiván on the type A inconsistencies and from Óbéba on both types.

Table 17 presents a summary of the type A inconsistencies in the Maros cemeteries. These instances exhibit a skewing toward older individuals whose sex is more probable to be incorrectly determined, although in several instances both traditional and morphometric techniques of skeletal sexing are in agreement with the biologicals sex of the individual.

A more complex picture emerges when type B inconsistencies are considered (Table 18). Among the north-south aligned graves, type B inconsistencies result in a non-normative west facing. In general, it appears that in order to achieve a west burial facing, the normal gender-specific body placement was reversed, while the gender-specific orientation of the body was preserved. This finding suggests that in the normative Maros funerary program, the principal marker for gender was body orientation, not the body placement. It is also suggesting that whatever the particular social status marked by westerly facing, it did not supersede the marking of the normative gender.

The potential uniqueness of the west-facing burials is highlighted at Mokrin by their spatial distribution. All seven graves cluster in the eastern part of the cemetery. O'Shea (1996, 156-157) is suggesting that their marked departure from normal facing, reversed side of body placement relative to gender and their spatial clustering all argue for these graves to be a distinct and important category of mortuary differentiations.

While this is a dominant theme across the Maros cemeteries, it is not without a few exceptions. At Deszk A, all the inconsistent cases are oriented toward the south. In two instances, one at Deszk F and one at Sz reg, biological sex of the skeleton does not match the body orientation. O'Shea (1996, 162-166) is suggesting that the Deszk A occurrence and the proportional skewing between north- and south-oriented examples at other sites, may be indicative of how the social status (or statuses) were differently distributed relative to gender across the Maros communities. This pattern of maintaining fidelity between the body orientation and gender is reinforced when intermediate body orientations are considered.

Marked deviation representing the polar opposite of the normative funerary treatment is orientation along west-east axis as opposed to orientation along north-south axis and west as opposed to east body facing. This orientation appears not to be in association to age or sex/gender (Table 19 and 20). This group includes both males and females, subadults and adults, predominately placed on the left side facing south.

The results are showing that the orientation along the west-east axis represents a second, minority but substantial, pattern of grave alignment and body orientation that occurs in half of the Maros cemeteries considered. The most notable are cases in Ószentiván, Sz reg and Deszk A.

The question that imposes itself is whether each orientation carried a unique meaning or whether there is a paired and equivalent northerly and southerly orientation, presumably differentiated by the gender associations of the orientation.

O'Shea (1996, 168) concludes that in all cases, placement variables distinguish potentially six alternative treatment categories recognized at the Maros cemeteries and underlines that it is interesting that the southwesterly orientation is not recorded. On the basis of findings from Ostoji evo, O'Shea's conclusion can be complemented with a southwesterly orientation recorded in the cases of two female graves, increasing the number of alternative treatment categories to seven (Table 21) ( 2008, 65-57).

On the basis of his analysis, O'Shea (1996, 164) suggests that the misalignment in orientation is rather intentional, marking off distinct and contrasting subset from a normative burial population. Axis of grave alignment distinguished at least three distinct groups of

individuals: (1) those in graves oriented toward the west, (2) those in graves aligned along a northwest-southeast axis and (3) those in graves aligned along a northeast-southwest axis. Further, O'Shea (1996, 168) considers it (probably) justifiable to see the intermediate orientations as marking a less striking or less socially different meaning (or set of meanings) carried by the oppositional orientations.

#### 3.3.2 Alternative grave alignment and body placement relative to gender

Burials of individuals whose biological sex and social gender are not in mutual accordance with each other from anthropological and archaeological point of view are termed gender ambiguous (also gender reversals; alternative genders) (Mati 2010, 170). Gender ambiguous burials in the Maros society would then be a biological male buried with the head to the south and a biological female buried with the head to the north.

At the Mokrin cemetery, bio-anthropological sexing confirms nine gender ambiguous burials, while seventeen cases are recorded having inverse orientation for the biological sex in Sz reg, seven in Deszk F, one each in Deszk A and Pitvaros (O'Shea 1996, 157). Deviation from the burial normative exclusively related to the orientation of the body is recorded in 27 graves in Ostoji evo. Common for all sites is that a larger number of men than women are buried oriented in the opposite way to the norm for their sex.

Por i (2010) conducted an analysis of the individuals having the inverse orientation in relation to their biological sex with the aim to determine if these individuals deviate from the normative funerary treatment related to the diversity, quantity and structure of the grave goods (Table 22). The bio-anthropological sexing used in this analysis relies on the data provided by Giri (1971) and the analysis conducted by Stefanovi (2006). The choice of graves for the analysis differs from the O'Shea analysis in three graves: 147, 210 and 299 which have not been used. Por i used graves 94 and 95 in addition to six common graves.

The results of this analysis have shown that the presence or absence of grave goods is not related to an inverse orientation of the individual. The same result is received for the relationship between the orientation and the number and diversity of the grave goods. However, the types of grave goods found in the male graves could be interpreted as *female* grave goods: ceramics, metal needles and other ornaments. No tools, weapons or head ornaments are recorded in these graves (2010, 168-173).

Results have further shown that there is no statistically significant relationship between sex and inverse orientation when it comes to females. However, there is a statistically significant tendency that the oldest men from the Mokrin cemetery could be inversely oriented. Furthermore, the spatial distribution of these graves is showing an interesting result. Although the sample is small, it is clearly pointing to the clustering of male graves in the south portion of the cemetery and female graves in the northern part (2010, 175).

Among several gender ambiguous burials recognized at the Mokrin cemetery, grave 10 stands out by the richness of the grave goods. It is confirmed that the grave belongs to an older osteologically male individual, who was oriented south-north and buried with ornaments usually associated with adult osteological females: a pair of "Cypriote" knotheaded pins, a neck ring, four copper bracelets and two gold spiral hair rings. Given the reversed orientation (relative to the normative) and specific grave goods, O'Shea (1996) labelled this individual as hyperfemale. This burial was quoted as one of the richest on the Mokrin cemetery, and this was one of the reasons why the individual in this grave was interpreted as an individual of some kind of special status. Other reason was the reversed orientation of this individual (Mati 2010, 171).

Similar case is recorded in Ostoji evo. A total of two graves (grave 127 and grave 250) that entirely deviate from the normative funerary treatment is observed. One of them, grave 250, has an extremely rich grave inventory ( 2008, 65).

In regards to this topic, it is worth mentioning that Rega's bio-anthropological analysis indicates that the results of these inversely oriented individuals fall exactly into the expected range of the sex estimation error. She also noted that a future DNA analysis of sex indicator loci for sex/gender discrepant individuals could help better at understanding the issue (Rega 1996, 232, 242).

## **3.3.3** Alternative posture

Alternative posture observed in the Maros cemeteries can be divided into three categories: (1) those with a fully extended burial posture, (2) those with the posture commonly termed rhomboidal in which the body is placed on its back with the legs flexed and spread apart and (3) the postures in which the body is still roughly flexed but rotated such that it lies on either its back or its front.

The rhomboidal posture occurs in relatively low frequencies and it is known from four Maros cemeteries (Mokrin, Pitvaros, Sz reg and Ostoji evo) (2008, 69; O'Shea 1996, 169-170). It may, however, mark at least two separate distinctions: (1) and expedient treatment for a subadult of either sex and (2) an intentional indication of a relatively rare special status distinction accorded to a small number of adult women.

Among the prone burials, both male and female adults are found. It appears that whatever the specific meaning of the posture, it did not supersede the marking of an individual's gender as individuals were commonly positioned in an alignment and orientation consistent with their biological sex.

The interpretation of the alternative burial postures is made difficult by their relatively small occurrence. It could be argued that the alternative postures among infants and children represented simple expedients in mortuary treatment as it could be that the smaller bodies lessened the need for flexion in order to reduce the size of the grave needed. In case of multiple burials, they may simply be positioned to fit with the adult's interments in the grave. For the alternative postures among adults, there are no obvious patterns in terms of either the sex of the individual or the location of such graves within the cemeteries (O'Shea 1996, 169-170).

#### **3.3.4** Other alternative treatments

Beyond the issues of grave alignment, body orientation and posture, a series of alternative treatments is documented for the Maros cemeteries, such as a symbolic burial, cremation, hearth burial, urn burial and postmortem mutilation of hands and feet. As befits their large sizes, Mokrin and Sz reg exhibit the greatest diversity of alternative treatments, but neither Mokrin nor Sz reg exhibit the full array of treatments represented among the Maros cemeteries (Table 23). Many of these alternative treatments have chronological trajectories that extend well back into the local Copper Age and forward to the Late Bronze Age (O'Shea 1996, 169). In this thesis, only multiple burials are mentioned in the text below relative to the age and sex.

Multiple burial in a single grave is documented in three of the Maros cemeteries. Most typically, this treatment appears in the form of a single adult with a single subadult. The majority of adults and subadults are females. In several cases the adult person is quite old and could represent a grandparent as commonly interpreted. Grave assemblages do not show any specificities. A possible explanation could be the concurrent death of a related adult and subadult who does not have to be necessarily a primary kin, such as mother and child.

Interesting case is recorded in the grave 122 in Mokrin where an adult male, a female and a child were buried together (Picture 10). The adult male was placed in the female orientation.

The violation of the norm is minor in the case of subadults buried with an adult, according to O'Shea (1996, 172). However, combining adults represents a significant departure, so it seems most likely that these instances do not represent a simple expediency, but rather mark a very specific social category, one in which the particular identities of the individuals are

overshadowed by some factor that lumps their identities together. The most likely factor would be a particular circumstance of death, such as an accident, warfare or something else that these individuals have collectively experienced.

#### 3.3.5 Grouping of various alternative treatments

Grouping of various alternative treatments is known from five Maros cemeteries. No cases of multiple alternative treatments are known from Deszk A, Ószentiván and Óbéba. The majority of cases are recorded at the Mokrin cemetery. The results do not exhibit repetitive clustering of alternative treatments which would be expected if combinations of treatments were being used to mark specific social statuses.

While the co-occurrence of specific sets of multiple alternative treatments is quite low, a higher level of co-occurrence for alternative treatments generally is noted. The Mokrin treatments can be split into those that commonly co-occur with other treatments and those that do not. Even in the case of high redundancy, there is no consistency in the specific alternatives that co-occur. Overall it appears most likely that each of the recognized alternative treatments was used to signify a distinct social or mortuary status. Combinations of these treatments then could represent individuals marked for multiple statuses (O'Shea 1996, 185-186).

# 3.4 Other relevant analysis results

The Mokrin cemetery was the target for different bio-anthropological analysis several times due to the large number of excavated graves and well preserved skeletal material backed up with solid archeological documentation. The most recent analysis were conducted by Rega (1996), Stefanovi (2006) and Por i and Stefanovi (2009, 2013).

Rega (1996, 239) performed trace element and stable isotope analysis on bone samples from adult individuals from Mokrin. Children were not assessed biochemically. The results of analysis have shown that similar proportions of meat and plant food were consumed by the men and women of Mokrin. However, several statistically significant differences in meat/plant consumption that are found among individuals may reflect intriguing differences in food consumption pattern between family and/or residence groups. But where dietary differences occur at Mokrin, they are not apparently gendered.

Another set of analyses were done by Stefanovi (2006) and Por i and Stefanovi (2009, 2013). A detailed analysis of musculoskeletal stress markers was performed on 118 adults from Mokrin in 2006 and on reduced sample of 56 adults in 2013. The method was employed to investigate the differences in activity patterns between men and women. The results have

shown that, in average, men were engaged in physically more demanding and harder work and point out to clear gender division of labor. These differences are seen on the muscles of lower limbs ( 2010, 169; Stefanovi -Por i 2013, 94-97).

Two of eight individuals that have inverse orientation for the biological sex, analyzed by Por i (2010, 173), were included in the sample for musculoskeletal stress markers analysis. These are male individual from grave 281 and female individual from grave 88. Results of the analysis have shown that individual from grave 281 (older male) is closer to the average calculated for female population. The same result has been obtained for the individual from the grave 88.

Por i and Stefanovi (2009) have also performed a comparative analysis of musculoskeletal markers of activity and social status as induced on the basis of grave contents. The objective was to determine whether quantitative and qualitative differences in activity are related to social status. The results have shown no correlation between social status and overall labor intensity. However, there are clues that social status and a single facet of activity are related. Positive correlation between vertical status and the intensity of use of upper arm and shoulder muscles was found among male individuals, while negative correlation between the aforementioned variables was found among the females. The general conclusion based on the results of this study is that there is no simple correlation between the overall labor intensity and social status. The results have also shown that females have more grave goods per individual burial than males (Por i -Stefanovi 2009, 259, 267).

Further, the analysis of musculoskeletal stress is separating 3 female and 10 male individuals in the group with strongly accentuated muscle attachments. Body weight was calculated for one of the females (grave 196) to be 71.64 kg, and there is a total of three females at the Mokrin cemetery that are in the same category. These females are the most corpulent ones and they all have leg muscle attachments significantly stronger than arms, which is unusual for Mokrin population. This can lead to a conclusion that these women were involved in type of activities that were typically male. Young age of woman from grave 196 is telling us that she was exposed to significant physical effort from the very early age (Stefanovi - Dimitrijevi 2007, 419).

The case of individual buried in the grave 196 is specific in few more aspects. She has traces of 3 injuries of different nature on her skull, among which the one that caused her death was probably the injury located on the frontal bone above the left orbit. It cannot be determined whether the injuries are the consequences of interpersonal violence, conflict with enemies of the village in which the woman lived, or if the injury and possible murder was a social punishment. Nevertheless it is evident that this individual, after suffering a violent death and possible postmortem mutilation of the head, was given proper burial treatment at the Mokrin

cemetery, since she was buried in the normative position and orientation for females, in accordance with the Maros culture burial practice.

Further, a pig's head was found placed on the femora of the skeleton from the grave 196. This was the large animal, also with the skull damaged in its frontal part, most probably by the blow that killed it. The blow was oriented towards the left frontal, above the orbit, as the one of the woman. It could be the case that a valuable animal was sacrificed for the woman's burial and a rare, perhaps symbolically important grave offering, a sow's head, was deposited in the grave (Stefanovi -Dimitrijevi 2007, 419-426).

Notable are also results of the analysis of characteristic of the Mokrin population done by Farkas (1971). He concluded that males mostly had dolichocranic skull and were mostly tall and middle height. Average height is 168cm. Women were also tall and middle height, average height is 159cm, however they mostly had mesocranic skull. Sexual dimorphism was not great in absolute values and it was harmonious. Further, variation of individual characteristics is great and it is showing heterogeneity of the Mokrin population (Farkas-Liptak 1971, 247-250).

# 3.5 Grave size and depth

Grave size and depth is the aspect of funerary treatment that may be used to express differential levels of effort expended in the funerary treatment and may therefore be characteristic of vertical, rather than horizontal distinctions (O'Shea 1996, 180). However some conclusions could be drawn on the basis of the analysis that are relative to age and sex.

When grave dimensions at Mokrin were evaluated among adults, no significant difference was observed in the depth of graves, but male graves were found to be significantly longer than graves of females. The graves of children were shallower and shorter that those of adults, however these results could be expected if the principal factor governing grave dimension was the size of the deceased. This may be interpreted as depth being more or less a standard for adults but with the grave length varying by individual size. Similar pattern is observed at the other Maros cemeteries (Table 24) (O'Shea 1996, 180-181).

In some cases at Mokrin and Ostoji evo, graves of subadults were found substantially deeper than the average for adult graves. Also in some instances, the size of the grave was much bigger than the size of the deceased.

Exceptional case is observed in Ostoji evo where leather cover for the body or the bottom of the grave was recorded in 6 graves: 4 male, 1 female and 1 child ( 2008, 67).

# 3.6 Grave offerings

## 3.6.1 Ornaments

#### Bone needles

All but one exception, all graves containing bone needles are those of females, and predominantly adult females. The one exception is grave 6 at Óbéba. The gender of this individual was determined on the basis of orientation and side of placement as a male. Other items in this grave are not sex-associated. This individual is therefore either female buried in a male posture and orientation, either female-linked item that is anomalously associated with a male. Bone needles occur with subadults in 8 of the 45 cases (one at Szöreg, one at Ostoji evo and six at Mokrin) (Table 25).

There is no consistent pattern to the quantity of bone needles found in a single grave. At Deszk A, Ószentiván, Pitvaros and Óbéba they occur only as singles. At Deszk F and Mokrin they appear in equal numbers as singles or as pairs. At Szöreg, they are twice as common as singles (O'Shea 1996, 189-190). At Ostoji evo, in four of a total five cases a pair of needles are found ( 2008, 71)

The only possible status significance related to the number of bone needles is found in the age distribution at Mokrin. Of the five subadults with bone needles, four had only a single needle. Among adults, five had singles and eight had pairs. O'Shea (1996, 190) is suggesting that differences observed on needles probably did not represent intentional elaborations of costume, but may be rather indicative of personal style or a shift in garment style that may be linked to the use of copper clothing pins.

The pattern of distribution of bone needles within individual cemeteries exhibits a degree of structure. All instances containing bone needle at Mokrin and Deszk A fall in the southeastern half of the cemetery. At Deszk F and Óbéba, graves with bone needles appear in the southern portion of the cemetery. The one grave at Ószentiván was in the southwestern portion of the burial area. No obvious pattern was visible at Szöreg. No plan exists for Pitvaros cemetery (O'Shea 1996, 190). In Ostoji evo, needles are found in central and north pat of the cemetery (2008, 71).

O'Shea (1996, 190) concludes that the constraint in distribution does suggest a potential function as a significant social marker. The lack of consistency in the precise directional character of the spatial patterns across the Maros cemeteries is also of an interest and would seem to indicate that the spatial distribution was not tied to a universal directional referent,

such as cardinal direction, but rather on the basis of an internal contrast recognized within the specific layout of each cemetery.

## Metal pins

Metal pins and bone needles co-occur in two cases, grave 20 at Mokrin (two metal pins and two bone pins) and grave 112 at Ószentiván. The rare co-occurrence of these two types, both in anatomical position, may suggest that they were not functionally identical, but rather that they fastened different garments, perhaps an item of outwear such as a cape or hood, as opposed to the main garment of dress.

The distribution of metal pins relative to the sex of the deceased is also similar to that of bone needles. Metal pins, regardless of specific type, occur overwhelmingly with adult and females across the Maros cemeteries. Of the 39 Maros graves containing metal pins, only 3 occur with males and only 1 is found with a subadult (grave 22 at Ószentiván). In two of these graves, grave 10 at Mokrin and 62 at Deszk A, buried individuals were biologically males placed and oriented as females (O'Shea 1996, 195). Information about number of male graves with metal pins for Ostoji evo is not available however it is noted that the individual(s) is buried according to the female normative ( 2008, 71).

In terms of the overall frequency of occurrence, when the number of females with metal pins is contrasted with the total number of identified grown-up females in each cemetery, there is again a rough uniformity in the level of occurrence: 9-12% for Mokrin, Szöreg, Deszk A and Deszk F, 15% for Ostoji evo and 17% for Óbéba (Table 26). No data is available for other cemeteries.

O'Shea's (1996, 195) conclusion is that there is a degree of uniformity in the use of metal pins as a clothing ornament across the Maros communities, which also suggests a degree of exclusivity for those individuals who received pins as part of their burial dress. This possibility is not surprising given the exotic character of this metal ornament, and it is also interesting to note that this level of occurrence is nearly identical to that for bone needles.

In Ószentiván, Pitvaros and Óbéba cemeteries, metal pins are found as single examples. In the other cemeteries, metal pins are found either singly or in pairs. At Deszk A and Ostoji evo, singles predominate. Equal number is found at Deszk F while at Szöreg and Mokrin the occurrence of pairs is much common.

O'Shea further suggests that the pins were being utilized as a clothing ornament worn as in life, based on both their location of placement and consistency in their number and arrangement. Whatever their specific meaning was in the social symbolism, the message was

primarily a qualitative one, carried via the simple presence of the pins, and probably not related to the specific number of pins.

It seems likely that the occurrence of singles and pairs of pins may be related to the fashion of clothes fastening, represented by the one- and two-pin occurrences. The popularity of these two modes apparently varied between settlements and may also have had a chronological component.

The distribution of metal pins within Maros cemeteries suggests little in the way of spatial structure. Both graves with metal pins in Ószentiván occur in the western burial cluster. At Szöreg, metal pins appear in all areas of the cemetery, with somewhat greater frequency in the outlying portions of the site. At Mokrin, metal pins are distributed across the central portion of the cemetery, along the southwest-north-east trending axis. This line parallels the distribution of bone needles, but lies generally to the north and west of the occurrence of bone needles (O'Shea 1996, 195). At Ostoji evo, graves with metal needles are found in south and central part of the cemetery ( 2008, 71).

Different styles of pins were clearly visible and must have some level of recognition or significance to the Maros villagers, there is no evidence that points to any systematic use of these styles for specific mortuary symbolism. It may be that as these pins were obtained via long-distance trade, the villagers had little control of the particular style that was available at any given time. If this were the case, it may also explain the absence of mixing the two styles in any given grave (O'Shea 1996, 196-198).

## Neck rings

Copper or bronze neck rings (or torques) are known from only three Maros cemeteries Mokrin, Sz reg and Óbéba. Of the 12 Maros graves with neck torques, 10 are from Mokrin and one each from Sz reg and Óbéba. Instances of neck rings are evenly split between males and females. While there is no distinct gender linkage, they do appear to be mainly associated with adults. Only in two cases was found with subadults, both times at Mokrin.

The frequency of occurrence of neck rings is low (roughly 5% at Mokrin) and no real clustering of graves with a torque is observed. At Mokrin, these graves are scattered along the central axis of the cemetery and generally are not found near the peripheries.

The fact that in all cases a single torque is found with an individual, and in consistent placement on the body, argues that the neck rings were buried as worn in life and that any symbolic information they conveyed was of a qualitative character (O'Shea 1996, 198).

#### Bracelets

The pattern of bracelet occurrence relative to biological sex varies across the Maros cemeteries. They are found with both males and females. At Deszk F, Pitvaros, Ostoji evo and Óbéba, bracelets are more common among men. At Mokrin and Szöreg, bracelets are more common among women (Table 27). In Maros cemeteries, bracelets appear in equal proportions among adult and subadult females and subadult males, and less frequent among adult males.

At Mokrin, three of four adult males that were buried with bracelets were buried in a normative female posture and orientation, including male in grave 10, individual who also has copper pins, another type linked to females. Also, grave 11 at Szöreg belongs to a male buried on the right side but this doesn't have to have strict relationship with a gender (O'Shea 1996, 198-201). At Ostoji evo, in grave 115, bracelet occur with a male, Senile, who is laid down on his right side, head oriented to southeast ( 2008, 72).

In Mokrin, among females, bracelets are found in nearly equal level of occurrence of 16-17% for both adults and subadults. Among males, only 6% of adults have bracelets, compared to 16% for subadults.

There is a suggestion of a relationship between age and the size of the bracelet. In case of subadults, single- and multi-coil varieties are found nearly in even numbers. Adults were twice as likely to have multi-coil bracelets. Of seven adults with singles, three were biological males. Three of seven adults with single-coil bracelet had a pair. All subadults had only a single bracelet of any variant (O'Shea 1996, 198-201). Interesting is finding in Ostoji evo, where the most massive bracelet with six coils was found in a child grave (2008, 72).

Of 62 instances of bracelets in Maros cemeteries, a single- and multi-coil bracelet were found together only in one case (Pitvaros, grave 47). The most common is occurrence of a single bracelet in a grave, less frequent is finding of two bracelets. Only in one case, at Mokrin grave 10, four bracelets were found. Deszk A have no findings of bracelets.

O'Shea's (1996, 201) conclusion is that copper and bronze bracelets were used as quantitative symbols that conveyed meaning through their presence and their quantity.

No perceptible spatial pattern is found in Maros cemeteries when it comes to bracelets. At Mokrin, distribution of bracelets is along southwest-northeast diagonal. At Ószentiván, all three occurrences were found in the western burial cluster. Spatial distribution of bracelets in Ostoji evo is along north-south axis.

An interesting finding from Ostoji evo is a bracelet found on the skull of the individual buried in grave 115 ( 2008, 72).

## Hair rings

A total of 29 occurrences of hair rings were observed in the Maros cemeteries (19 at Mokrin, 1 at Szöreg, 2 at Pitvaros, 3at Ostoji evoand 4 at Óbéba). Hair rings are found associated with both men and women and with both adults and subadults. Szöreg, Pitvaros and Óbéba instances are found only with adults (Table 28).

In Mokrin, hair rings are more common among adult females. Two of three males with hair rings are oriented as females including grave 10. Among subadults almost equal number of male and female graves contain hair ring (four with males and five with females). Overall, the impression from the Mokrin occurrences is, as with metal bracelets, that hair rings were ornaments that typically were not worn by adult males.

At Mokrin, hair rings appear in numbers one to five in a single grave. In other cemeteries, one or two pieces occur in a grave. Spatial distribution pattern can be seen only at Mokrin, were hair rings as skewed toward the southeastern quadrant of cemetery (2008, 73; O'Shea 1996, 201).

## Finger rings

Finger rings were found in a total of seven Maros graves, three at Mokrin (one with male, two with females), two at Szöreg (both with females) and one in each Deszk F (with a male) and Deszk A (with a probable female). These numbers give the levels of occurrence consistently in the range of 2% or less. All seven cases occur with adults (Table 28).

Finger rings are found as a solitary occurrence, except in one case in Mokrin and one case in Deszk A where three rings in each of the graves are found. It is worth noting that, at Mokrin, finger rings were scattered north and south along the site's central axis (O'Shea 1996, 203-204).

#### Head ornaments

Number and rate of head ornament occurrence varied considerably, with more than half of all examples deriving from Mokrin. Excluding Mokrin, Ostoji evo and Óbéba, where head ornament appear in greater numbers, this ornament appears at relatively uniform rate in other Maros cemeteries.

Head ornaments occur with both men and women. In all but three cases, head ornament is found with adults. The exceptional cases are from Mokrin and Ostoji evo. Among adults, the occurrence of head ornament is nearly evenly split between males and females. The largest discrepancy is found at Mokrin where more than twice as many females as males have such ornaments (38 as opposed to 15) (Table 29-30; Figure 7) (O'Shea 1996, 209). In Ostoji evo, situation is different as head ornament is found with 12 males and 8 females (2008, 74).

Distribution of the different varieties of head ornament is not markedly different among males and females. O'Shea (1996, 206) concludes that either males or females could be buried with head ornaments, either their meaning or possibly the rules governing their acquisition were different for males and females.

Only at Mokrin and Ostoji evo, spatial distribution pattern is visible in relation to gender of the deceased. At Mokrin, in graves with male individuals, different types of head ornament are found separated: one of the types is found only in the western portion of the cemetery and other two types are found in the eastern part. No visible pattern can be detected when females are plotted. In Ostoji evo, female graves with head ornaments occur in northern part of the cemetery, and male graves with head ornaments are found in southern part.

These two examples may suggest some significant distinction in either meaning or the route of acquisition of such ornaments for males and females. When richness of male and female head ornaments is compared, no significant difference is observed. In cases of subadults, in all three cases the ornament is considered as rich (2008, 74; O'Shea 1996, 206-211).

#### Sashes

Basic rate of occurrence for sashes is 5%, 11%, 18% and 3%. This ornament exhibit strong association with females. In one case at Szöreg, sash is found with a biological male (mature individual). Body orientation is not available for this individual, however the individual had been placed on the right side suggesting the female gender. Two of a total of three Ostoji evo

graves that have this ornament are males (Adult) buried according to female norm ( 2008, 75; O'Shea 1996, 211).

Sashes mostly appear in graves of adults, yet a small number of subadult individuals were buried with this ornament. In only one case, the deceased was buried wearing the ornament. In all other cases, sash was placed near the hands and lower arms or the feet and knees.

All five findings of doughnut-shaped rings made from human patellae at Mokrin, Deszk F and Szöreg, were found only with adult females. Notable is that this ring was found as an element of a necklace at Szöreg also with an adult female.

At Mokrin, sashes cluster at the periphery, in the extreme southwestern part of the cemetery and in the extreme north. At Szöreg, sashes are concentrated in the central part of the cemetery (O'Shea 1996, 213). Ostoji evo sashes are found in graves in the northern part of the cemetery (2008, 75).

Overall, sashes appear to have had relatively restricted and specialized use. The item was clearly restricted in its use to adult females, although occasional younger females appeared to have had ascribed to them the right to possess, if not to wear the sashes (O'Shea 1996, 213).

## Necklaces

Necklaces represent by far the most common category of body ornament and the most common class of Maros grave accompaniment aside from ceramics. When occurrence of necklaces is considered relative to age and sex, a somewhat complex pattern is observed. At Mokrin, necklaces occur significantly more often with females than with males but do not show a significant difference relative to the age of the individual (Table 31-32; Figure 8). At Szöreg, by contrast, there is no difference relative to the sex, however all but one necklace is found with adult individuals. At Pitvaros and Óbéba, necklaces are more common among females (O'Shea 1996, 213-216). There is no regularity in relation to gender in Ostoji evo (2008, 76).

Overall, it appears that there is a general trend toward the use of necklaces as body ornaments for females and particularly for adult females. There also appears to be a marked association of necklaces with head ornaments and bone pins. Other observed pattern are that nearly half of the female children exhibited necklaces that included pendants, while none of male children had pendants. Also, females in general tend to have necklaces with larger number of elements among both subadults and adults. Spatial distribution pattern is complex. At Mokrin, male graves with necklaces were found principally in the southern half of the cemetery while female graves with necklaces occur equally in all portions of the cemetery. At Szöreg the largest concentration of graves with necklaces is found in the northern part of the cemetery. At Ószentiván, all round-element-only necklaces occur in the western cluster, while tubular/no pendant type necklaces appear in eastern part of the cemetery (O'Shea 1996, 217-218). At Ostoji evo cemetery, spatial distribution of necklaces is along the northeast-southwest axis (2008, 76).

## Worry beads

Worry beads occur in graves of adults (no information on age is available for Ostoji evo). No pattern relative to sex could be established in Mokrin, Ószentiván and Szöreg, however in all three cases from Ostoji evo, worry beads are found in female graves (2008, 77; O'Shea 1996, 218).

#### 3.6.2 Weapons and tools

#### Daggers

Daggers are associated with adult males. One exception is grave 9 at Pitvaros where the dagger is found with normally oriented and positioned adult female.

The incidence of daggers falls in the range of 5-10%. Spatial distribution pattern is observed at Mokrin where all daggers are found in the extreme south of the cemetery. At Szöreg, all three daggers occur in the central part of the cemetery (O'Shea 1996, 223). In Ostoji evo, a single grave with a dagger is found in the south part of the cemetery, as in Mokrin (2008, 78).

#### Axe

Axes are associated with adult males with the exception of one case at Mokrin and one case at Szöreg where a stone axe is found with an adult female. At Mokrin, one of males was Juvenile. At Mokrin, rate for axes among males is in the range of 6-7%. Similar range is observed in Szöreg.

The distribution of axes does not show a consistent pattern across the Maros cemeteries. At Mokrin, interesting is that axes occur in the northern half of the cemetery and seem to exhibit distribution complementary to that of daggers. At Szöreg and Deszk A, axes and daggers share an overlapped spatial distribution and co-occur in two cases in a same grave (O'Shea

1996, 223-226). At Ostoji evo, the dagger and both axes are found in southern part of the cemetery close to each other ( 2008, 78).

## Other tools

When sex and age associations of other tool assemblages are considered, no statistically significant patterns are apparent. It can only be observed that occurrence of all these types of tools are more common among females than among males, and among adults that among subadults (Table 33).

Interesting clustering is observed at Mokrin, where all graves with ceramic-related tools occur in the western half of the cemetery, while the sewing kits occur predominantly in the eastern half (O'Shea 1996, 226, 229).

## 3.6.3 Ceramics

Ceramics represents the most frequently occurring category of mortuary offering in Maros cemeteries. However, this is still relatively large proportion of graves without pottery observed at all Maros cemeteries (Table 34; Figure 9).

The most common ceramic types found in the Maros cemeteries are bowls with one or more handles, one and two-handled beakers and little amphora-shaped vessels (Bankoff 1972, 57; Giric, 202; 2008, 80; O'Shea 1996, 231). At Mokrin, ceramic bawls and beakers, often in pairs, constitute the most common grave goods.

There does not appear to be any consistent pattern in the absence of mortuary ceramics relative either to age or to sex. Aceramic graves appear in equal numbers among males and females. At Mokrin, the largest proportion of aceramic graves is among subadult females (60%) (Table 35). At Óbéba, 60% of subadult and juvenile graves lack pottery.

No consistent pattern of association of particular ceramic types and individual sex is observed at Maros cemeteries. However, among the sites, statistically significant differences in occurrence by sex are observed. At Deszk F and Szöreg (early phase), jags and small bowls are significantly associated with males. At Mokrin, male subadults are found with significantly greater numbers of cups and pitchers than subadult females. At Pitvaros, Deszk A and Ószentiván, females are associated with bowls. At Pitvaros, male graves tend to emphasize liquid containers (O'Shea 1996, 231, 237-238; Rega 1996, 233). No pattern is observed at Ostoji evo (2008, 80). Overall, there is some tendency for females to be associated with bowls and males to be associated with liquid containers.

There is more consistency in the age associations across the Maros cemeteries. Generally, graves of subadults tend to contain small vessels. At Deszk A and F, Ószentiván, Szöreg and Pitvaros, children are found with cups and adults with pitchers and jugs. Children are also less likely to have bowls in their grave assemblages.

At Mokrin, it is observed that subadults tend to either have no vessels or simple assemblages while adults have a greater proportion of the more complex ceramic sets. The juvenile assemblages are interesting in this regard, since they have evenly split between two extremes, with roughly half having no ceramics and the rest having both cups and bowls. O'Shea is suggesting that this perhaps represents a shift in social standing from that of a child to that of an adult.

At Szöreg, the difference is noted in relation to volumes. In the early phase, the average liquid and total volumes of the assemblages of adults were significantly greater than those for subadults. Also in the early phase, total volumes of the assemblages of males were significantly greater than those for females. This difference disappears in the late phase.

At Ószentiván cemetery, more complex assemblage types are found only with females, both subadults and adults (O'Shea 1996, 237-238, 243-247).

In Ostoji evo, situation is simpler than observed in other cemeteries. Three vessels in a single grave are recorded in one case only. Other graves have one or two vessels. Imported vessels are not recorded ( 2008, 80).

The general assessment of volumes relative to age and sex is that adult males and females have comparable ceramic assemblages while those associated with children often are either less elaborate or smaller, in terms of their actual capacity as containers. Taken together, the occurrence and composition of ceramics that are found within Maros graves are influenced principally by the individual's age, by a series of long-term chronological trends in ceramics across the Maros region (and potentially beyond it) and by unique and localized practices that appear to have been operated at the level of the individual settlement (O'Shea 1996, 243-247, 250-252).

## **3.6.4 Food offerings**

No spatial patterns, and no patterns relative to age and sex are observed in association with food offerings ( 2008, 82; O'Shea 1996, 255).

# 3.7 Conclusions

The aim of analysis was to show if we can identify the crucial variables through which sex/gender and age became differentiating principles and how they were used by the Maros villagers, as reflected in their funerary treatment.

The results of analysis have shown that some funerary elements were shared between gender and age groups, and some were mutually exclusive and relative only to one of the groups. Some patterns are identified pointing out to the way individuals may have been classified as belonging within particular gender and age groups.

Further, elements of the mortuary treatment were evaluated relative to gender, and gender indicators were identified. Different approach should be applied for the analysis of age indicators, and it should be the subject of a separate research.

## **3.7.1** Conclusions – funerary treatment

The results of analysis have shown that the same basic set of normative and alternative funerary treatments were in use throughout the Maros sequence. In terms of body orientation and facing, Mokrin, Ostoji evo, Pitvaros and Óbéba show strong similarity to one another, as do Szöreg and Deszk A. Deszk F seems to fall between these two groups while Ószentiván exhibits a totally different pattern.

It is easy to see that body orientation and placement are gender specific. This is a common rule reflected in all Maros cemeteries. Body facing, in its variants, is shared between age and gender groups, and it seems to represent the distinction of a different kind, possibly related to the belief. Some exclusivity of body orientation and placement relative to age can be seen with older males, however it seems to apply only to some representatives of this age group. Another exclusivity, this time in terms of the general treatment, is observed with the youngest, as they were obviously receiving some other kind of burial away from the community cemetery.

O'Shea's (1996, 182-184) opinion is that surprising number of distinctions expressed through the placement and positioning of the dead within the grave suggests that these tasks were undertaken with care and precision. The high level of fidelity that the Maros villagers maintained relative to the basic normative rules of placement is particularly striking. Further, O'Shea sees the Maros communities as relatively self-sufficient and autonomous which participated in a single cultural tradition. It should also be noted that given the relatively low rates of occurrence of many of the alternative treatments, the absence of such treatments in

the smaller sites may be a sampling artifact and not a true reflection of their existence within the cultural repertoire.

## **3.7.2** Conclusions – grave goods

The occurrence of ornaments, the same as occurrence of ceramics, is not universal in the Maros burials. At Mokrin, ornaments are found in about third of the total number of burials. In half of these cases, only one item is present in the grave. By comparison with Mokrin, the other Maros cemeteries have much plainer and less elaborated ornament assemblages. One other obvious difference between Mokrin and other sites is the number of subadults who received ornaments of any kind.

In regards to ceramics, the general assessment is that adult males and females have comparable ceramic assemblages while children often have less elaborate or smaller containers, in terms of capacity. Taken together, the occurrence and composition of ceramics that are found within Maros graves are influenced principally by the individual's age. However, some tendency for females to be associated with bowls and males to be associated with liquid containers can be observed (O'Shea 1996, 243-247, 250-252).

Analysis have further shown that some ornaments were shared between males and females, and some were mutually exclusive and relative only to male or only to female graves. Age markers are more complex to determine.

O'Shea's (1996, 218-220) analysis has shown that copper pins represent a clear marker of both age and gender. Other ornaments show tendency to occur with female adults or with subadults of either sex. This seems to be true for multi-coil bracelets, copper pins, neck rings and hair rings which are not to be found with adult males. These are also the larger and heavier metal ornaments represented in the Maros cemeteries. Further, head ornaments, sashes and bone needles, exhibit shared, inter-site patterns of age and sex associations and of spatial distribution. They also exhibit patterns of abnormal placement with subadults that are suggestive of possible hereditary ascription.

O'Shea's analysis is separating beads, pierced animal teeth, bone pins, multiple coil bracelets, bronze spectacle pendants, copper plaques and discs and arched pins as female ornaments, while daggers and stone axes seem to be reserved for males. Same analysis is placing single coil bracelets, amphorae and cups with subadults.

Rega's (1996, 233-235) analysis has also shown that some grave goods appear to be portioned along the lines of gender. She conducted an analysis of artefactual associations on the Mokrin sample. Gender was defined by grave orientation to allow gendering of children

and to incorporate unexamined adults. The results of this analysis have shown that several artefacts are significantly associated with gender. Associations with females include clay, animal and mixed bead necklaces, copper arched pins, multiple spiral bracelets and bone needles. These results are the same as of O'Shea. From these artefacts, multiple coil bracelets and bone needles are found exclusively with females. Copper daggers are found in exclusive association with adult males. Copper axes are in all but one case found in male graves.

In regards to the metal ornaments, at Mokrin where sufficient numbers for comparison exist, similar proportion of adults and subadults have copper and gold ornaments. Of graves containing the basket-type ornaments, which represent the greatest quantity of gold, subadults outnumber adults. Further, it is observed that copper/bronze and golden ornaments rarely occur together. This is observed only in one case at Mokrin in the grave an infant female (O'Shea 1996, 204).

Generally, the results have also shown that females have more grave goods per individual burial than males. This is not an unusual situation for Early Bronze Age cemeteries.

#### 3.7.3 Conclusions – Ostoji evo

Ostoji evo deserves a brief separate mention as it was not taken into consideration in analysis and interpretations of the Maros society by majority of scholars.

Funerary treatment observed at Ostoji evo cemetery is mostly comparable to Mokrin. Among several distinctions, not only in relation to Mokrin but also other Maros cemeteries, notable is different demographic composition of the cemetery. The number of children graves is higher and the ratio of adult men and women is in contrast with majority of other Maros cemeteries (number of male burials is somewhat higher than females). This may be the most distinct difference of Ostoji evo in relation to other Maros cemeteries.

Another specificity is found in distribution of head ornaments. After Mokrin, the second highest number of head ornaments is found in Ostoji evo. In comparison to Mokrin, where more than twice as many females as males have such ornaments, in Ostoji evo situation is different as head ornaments are found with significantly more males than females.

Finding of a blue clay mold or a model of an axe represents the only example of this kind in the Maros cemeteries. Further, finding of leather possibly used to wrap the body of the deceased or to cover the bottom of the grave represents also an unique finding.

All mentioned distinctions are pointing out to local differences and are proving variety of the Maros society. Also they are reminding us on the importance of new findings for interpretation of past societies. As shown in this analysis, in many places where Mokrin was considered to be the only one to have a certain distinction Ostoji evo has now joined.

# 3.8 Gender indicators

In total 30 analyzed elements of the Maros funerary treatment are separated to be evaluated against their relevance to gender. List of the elements is presented in the Table 37. Relevance scale is set from -2 to 2, with -2 to be non-relevant and 2 to be relevant. Zero value is marking cases in which relevance to gender couldn't be determined, and -1 and 1 are marking cases that couldn't be disregarded as non-relevant (-1) and the ones that apparently show some pattern but cannot be considered as generally relevant (1).

The results are grouping body orientation, bone needle, metal pin, sash, dagger and axe as relevant to gender. These elements therefore can be considered to be gender indicators. Finding of one of these indicators, or more of them together, could suggest if the buried individual's gender is probably to be female or male.

Burial treatment (inhumation, multiple burial, etc.), as well as postmortem mutilation of hands and feet and grouping of various alternative treatments appears to be non-relevant. Also non-relevant are the grave depth, ceramics, food offerings, presence or absence of grave goods and the number and diversity of grave goods. Meat/plant consumption is also not in relation to gender. Relevance to gender couldn't be determined for body facing, finger rings, necklaces, "worry beads" and activity patterns (musculoskeletal stress markers).

Grave depth and occurrence of tools cannot be fully disregarded. At the Mokrin cemetery, some small difference between depth of the grave and gender can be observed. Male graves seem to be somewhat deeper however, the size of the male grave may correspond to the generally bigger size of male individuals. In the case of tools, their appearance is more frequent in female graves but the sample is too small for any conclusion.

Interesting is the situation with head ornaments. They appear with both males and females however, their appearance is showing inter-site patterns of age and sex associations that could be the subject of a separate investigation.

Body placement is found to be in relation to gender but it is not an independent marker. It is also superseded by the body orientation. In cases of the number and class of grave goods, pattern exists but it cannot represent the gender indicator on its own. The same applies to the following group of elements: multi-coil bracelets, hair rings and neck rings. In the case of grave furnishing, traces of leather are found in predominantly male graves but the sample originates from one cemetery only (Ostoji evo) and it is too small for any definite conclusion.

Certain elements seem to be linking gender and age distinctions. Daggers and sashes appear to be connected with adults. At Mokrin, west facing was observed exclusively in adult individuals. In cases of multi-coil bracelets, hair rings and neck rings, situation is interesting as they were not found with male adults.

Generally, some conclusion can be made that gender distinctions were reflected in orientation/position of the body and some ornaments that are pointing out to gender/age differences in the way the dress was looking and/or affecting how pieces of fabric were worn on the body.

Age related distinction can be seen in children having more grave goods than adults, and often very rich. Also important age distinction is recognized in absence of infants from 1 to 3 years of age from community cemeteries. It was suggested that this age category could be buried in or near the settlements and that this burial treatment could be more common among male infants, as this age/gender category is underrepresented in the Maros cemeteries.

One more specific combination of gender and age distinctions is found in gender ambiguous burials of old men buried with rich grave accompaniments. This applies only to some cases of burials of old men in the Maros cemeteries. Other old men were buried according to the normative and commonly their graves consist of none or small number of grave goods.

A conclusion can be drawn that gender appears as a primary axis of differentiation between the Maros people, while age may have been of secondary importance. It is also possible that age and gender could interconnect in ways that created individuals of particular importance. For the Maros community, these individuals of importance could be seen among some of the old men and in all cases of very young children.

# 4 Discussion

Including gender and age in archaeological interpretation is not straightforward. Dealing with gender and age requires awareness of other identities for other types of identification, such as status and religion that may significantly affect the rules by which these distinctions are understood and embodied in daily practice (Díaz-Andreu 2005, 41-42). This embodiment is seen in the most fundamental concerns of archaeology such as household organization, division of labor and production, above mentioned status and ideology (Hill 1998, 100). All in all, studying gender and gender relations cannot be separated from studying social roles, statuses and society differentiation and structure.

O'Shea (1996, 260-261) has separated five categories of artifact that served to mark qualitative distinctions in the funerary program that were broadly shared across the Maros cemeteries (termed major social markers): weapons (daggers and axes) and head ornaments for males, and head ornaments, sashes and bone needles for females. These items shared a series of characteristics, in that they appear to have been hereditarily transmitted (with possible exception of head ornaments among females); to have been limited to one instance, or a small number of instances, in each generation of dead represented at Mokrin; to have exhibited some elements of spatial constraint or segregation in their distributions, both within graves and within the cemetery; and to occur broadly across the Maros cemeteries. These attributes are consistent with the representation of major social or political positions within the Maros villages.

Compared to the O'Shea's major social markers, gender indicators coincide in cases of bone needles, sashes, daggers and axes. These ornaments may represent the crucial variables through which gender became differentiating principle and individuals were classified as belonging within particular gender group. In light of these characteristics, it seems likely that these items were marking qualitatively specific social statuses that were recognized and shared across the Maros villages.

Metal pin is not considered to be a social marker by O'Shea, and head ornaments do not appear to be an indicator of gender distinctions. Relationship between head ornament and gender is not determined and it represents the future challenge. Interesting is the thought that in the society that appears to have such gendered structure, what appears to be the ornament of such distinctive type was worn by all sexes. On the other hand, it thus appears that the metal pin was a clear component of a female dress.

Analysis of spatial distribution in the Mokrin cemetery has shown clustering of ornaments along north-south axis. Axes (males), richest head ornaments (males and females) and sashes (females) all cluster in the northern part of the cemetery. In the southern portion of the

cemetery, clustering of daggers (males), and both less elaborate sashes (females) and head ornaments (males and females) is observed (O'Shea 1996, 261-264). Interesting is that inverse oriented female individuals are located in the north part of the cemetery while inverse oriented male individuals are located in the south part of the Mokrin cemetery (2010, 177).

Another spatial pattern in Mokrin is showing clustering along west-east axis for different types of head ornaments (only males). O'Shea (1996, 261-264) has suggested that such distribution may point out to some bipartite, horizontal division among the males receiving these markers.

Ornaments marking gender and status rarely come together in a single grave. Appearance of daggers and axes is mutually exclusive in male graves, the same as occurrence of sashes and bone needles and bone needles and metal pins in female graves. In rare cases a single person is found holding multiple statuses like in the case of a child burial in Mokrin, where a bone needle and sash where found together.

It is also interesting to note the relatively high proportion of other metal ornaments that are found with individuals buried with bone needles. Another interesting fact is that female individuals buried with head ornaments, unlike male individuals, did frequently have other exotic items of personal adornment.

A certain parallel can be drawn with results of the study done by Sørensen (2004, 330-334) for cemetery at Gemeinlebarn F in Austria<sup>5</sup>. The data from this cemetery show similar patterns seen also on other Early Bronze Age cemeteries. Burial treatment relative to the orientation at Gemeinlebarn F is the same as in the Maros cemeteries: male bodies were placed on the left side with the head toward north and female bodies were placed on the right side with the head toward south. This categorization was irrespective of age and social distinctions according to Sørensen (2004, 330-332). She conducted an analysis of bronze objects found in graves and her conclusions were that some objects were shared between males and females, and some were mutually exclusive and relative only to male or only to female graves. Male markers are: hair rings, belt hooks, daggers, axes while female markers are: arm and leg rings, tutuli. Even though markers match only in cases of daggers and axes for men, this study can certainly serve as an example of similar way gender was expressed through gender-specific body position and ornaments. One more parallel can be seen in graves of old men: some are richly equipped, some are poor.

Sørensen's (2004, 337) conclusions are that the Early Bronze Age saw an emerging emphasis

<sup>&</sup>lt;sup>5</sup>Gemeinlebarn F is dated as late Early Bronze Age (Gemeinlebarn III/ A2; 1880 – 1680 cal. BC) (Wohlschlager 2011, 13).

upon the individual. Individual is being responded to and materialized as belonging to a category of people, such as particular gender/age group. Metal objects are strongly gender-based in their association and use. The manipulation of the body (placement and orientation) is used as a prime means of categorizing people, with difference also expressed in the dress.

In the Maros culture, not only metal objects served this purpose, as we can see in cases of bone needles, sashes and stone axes. No matter of the material, the fact is that these objects were somehow used to mark different categories of people.

The geographical distance between Maros cemeteries and Gemeinlebarn F can be recognized as part of wider question about the nature of these conceptions of gender and age and how they operated.

# 4.1 Linking gender and age at Mokrin

Analyzing interconnection of age and gender focuses upon the historical contingency of how their dimensions are understood and how their connections are explored within particular cultural contexts. The potentials for difference and similarity of both age and gender may be seen as central means through which communities construct themselves, as well as providing points of mediation between the individual and social. Understood this way, practices and negotiation of age and gender are part of the cultural make-up, part of communities distinct cultural practices (Sørensen 2004, 331).

Overall conclusion of the analysis is that the Mokrin community has had a gendered structure. This speaks about the society which cultural practices involved gender distinctions in different spheres of life, as it was reflected in many aspects of the funerary treatment, showing a complex system of symbols in use. Attribute *highly* was used by some scholars to describe gendered structure of the Maros society however, it is not clear if this refers to complexity or pervasiveness or both, or something else. How to prove if the structure is more, or less, gendered in comparison to, for example, any of Ún tice culture societies where body position and orientation were not usually depending on sex but the grave goods may have been. Other question is how to conceptualize differences both within and between gender and age groupings, such as proposal of gender spectrum, a third gender, childhood, etc. Having this in mind, would highly gendered structure be the one which is bipolar or the one which allows all these different categories and varieties. And which of two seems to be the Maros society structure.

Further, interpretation of gender and age interconnected does not represent an easy task. Much needs to be understood and not so many remains of such complex manifestation have survived to date. An interesting interpretation is provided by Rega (1996, 233-234) on the basis of findings of bone needles among females of different age groups. O'Shea considers bone needles to be dress ornaments, however Rega has suggested that these needles may represent a functional personal kit as well as symbolic presence. It may be that sawing was female-gendered activity, performed by girls as well as women. Further, Rega noted that half of the bone needles were not fully intact and functional and that youngest age category would not have sufficient strength, size and dexterity to use the needles as tools. For Rega, bone needles provide an additional line of evidence that female children were accorded a gender identity overlapping with that of adults. The highest percentage of graves with bone needles occurs in the 6 to 13 year old category, and Rega sees these needles as girl-symbols carried to adulthood.

O'Shea (1996, 265, 281) was interested in the fact that more metal ornaments were found in graves of subadults of both gender than adult males. He suggested an explanation that subadults have received metal ornaments by virtue of their association with other individuals, presumably kin. As males matured they retained progressively fewer ornaments and once into maturity they retained none at all. It seems that as males moved into adulthood, and presumably also into a position that enabled them to actually acquire such ornament (through trade or acquisition of raw materials), they entered social statuses that required them to distribute metal ornaments, rather than retain.

Further, O'Shea suggested that it is possible that males wore the full array of metal ornaments in life with the redistribution of the ornaments occurring only at death (ornaments are redistributed to the kindred rather than buried with the body). However, it seems more likely that relative absence of ornaments among adult males is reflecting normal modes of adult dress as worn in life and that prestige is gained by the distribution rather than the display of metal ornaments.

Presence of a weapon in the grave, O'Shea interpreted as a maker of status which once obtained was held into old age. This may signal some form of general leadership and not simply the marking of a successful war captain. In the case of juvenile male buried with ornaments, copper axe and a head ornament, O'Shea has suggested that this individual clearly represents somebody who was destined to hold a paramount position within the Mokrin villages.

## 4.2 Horizontal social distinctions and their relation to gender

General conclusions of the analysis is that gender appears to be a central organizing characteristic in the Maros cemeteries involved in both horizontal and vertical social distinctions.

On the basis of his analysis O'Shea (1996, 336-337) distinguishes three main horizontal categories recognized in the Mokrin cemetery: normative gender (gender-specific orientation and body placement), north-south division of the cemetery and west-east division of the cemetery.

The most obvious of these distinctions is marking of normative gender by means of the orientation of the body within the grave, females with their heads to the south and males with their heads to the north. This categorization of individuals seemingly occurs very early in life and is retained into death. This distinction is so pervasive that it constitutes a normative element of the Maros funerary program.

The north-south division of the cemetery is suggested by the distribution of important classes of mortuary artefacts. Occurrence of exclusively male, exclusively female and shared marker is observed in both sides. O'Shea sees a possible explanation in these two sides of the cemetery representing two major social segments in the Maros society, most likely distinct villages or allied groups of villages that jointly used the Mokrin cemetery.

The north-south division of the cemetery is observed also in Ostoji evo, on the basis of the clustering of head ornaments, and this division is relative to gender: female graves with head ornaments occur in the northern part of the cemetery and male graves with head ornaments are found in the southern part. This interesting appearance is supporting the importance of north-south division of the cemetery and is pointing out to local differences whatever the reasons of such division may have been.

The west-east division of the Mokrin cemetery is observed for the same type of artefact (head ornament) and only in cases of male graves. O'Shea (1996, 294-297) suggests that this arrangement may have a relationship to some manner of descent group. Other possible explanation is existence of some broad-based sodality structure, each with an associated hereditary female position that would have been represented in the Mokrin villages.

Further, O'Shea considers these two potential horizontal distinctions together and envisions a tribal social structure composed of two autonomous villages or allied groups of villages with similar features of organization and ideology. Each community is further divided by a sodality structure that apparently influenced patterns of descent and marriage. However,

both these major horizontal distinctions must be viewed as tentative. To the extent that the social divisions marked were also involved in biological descent, future biological analysis of the skeletal samples may provide and independent test of the possible sodality or lineage markers in the cemetery.

## 4.3 Vertical social distinctions and their relation to gender

Common analytical approach in specialized literature is the one which assumes that the social role of an individual will be reflected in the funerary treatment, in the energy invested into it and in the richness of the inventory<sup>6</sup> (Cretu 2015, 7-9). One example is Binford's (1971, 23) opinion that: "Status was most commonly symbolized by status-specific 'badges' of office and by the quantities of goods contributed to the grave furniture". This conclusion is often summarized to justify the assumption that there is a direct relationship between the social status of the deceased and the relative amount of treatments, grave goods, or energy expended in the burial of the individual<sup>7</sup>. Critiques of this approach point out on the fact that quantitative ranking of various mortuary treatments in many studies was subjective or presented with no explanation for why one treatment ranked higher than another (Rakita et al. 2005, 4-6).

Contemporary approach to the study of mortuary context commonly includes study of some, or several together, following aspects: formal attributes of mortuary treatment, artifacts accompanying the individual, spatial relationships both within the mortuary context and between the mortuary site and the surrounding landscape (Hodder 1982, 195-201) and skeletal material. An analysis of skeletal remains per se can inform on diet, pathologies, nutritional differences and trauma as well as physical stressors, rates of infection, childhood stress episodes, the occurrence of accidental injury versus interpersonal violence, and relative mortality rates (Hill 1998, 113-114), contributing to understanding of social complexity.

The most complex analysis of the Maros society was done by O'Shea (1996). He singled out hereditary social statuses marked by weapons and head ornaments among males and by bone needles and sashes among females as vertical social categories marked at Mokrin. O'Shea (1996, 293-294) suggested that each represented a social position that had only a single occupant at any given time. These positions appear to have been occupied until the holder's death. The same symbols and social offices are replicated across the Maros cemeteries which emphasizes their central role in Maros social organization. Further, on the basis of his

<sup>&</sup>lt;sup>6</sup>This processual perspective is often referred to as the "Saxe-Binford approach" (Cretu 2015, 7-9; Rakita et al. 2005, 4-6).

<sup>&</sup>lt;sup>7</sup>For example, see Shennan 1975.

analysis of identified major social markers, O'Shea has provided an elaborate interpretation of social roles and statuses for men and women of different age categories.

The pattern of occurrence of metal objects within the cemetery O'Shea (1996, 288-293) interprets as a system in which adult males acquired social standing for themselves and their household or lineage, through the acquisition and subsequent distribution and display of these exotic ornaments. The most likely pathway for this distribution was to the members of one's household, particularly subadults and to one's wife and obligated affine through institutions such as bride price and dowries, which than became part of the wife's regalia. While there were mechanisms that worked to keep a household's durable wealth in circulation, such as the redistribution of old individual's ornaments, burial of the goods with the dead was the mechanism that was applying the pressure to acquire more goods. The display of goods and social standing in life and in death is also evident.

Adult male responsibility would be the acquisition of either the raw material or the ornament itself which required major long-distance contacts. Male individual will display his power and standing by his ability to dress his household in exotic ornaments. Common occurrence of ornaments among children and women argues that these items were the product of individual action and initiative. The observation that older women are not commonly buried with rich and exotic ornaments, might be seen in the redistribution of wealth from older woman on to daughters or grandsons to contribute to accumulate a bride price.

Older individual's ability to contribute exotic wealth to the household may have smoothed the individual's entry into the household, despite the individual's likely subsequent status as a subsistence consumer rather than a producer. This is applicable to both older females and males, maybe even more in the case of males, since these individuals would make little or no contribution to household subsistence standing.

In regards to head ornaments found with females, O'Shea (1996, 265, 287) is suggesting an associative status in which the right to wear the ornament was acquired via ties with powerful or high-status males. The number of occurrence of female head ornaments is pairing two or three females with each holders of a major male distinction. If the status was obtained by virtue of being either wife or the sister of a principal male, the frequency of ornaments and the lack of spatial pattern could be accounted for. An alternative explanation would be that female head ornaments have no relationship to male office holders, and instead represent a uniquely defined and inherited female social status.

In terms of the general distribution of exotic wealth markers, O'Shea (1996, 290-292) considers that subadult females and males are treated similarly. Significant difference is that fewer infant males received burial in the cemetery.

With adulthood, and presumably marriage, females become more likely to possess markers of exotic wealth. The source of this increased wealth appears to be their affiliation with males, possibly both kinsmen and husbands. In effect, adult and mature women function as the principal focus for the display of family or corporate wealth. This role continues through middle age but relinquished with goods being redistributed on the attainment of old age.

Until a male reaches the age of majority, any markers of wealth or standing he possesses are acquired by virtue of hereditary right or affiliation or kinship with relatives. At the age of majority, or perhaps marriage, exotic wealth accumulated as a child is redistributed. It may go to kinsmen or to affine as an element of bride price. In any event, this is the time when males cease to function as displayers and become distributors of exotic wealth.

Additionally, O'Shea (1996, 284-287, 290-294) identifies weapons and head ornaments as markers of two distinctive positions of leadership within the Mokrin villages, however these two positions could have been in occasions held by a single individual. The distinction between ax and dagger is not structural one, but rather seems to differentiate two hereditary descent groups that may correspond to two villages or set of villages that jointly utilized the Mokrin cemetery.

The differences between male and female head ornaments O'Shea interprets as marking of specifically recognized social position rather than simply locating the individual along a quantitative dimension of wealth.

Further, he sees sash in association with fertility. Bone needle may be the only surviving part of more elaborate cape or other garment that has not survived. Alternatively, it may represent female control of the domestic economy and production. In any case O'Shea considers central female statuses to be linked to the local sphere of activities.

Extending the duality between local and exotic, O'Shea suggests that subsistence wealth may have been primarily under the control of women, who were also the principal producers, and that there is no evidence to suggest significant male involvement in the control or decision making concerning household subsistence activities.

In economy as diverse as that of the Maros villages, with farming, stock raising, fishing, hunting and gathering, it seems unlikely that females would have been the sole producers of subsistence products. The centrality of their position may have related more to the processing and storage of such produce, or to the preparation of such products for transport and trade. Also, females may have played an active role in the manufacture of metal goods at the villages and in the assembly of distinctive composite ornaments. In addition, there is the

potential of their involvement in manufacture of ceramics, cloth and other goods.

O'Shea's interpretation is supported by his analysis and well put together. The picture he has drawn of men and women (children, adults and elderly) is being mostly based on analysis of major social markers and their distribution. The starting point for the interpretation was the fact that adult male graves have less metal objects than graves of adult females and children, which was explained by redistribution of goods in life, and supported by the fact that graves of old people also have less or none grave goods. Gender division of roles and activities is strict: man is seen as provider of metal goods, woman is responsible of the household subsistence activities. Additionally, woman has associative status acquired via ties with a man (father, brother and/or a husband). The same associative status is applied to children. Alternative interpretations of some aspects are briefly mentioned but not elaborated. The final conclusion is that the social structure of the Maros population is egalitarian, with only minimal indicators of ranking.

Further, we would like to mention detailed analyses of Mokrin material that was performed by Stefanovi (2006) and Por i and Stefanovi (2009, 2013). They have used two independent lines of evidence (the archaeological and the biological) simultaneously and provided the interpretation of relationship between ranking (social status as induced on the basis of grave contents) and activity (musculoskeletal markers). They have focused the research on the sexual division of labor as the most universal phenomenon.

The important conclusion of their analysis was that the relationship between vertical social status and upper arm/shoulder activity differed for men and women. It seems that men had to achieve their social status through some activity involving the use of arm/ shoulder muscles (fighting?) whereas women with high status worked less, at least when activities related to the use of arm/shoulder muscles are involved. The female case would seem to conform to the *life is laborious for the poor* hypothesis, that women of high status worked less, but the situation with male sample is just the opposite, as males of higher status tended to work more (Por i -Stefanovi 2009, 269-272).

These observations may be used as an argument that gender identity and distinction was an important structuring factor in the Mokrin society. Additionally, Por i and Stefanovi (2009, 269-270) have offered three social models for the observed patterns.

### Model 1

Model 1 suggests that high status of a male individual may have been ascribed through the lines of heredity and that these higher status individuals may have had some specialized activity or set of activities related to the specific office they hold. Given the fact that it is the shoulder and arm muscles which are more used and that the presence of weapon is a major

determinant of high status, it would be reasonable to suppose that a high status office is related to warfare. It is more difficult to explain what is happening in the female sample. It may be that a wife or a sister of a high status male individual is exempted from carrying out some heavy tasks during the occupation of an office.

#### Model 2

The high status of a male individual might not have been ascribed through the lines of heredity but could have been achieved during one's lifetime and through one's success in certain activities. It could be that success in warfare or hunting, or the general strength of an individual, determined his vertical status. One would have to compete with other males for prestige during early adult life. This scenario would be more consistent with egalitarian types of society. According to O'Shea (1996), females achieved their status through their links with high status males. Females of high status might have been exempted from one particular set of activities related to the use of upper arm and shoulder muscles due to their links with high status males. The link between high status and less intensive labor did not have to be a direct one: e.g. women of high status may not have been exempted from performing heavy tasks just because they were married to males of high status, but because reaching a high status may be related to being able to mobilize a larger labor force. So, high status women were not necessarily exempted from heavy tasks at all, they perhaps simply had more help in that particular domain of activity.

#### Model 3

Since the two models presented above are mutually exclusive, the third model is actually a combination of the first two. In this scenario, a person who was born in a high status family would not automatically inherit its status position, but would have to work hard (or fight hard?) to keep it.

General conclusion is that there is no sufficient evidence to claim that the Maros or Mokrin society represents a highly ranked society (e.g. a chiefdom). None of the archaeological correlates of ranked societies seems to be present if we employ a regional perspective on the Maros group. As O'Shea (1996) has demonstrated, the occurrence of major social markers is rather consistent across the Maros cemeteries. On average, equal proportions of status markers are present in different Maros cemeteries indicating that they were autonomous units (Por i -Stefanovi 2009, 271). There is only scant data on Maros settlement sites, but there is no evidence of fortified centers, monumental architecture or settlement hierarchy in general. O'Shea's (1996, 348) conclusion is that although some ranking existed in the Mokrin society and the Maros societies in general, these were mainly egalitarian groups and there is no evidence to suggest "the existence of any group or social segment with sufficient power or authority to constitute a distinct social stratum".

Por i and Stefanovi (2009, 271-272) argue that if O'Shea's conclusion about the egalitarian nature of Mokrin society is accepted, then Model 2 and/or Model 3 are more suitable explanations for patterns observed in their study. In more or less egalitarian societies vertical status has to be at least in some measure attained and retained through some sort of activity or quality (e.g. being a good hunter, good warrior, skillful and hard worker, wise decision maker, etc). The general theoretical starting point for this investigation was socio-cultural evolution in the Bronze Age. As observed by Shennan (1986), the archaeological record of the European Bronze Age does not indicate a major evolutionary step towards complex societies such as those documented in the Near East or in the New World, but European societies were nevertheless changing, albeit evolving along a different trajectory. A possible clue to the inception of this process is the aforementioned correlation between status and intensity of activities related to the use of arm and shoulder muscles, and the tentative association of weapons with these individuals. However, the absolute magnitude of what we perceive as vertical status differences might have been much lower in reality, and they may not have been institutionalized even though they had been perceived to be so.

On the basis of her analysis, Rega (1996, 243) concluded that no differences between status groups as defined by quantity and quality of grave wealth were revealed in mortality, pathology and dietary analyses. In her opinion, systematic social inequalities indicative of an emerging elite are not supported by the biological evidence.

Further, Rega (1996) is providing an interesting interpretation of gender distinctions in the Mokrin community but unfortunately, she examines only women and children so part of the picture is missing. However, she states from the outset that she will be paying particular attention to the roles of women and children, seeing them as under-studied and often overlooked in archaeology.

Rega suggests a possible interpretation where Mokrin females had symbolic, if not actual, control of the metal trade axis considered vital to the development of social stratification in the Early Bronze Age. Such a formulation would indeed be consistent with the interpretative frameworks routinely applied to male burials. Rega further suggests that female children may have been preferable to male children due to the wealth acquired from bridal payments, and that the material wealth displayed in rich female graves may be indicative of women having symbolic, if not actual, control of the metal trade, suggesting that women may have enjoyed status equal to men, or perhaps even elevated above that (Rega 1996, 229, 238-241).

In her study, Rega also comments on interpretation of similar findings from the Early Bronze Age cemetery at Bran in Slovakia by Shennan (1975, 1993). Shennan (1975) examines whether there is any difference in the status of males and females in death based on the grave goods they were buried with, the relative wealth these goods represent, and how this reflect

the vertical status of individuals in life.

Similarity of findings in Mokrin and Bran does not prevent Rega and Shennan from reaching startlingly different conclusions as to the role of women in the Early Bronze Age societies they were analyzing. Both sites have higher numbers of rich female than rich male graves, with larger numbers of female infants than male infants. Shennan's interpretation of this scenario is that female wealth is achieved upon marriage, with the higher number of young female graves as the result of the material wealth (presumably of the father) of female children increasing the likelihood that they would survive infancy. This effectively simplifies the female role in society to nothing more than a product of the male wealth inheritance system. Generally, Shennan sees the larger quantity of metal grave goods in female graves primarily as a reflection of male wealth and prestige.

Both sets of arguments can be questioned in their own right. Shennan (1975, 285) does not consider that female children may have been preferred by parents, despite the fact that better nutrition and living conditions (which Shennan identifies as two of the probable causes for more rich female infants surviving than any other group) would surely have continued into the childhood of those people as well, not fully explaining why there are so many rich graves for young female children. She also does not consider that women may have had symbolic control over certain areas, or indeed have been symbolically or ideologically celebrated by society, as Rega suggests. Rega (1996, 236), for her part, does not consider that women may indeed not have had any control over the metal industry, or any chance to acquire their own wealth, instead criticizing these views as derogatory to women. That said, it does seem that her argument that male babies were the victims of deliberate infanticide is better supported than Shennan's simple assertion that wealth increased the likelihood of their survival (although wealth should not be discounted as a contributing factor in this phenomena).

Rega (1996, 241) is openly stating her dissatisfaction with Shennan's opinion, commenting that this is apparent double standard of judgment that pronounces that rich male burials are rich while rich females simply married well. Rega further concludes that while the metal wealth in female graves may indeed represent a male contribution, the mortuary data alone do not allow determination of ownership whether symbolic or actual.

Considering both views, it could be said that both Rega and Shennan, in a certain way, have *chosen* the perspective or a framework for the interpretation of data. Introducing another line of evidence could decide which of two opposites may be closer to the truth. It seems that, for now, they both have equal chances to be right. Of course, it should be noted that Rega's interpretation of archaeological evidence may be influenced from the beginning by a feminist viewpoint. Shennan's assumption, on the other hand, that the society she was studying had only two genders despite the 20% of male-sexed skeletons buried in female-

identified positions (Shennan 1975, 282) shows how preconceptions and assumptions can lead to possibly important areas of data being overlooked. With this being said, it seems that Rega's opinion stands alone, for now, while the conclusions Shennan reaches are more or less in line with interpretation by O'Shea (1996) and Por i and Stefanovi (2009).

It is worth mentioning that contemporary archaeology, even the mainstream, pays more and more attention to the gender issues, and material evaluation is being done with certain care not to privilege the adult male experience over that of females and children. Still, consideration is rarely given to the notion that rich female graves may actually contain individuals of wealth and power, a peculiar fact given the vital importance of female productive labor in many small-scale societies, as Rega argues (1996, 241). Although archaeologists continue to attribute enormous power in symbolizing, creating and maintaining social hierarchies to the movement and consumption of prestige goods, the real significance of the rich female graves and possible favoritism towards daughters in this context has yet to be widely addressed.

The question of was there a structural reason within the Maros society which led to wealth accumulating in the hands of women is open for the future studies. Another question, set within the wider framework, is of the dominance of males, held in the traditional view of gender relations in the Early Bronze Age, and warranty of such interpretation (Harding 2000, 407; Moravcova 2008, 9-12; Rega 1996, 241-242).

Rather than choosing the side, the analysis of this issue must be approached without preconceptions and without deliberately attempting to place one sex/gender above or below the other. This *egalitarian* archaeology could create an environment where everyone in the past will be represented fairly, and could give archaeologists the greatest chance of fairly and accurately reconstructing the past.

### 4.4 Alternative funerary treatment and special status distinctions

Elements of body treatment and orientation are often prime dimensions for the expression of horizontal-type social distinctions, since they provide a means of dividing the population in a way that does not represent a major difference in the effort expended or social disruption. O'Shea (1996, 184) suggests that alternative treatments observed at the Maros cemeteries may serve to mark a variety of small-scaled special statuses. Such distinctions can present intractable problems for analysis, because they occur infrequently and they commonly lack and clear referent. Such statuses may also serve to mark diverse death statuses, such as circumstances of death, which may have no equivalent in the living society.

Analysis of west-facing burials, gender ambiguous burials, multiple burials, and burials of

individuals with signs of mutilation of hands and feet have shown that these individuals were buried, most commonly, in a way that allowed them to retain normative gender orientation, at least in most of the cases of adult burials. Their grave assemblages may or may not be relative to their biological sex.

Thus, central questions should be how to decide if the *special status* represents more, or less, deviation from the normative program and what is more, or less, socially extreme or alienated.

The degree to which special status was compatible with other individual's marked social statuses or positions, the character of the funerary feats, and results of osteological analyses can be used to assess the relative social alienation implied by the special status (O'Shea 1996, 297; Rega 1996, 242).

#### Non-burial

Non-burial represents any burial or disposal of the body in location other than the community cemetery. This special status represents age class, denoting young infants who were not buried at the community cemetery. It is possible to separate two cases of such treatment: infants younger than about 3 years of age and young adult males.

Rega (1996, 237-240), in her analysis of the Mokrin material, sees the probable reason for a discrepancy of this magnitude as cultural. The increased male mortality may be caused by the intentional killing or neglect of male neonates. The neonatal period is time when something like this is more likely to happen, as infanticide and neglect are less likely to be employed as a population manipulator once older ages are attained.

The practice of infanticide and neglect are viewed by the majority of non-clinical researchers as consciously-calculated adjustments in parental investment designed to achieve economic and cultural as well as biological goals. Although some archaeological instances of infanticide have been recognized, none to date was able to definitely identify sex-biased infanticide. In the clinical and ethnographic literature, differential infanticide is most commonly cited as disadvantaging female children and occurs in cultures where the social and economic contributions of males are more valued than those of females.

However, few cases of female biased parental favoritism are documented. These occur in widely separated political and geographical contexts, such as Pakistan, New Guinea, the US, Britain, Kenya, Jamaica. This favoritism has been ascribed to the greater role of women as economic providers and in maintenance of family stability in a matrilineal society. This manifests in prevalent childcare practices favoring girls. Other reason can be seen in the

economic benefit accrued in a bride-wealth system.

Rega (1996, 240) further notices that even if sex biased differential mortality and/or cemetery access for subadults is observed at the Mokrin cemetery, other sex biased differences in biological quality of life among adult individuals are not apparent. Adult mortality is identical, as are the low rate of bony pathology including trauma and degenerative disease.

As demographical data demonstrated, access to the cemetery at Mokrin is partially dependent on age-at-death. Rega has suggested that before age of one year, a mortuary alternative to cemetery inhumation must have been in operation as reflected in the absence of these individuals from the larger group cemetery. She also considers that the transition to cemetery/community membership at around one year marks a significant alteration in personhood, before which sex-biased population control measures such as infanticide and neglect may have been sanctioned. This practice would explain the sex-biased representation in favor of females between the ages of one and six years and would be consistent with ethnographic practice in societies where the material and/or social contribution of females is accorded vital importance. Alternative explanation proposes that male children in this age group may be, for whatever reason, preferentially excluded from this cemetery. However the latter hypothesis does not fully account for the results of demographic analysis which suggests an overall proportion of children to adults consistent with full community inclusion after one year of age.

As for children that were buried at the cemetery, they are incorporated in gendered structure (positioning of the body and types of grave goods) seemingly in a manner at least in parallel to that of the adults.

O'Shea (1996, 142-147, 297-298) has a different opinion on this subject and believes that disparity in Infant I numbers is not due to differential mortality among male and female infants or to targeted infanticide but rather to differential representation within the community cemetery. The figures also suggest that there was culturally determined minimum age at which individuals were accorded cemetery burial and that this boundary was different for female and male infants.

Further, O'Shea sees the difference in number of adult males and females as deficiency of males. He interprets this deficiency as result of young adult males dying away from the immediate locality and their bodies not being recovered for burial. He considers these cases to be a circumstance of death rather than an actual life status. The clear evidence of regional and long-distance contacts maintained by the Maros people, and the evidence for warfare (such as trepanation, defensive works and human patella pendants), make such an

explanation possible in O'Shea's opinion. This opinion is somewhat supported by conclusions of Por i and Stefanovi (2009).

It is already mentioned that both Rega and O'Shea didn't have Ostoji evo material available. Different patterns observed at Ostoji evo could suggest that these age/sex groups where treated differently by the local community, in a way that does not correspond to ways of other Maros local communities (e.g. the one in Mokrin). It could be said that, because of some reason, age/sex groups in question were allowed cemetery burial in larger number than in other cemeteries. Also, it can be that Mokrin sample simply does not include these individuals. In case that Mokrin sample is valid, Ostoji evo community may have had a special social and/or economic status allowing them to deviate from the Maros norm. For example, Ostoji evo men may not have been involved in warfare or trade which enable them to stay home. This could further suggest some kind of social differentiation and/or economic specialization of different Maros villages which would be interesting to examine.

Another open question is the question of childhood. Different studies show that there is no common definition of childhood in the Bronze Age. Some traits seems to be fairly common over a large area, specifically that at around the ages of five and six the children gained access to their first bronze or other artifacts, and that they were seen as grown-ups sometime before the age of 15 (Bergerbrant 2014, 533). At the Maros culture, generally speaking, children seem to have received the same funerary treatment, with respect to the same gender distinctions, as adults. However, this should be the subject of a separate study.

#### Gender ambiguous burials

Individuals in which the biological sex does not match the cultural marking of gender expressed in the Maros funerary ritual may or may not represent special status according to O'Shea (1996, 298). In cases where the cultural gender appears to be marked, not only in body placement and orientation but also in the character of grave offerings, such as male buried in grave 10 at the Mokrin cemetery, overall consistency of normative treatment has been preserved. If buried with grave goods, artifact inclusion argues that these are not really special status distinctions, but rather individuals who, for whatever reason, have assumed and were recognized as holding the *specific* gender and were treated accordingly in death. By this reasoning, the treatments accurately portray the status these individuals apparently held in life.

The question with burial in grave 10 is not only inverse orientation, but also the fact that this individual was buried with entire set of ornaments that would be redistributed in normal circumstances according to O'Shea (1996, 294). His opinion is that this case illustrates the way in which the Mokrin villagers negotiated specific compromises of their normative

funerary practices to accommodate relatively unique or unusual social circumstances.

Another evidence of grave 10 being a gender ambiguous burial is presence of metal pins which is a gender indicator and it seems to be a clear component of female dress, suggesting that this biological male was in fact treated consistently as female in both dress and burial alignment.

O'Shea further suggests that if individual is oriented and placed as a female and has burial assemblage consistent with being a female, then in all likelihood we are dealing with a case of either erroneous skeletal determinations or of an individual who occupied a normal female gender role in the society regardless of the individual's biological sex.

Also the fact that there is statistically significant tendency that the oldest men from the Mokrin cemetery could be inversely oriented, and that there is no statistically significant relationship between sex and inverse orientation when it comes to females should be taken into the consideration. This fact argues that there may have been a special status reserved for older men in Maros community, but only in some particular cases.

Here, one more option can be considered, connection between gender ambiguity and shamanism that has been documented among societies that cover a wide geographic area. Some examples are the Sami of Fenno-Scandia, Hungarians of Central Europe and the Central Asian Uzbek. Numerous Siberian groups have also been described with regard to these phenomena, including the Khanty-Vakht, Nivkh-Gilyak, "Samoyed", Koryak, Kamchadal-Itelmen, Chukchi, Evenk-Tungus and Ob-Ugrian. However not all gender ambiguous individuals have to be shamans, and this issue should be considered with caution (Mati 2010, 181).

Other than gender ambiguous burial itself, there is an occurrence of a spatial pattern at the Mokrin cemetery suggesting that inversely oriented individuals may have had a special place in the cemetery. Even though the sample is small, it is showing clear clustering of male graves in the south portion of the cemetery and female graves in the northern part. If the spatial pattern is showing real life situation, and it is not just coincidence, it is possible to conclude that biologically male individual is being buried in the south part of the cemetery to emphasize that his identity deviates from the established normative. The same rule applies for female individuals being buried in the northern portion of the cemetery. It is considered that normative for females is south and for males it is north, as pointed out by the body orientation (2010, 177-178).

Other explanation of this spatial pattern can be given in consideration to relative chronology proposed by Wagner (2005). This chronology suggests that almost all inversely oriented

male graves are located in the oldest part of the Mokrin cemetery while all female graves are situated in the portion of the cemetery which belongs to II and III phase of the Mokrin chronology. If we consider this relative chronology to be correct, it can disprove the previous hypothesis on spatial distribution pattern that is relative to gender. Additionally, this opens another interesting question of why only male graves deviate in one (early) chronological phase and only female in other (later) chronological phase.

This conclusion could be additionally supported in case if the spatial pattern represents the real life situation and not just a coincidence. If that is the case, Mokrin community was aware of this gender disharmony and did emphasize it.

Actually, the fact that normative treatment existed is pointing out to the fact that physical characteristics of body that define the sex were important for Mokrin community. This importance is reflected in practical (labor division) and symbolical context. Also, it can be concluded that deviance from the norm was recognized by the Mokrin community, however it was not disapproved. In cases of two inversely oriented subadult graves, one may say that the community even supported the gender inversion (2010, 177-178).

Another point to consider is that deviance from the normative treatment may also be reflection of deviant behavior<sup>8</sup> (deviant from the norms set in that particular society) of the individual during life or could be reflecting unusual circumstances of individual's death (Murphy 2008, 12-13).

Final conclusion of both O'Shea (1996, 375-376) and Por i (2010, 178) is that life circumstances of inversely oriented individuals influenced funerary treatment they received. From the point of view of gender theory, body orientation of these individuals cannot be considered as deviant, because it is in line with the gender of these individuals.

Separate issue is of multiple genders. Social scientists agree that, given the cultural basis of gender, there is no limit to the number of possible genders in each human group. Thus, it has been argued that the Chukchee of Siberia have two gender categories for women and three for men. Homosexuality has been argued as the appropriate interpretation of some of the scenes represented in late Bronze Age (*c*. 1000–500 BC) rock art carvings of Bohuslän, Sweden. The search for *berdaches*, members of an ethnographically well-documented third gender in North America, has been recently addressed by different authors (Díaz-Andreu 2005, 16).

O'Shea has noted that the results of this analysis have shown, on the basis of the mortuary symbolism, that the Maros society recognized two basic genders. This fundamental marking

<sup>&</sup>lt;sup>8</sup>For more on the subject see Voss 2000, 184; Voss 2008, 329.

of gender remained constant. Even for individuals who received alternative or abnormal funerary treatments, an effort is made to maintain their gender identity. Individuals whose biological sex and cultural gender do not agree, they seem not to occupy third or fourth gender but rather occupy one of two normative genders.

Mati (2010, 182) on the other hand is suggesting that the Mokrin mortuary record is showing how femininity and masculinity are not reserved for certain osteological sexes, neither are certain activities. Thus, sex is in Mokrin communities nothing but gender, as they are both the same construct of a network of embodied relations intersected with status and prestige. Only when we stop assuming the number of sexes/genders we will be able to push our available record to the theoretical and methodological limits of archaeology.

Further, Mati examines if ambiguous burials can be interpreted as transgressions which are allowed in Mokrin society only in certain conditions and for certain prestigious individuals. Analyses done by Por i (2010) showed that not all non-normative burials can be described as wealthy. Thus, if wealth is correlated with status to certain extent, one can argue that transgression was not dependent of wealth/status. However, if the sex/gender system was not based on genital sex, but rather on different aspects of identity (occupation, work, status etc.) then the number of sexes/genders in this society cannot be easily defined, but it can argued that, at least on the basis of the record, changing sex/gender would not be labeled and sanctioned as transgression. Mati assumes that four sexes/gender are evident (biological males, biological females, biological males oriented as biological females, biological females oriented as biological males), but this number fails to address those burials oriented according to the defined normative but with grave goods usually not associated to their sex/gender. The basic problem is equifinality in the record of the necropolis. Possible way to resolve this is to conduct previously done analyses without a priori defining number of sexes/genders, rather testing different possible gender systems and paying close attention to dress ornaments and their context.

#### Multiple burials and mutilation

Cases of multiple burials, pairing of adults and children in a single grave, O'Shea (1996, 298) explains as possible low economic standing of a household. Another explanation could be that this specific burial treatment may be organized due to a timing or circumstances of death.

Individuals in whom mutilated hands and feet were recognized, were accorded normative burial at the Mokrin cemetery. They have normative gender orientation, normal range of ceramic assemblages, and were found buried with major social symbols. Overall, it does not appear that these individuals were marginalized within the Mokrin society. O'Shea (1996,

300) considers a possibility that this is the case of sample distortion. However, finding of four burials with mutilated hands and feet at Ostoji evo cast a new light on this issue and it deserves a separate investigation.

# 5 Conclusion

In cases of non-burial, gender ambiguous burial, multiple burials and mutilation of hands and feet, it seems that the greatest deviation from the normative Maros funerary program represents non-burial. Other three burial treatments more or less fit the normative and seem not to be socially alienated or considered extreme. If individuals marked by these statuses were somewhat different than others, their distinction was not condemned by the larger community.

General conclusion can be made of egalitarian nature of Maros society. Although some ranking existed in the Mokrin society and the Maros societies in general, these seem to have been mainly egalitarian groups and there is no evidence to suggest the existence of any group or social segment with sufficient power or authority to constitute a distinct social stratum.

Further, it seems probable that the Maros population gendered structure was also based on a certain level of equality and mutual acceptance allowing different gender/age groups to express themselves, which was reflected in both the burial rite and funerary dress (if different than the one worn in life). Also, the relationship between females and males could have been based on the principle of complementarity.

This study has revealed many open issues and pointed out to numerous future research perspectives. One of them is definitely the question of exclusivity of body orientation and placement relative to age that can be seen with older males. Possibly connected with this issue is the multiple sexes/genders paradigm argued for the Maros society, briefly mentioned in the text above, that deserves the study of its own.

Another exclusivity that should be separately examined is the issue of missing burials of youngest members of the Maros society. Further, spatial distribution of graves within individual cemeteries and their relation should be examined with new methods.

Peculiar question of rich female graves deserves another analysis in order to test two opposed opinions. Another open question is of childhood in the Maros society. And, having in mind findings from Ostoji evo, specific burial treatment that possibly involved mutilation of hands and feet should be revisited.

On the place of the final remarks, we would like to mention ethnographic sources that could help us understand better the minds and hearts of people buried in the Maros cemeteries. How did gender distinctions and belief intersect? Ethnographic sources are telling us that the most common interpretation for specific orientation of the deceased body is toward to land of the dead. Common is that burial place is located on the west because of the setting sun. However any other direction is also present. Common belief is that deceased should be placed and/oriented in a way that their soul could reach the other world. Sometimes, soul will be led by river streams to the land of the dead. In places where this was a case, dead were buried parallel to the river facing the upstream (pre-dynastic Egypt, Indonesia, China). Also common is orientation toward the land of the ancestors that could be on some mountain, or the island so the dead will be oriented and faces toward this place (Indonesia, Africa and Melanesia). In Africa, in Cost of Guinea, tribe Ashanti is burying the dead facing opposite of the village they lived in.

Not too common in ethnographical sources is burial rite different in relation to the sex but it is known from some African communities. Some tribes in Ghana and Nigeria burry men on their right side and women on their left side. Explanation is that men are faced east toward the rising sun to prepare for the hunt or work on the farm, while women are facing west toward the setting sun to make the food for the husband when he's back. Azande from Congo have the same burial rite but the explanation is that men are facing east showing their strength and women west showing their weakness. Examples from Africa are suggesting that different orientations have rather social than religious implications and that reflect different social position of men and women in the community. However, position of the face is explained, most commonly, with religious needs and spiritual connections (Riedl 1972, 72).

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# APPENDICES

Grave:	<b>Ornament:</b>			Weapons/tools:	Ceramics:
Number	Necklace	Faience bead*	Bone needle	Copper/bronze dagger	Beaker
Depth	Head ornament	Animal teeth/bone bead*	Copper/bronze pin	Stone ax	Bowl
Size	Bracelet	Shell/snail beads*		Copper/bronze ax	Amphorae
	Needle	Copper/bronze bead*	Copper/bronze bracelet		Pot
Body:	Finger ring	Stone bead*		Other tools:	Storage jar
Ritual and position	Hair ring		Copper/bronze finger ring	Copper/bronze awl	Miniature
Orientation and facing	Sash	Clay pendant		Copper/bronze chisel	Cup
Sex	Worry beads	Animal teeth/bone pendant	Copper/bronze neck ring	Whetstone	Other
Age		Shell/snail pendant		Copper/bronze arrow	Fragments
		Copper/bronze pendant	Circular bronze plates	Flint tool/chip	Um
		Stone/marble pendant		Pebble	
				Bone stamp (pintadera)	Height of the vessel
		Gold hair coil		Bone object	Maximum rim diameter
		Copper/bronze hair coil		Spindle whorl	
		Tubular copper plaque**		Unmodified shell/snail	
		Small copper disk**			
		Salteleon**		Animal bone/horn (food offering)	offering)
		Copper/bronze strip**			
		Copper/bronze spectacle pendant**	lant**		
* Part of a necklace.					
** D 5 5 5 **	****				

Table 1. Principal elements of analysis

\*\* Part of a head ornament.

	Mokrin	Szóreg	Deszk F	Deszk A	Oszentiván	Pitvaros	Óbéba	Ostojićevo
				Intact	Intact graves			
	278	179	57	49	29	34	15	77
Type			Intact	graves conta	Intact graves containing the artifact type	ct type		
Bone needle	19 (7%)	10 (6%)	2 (4%)	2 (4%)	1 (3%)	3 (9%)	3 (20%)	5 (7.8%)
Small tool	14 (5%)	9 (3%)	3 (5%)	1 (2%)	1 (3%)	1(3%)	1 (7%)	3 (4.7%)
Unmodified animal								
bone	17 (6%)	2 (1%)	0	2 (4%)	2 (7%)	2 (6%)	1 (7%)	11 (14%)
Unmodified mussel								
shell	6 (2%)	1 (0.6%)	1 (2%)	0	1 (3%)	0	0	0
Dagger	6 (2%)	3 (2%)	1 (2%)	2 (4%)	0	1 (3%)	0	1(1.6%)
Bracelet	36 (13%)	10 (6%)	1 (2%)	0	3 (10%)	6 (18%)	3 (20%)	3 (4.7%)
Metal pin	13 (5%)	12 (7%)	2 (4%)	4 (8%)	2 (7%)	1 (3%)	1 (7%)	3 (4.7%)
Neck ring	10 (4%)	1 (0.6%)	0	0	0	0	1 (7%)	0
Ax	6 (2%)	3 (2%)	0	1 (2%)	0	0	0	2 (3.1%)
Hair ring	19 (7%)	1 (0.6%)	0	0	0	2 (6%)	4 (27%)	3 (4.7%)
Finger ring	3 (1%)	2 (1%)	1 (2%)	1 (2%)	0	0	0	0

Table 3. Occurrence of various artefacts in the Maros cemeteries (adapted from Милашиновић 2008, 52; O'Shea, 1996, 102-103)

The percentage is the count as a percentage of the total number of analyzed graves within the cemetery.

Table 4. Classification of Maros head ornaments (adapted from O'Shea, 1996, 113)

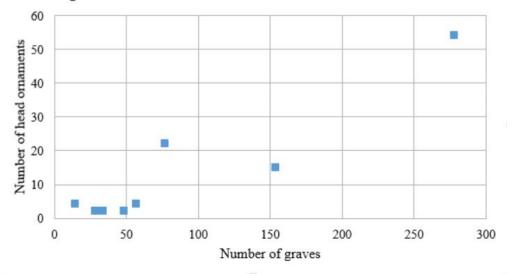
Typ	e Composition				
1	Copper plaques and/or spectacle pendants, but no copper disks				
2	Copper disks but no copper plaques with spectacle pendants				
3	Single copper strips				
4	Copper disks with copper plaques and spectacle pendants				

Table 5. Occurrence of head ornaments in the Maros cemeteries (adapted from Милашиновић 2008, 54; O'Shea, 1996, 206)

Site	Number	Frequency of occurrence
Mokrin	54	19%
Szóreg	15	8%
Deszk A	2	4%
Deszk F	4	7%
Ószentiván	2	7%
Pitvaros	2	6%
Óbéba	4	27%
Ostojićevo	22	29%

Percentage is calculated of the total number of graves at each site.

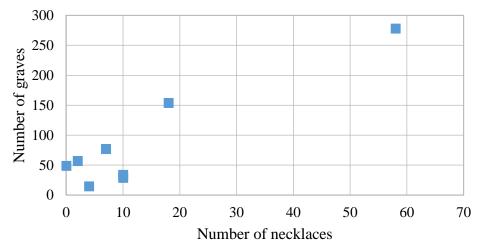
Figure 1. Occurrence of head ornaments in the Maros cemeteries



	Number of necklaces	Number of graves	%
Mokrin	58	278	20.86%
Szöreg	18	154	11.69%
Deszk A	0	49	0.00%
Deszk F	2	57	3.51%
Ószentiván	10	29	34.48%
Pitvaros	10	34	29.41%
Óbéba	4	15	26.67%
Ostojićevo	7	77	9.09%
Total	102	415	24.58%

Table 6. Occurrence of necklaces in the Maros cemeteries (adapted from Милашиновић 2008, 57; O'Shea, 1996, 124)

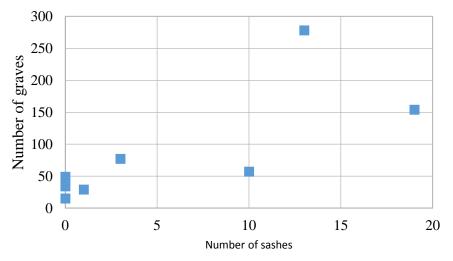
Figure 2. Occurrence of necklaces in the Maros cemeteries



	Number of sashes	Number of graves	%
Mokrin	13	278	4.68%
Szöreg	19	154	12.34%
Deszk A	0	49	0.00%
Deszk F	10	57	17.54%
Ószentiván	1	29	3.45%
Pitvaros	0	34	0.00%
Óbéba	0	15	0.00%
Ostojićevo	3	77	3.90%
Total	46	693	

Table 7. Occurrence of sashes in the Maros cemeteries (adapted from Милашиновић 2008, 56; O'Shea, 1996, 120)

Figure 3. Occurrence of sashes in the Maros cemeteries



Age category	Males	Females	Unknown	Total (%)
Infant 1	13	30	4	47 (17%)
Infant 2	17	21	0	38 (14%)
Juvenile	5	2	0	7 (3%)
Adult	45	66.8	0	111.8 (40%)
Adult/Mature	3	2	0	5 (2%)
Mature	25.5	24.7	0	50.2 (18%)
Mature/Senile	8	1	0	9 (3%)
Senile	8.5	13.5	0	22 (8%)
Totals	125	161	4	290

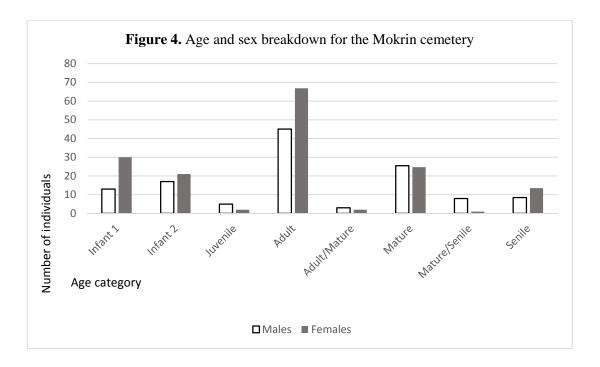
Table 8. Age and sex breakdown for the Mokrin cemetery (adapted from O'Shea, 1996, 143)

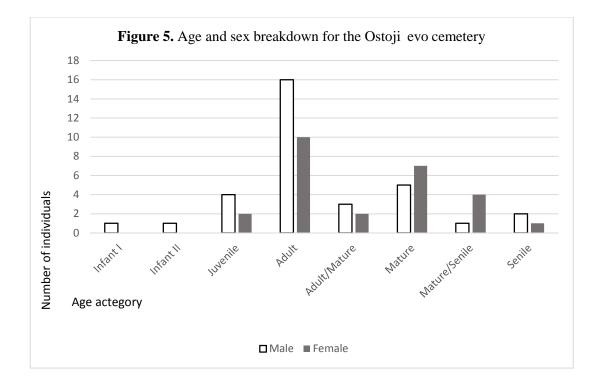
 Table 9. Age and sex breakdown for the Ostojićevo cemetery (adapted from Милашиновић 2008, 61)

Age category	Male	Female	Unknown	Total (%)	
Infant I	1	0	5	6 (7.7%)	
Infant II	1	0	10	11 (14.3%)	
Juvenile	4	2	2	8 (10.4%)	
Adult	16	10	0	26 (33.8%)	
Adult/Mature	3	2	0	5 (6.5%)	
Mature	5	7	1	14 (16.9%)	
Mature/Senile	1	4	0	5 (6.5%)	
Senile	2	1	0	3 (3.9%)	
Total	33	26	18	77	

Table 10. Age categories and their age spans for the Maros cemeteries (adapted from O'Shea, 1996, 142)

Age category	Age span (yeas)	Age category	Age span (yeas)
Infant 1	0-6	Adult	21-40
Infant 2	7-14	Mature	41-60
Juvenile	15-20	Senile	61-70+





				Site				
Orientation	Mokrin	Szóreg	Deszk A	Deszk F	Ószentiván	Pitvaros	Óbéba	Ostojićevo
North	37%	33%	16%	34%	4%	36%	14%	34%
Northeast	2%	0%	5%	0%	0%	14%	14%	4%
Northwest	1%	0%	0%	5%	0%	7%	14%	8%
South	53%	43%	52%	52%	19%	36%	29%	22%
Southeast	6%	0%	0%	4%	4%	7%	29%	20%
Southwest	0%	0%	0%	0%	12%	0%	0%	3%
East	0%	7%	25%	5%	42%	0%	0%	1%
West	1%	17%	2%	0%	19%	0%	0%	1%
Total	265	46	44	56	26	14	14	77

Table 11. Body orientation at the Maros cemeteries (after Милашиновић 2008, 62; O'Shea, 1996, 149)

Intermediate orientations are not available for Szóreg

Table 12. Body facing at the Maros cemeteries (after Милашиновић 2008, 62; O'Shea, 1996, 150)

				Site				
Facing	Mokrin	Szóreg	Deszk A	Deszk F	Ószentiván	Pitvaros	Óbéba	Ostojićevo
North	0%	2%	2%	5%	4%	0%	0%	7%
Northeast	13%	0%	0%	9%	4%	7%	7%	10%
Northwest	0%	0%	0%	0%	0%	0%	0%	0%
South	0%	24%	25%	0%	58%	0%	0%	0%
Southeast	5%	0%	5%	0%	11%	14%	14%	0%
East	79%	65%	59%	79%	19%	72%	79%	58%
West	3%	9%	9%	7%	4%	7%	0%	3%
Total	258	45	44	56	26	14	14	77

Intermediate orientations are not available for Szóreg

Table 13. Body Orientation by Sex at Mokrin (adapted from O'Shea, 1996, 153)

Sex		North	N	lortheast	N	orthwest		South	So	utheast	Total
Female	2	1.90%	1	0.95%	0	0.00%	89	84.76%	13	12.38%	105
Male	61	83.56%	3	4.11%	3	4.11%	6	8.22%	0	0.00%	73
Totals	63		4		3		95		13		178

Table 14. Body Orientation by Sex at Ostojićevo (data from Милашиновић 2008, 63)

Sex	3	North	N	ortheast	N	Northwest		South	So	utheast	Total
Female	0	0.00%	0	0.00%	0	0.00%	11	50.00%	11	50.00%	22
Male	19	70.00%	2	7.00%	6	22.00%	0	0.00%	4	0.00%	31
Totals	19		2		6		11		15		53

				Sit	e			
Body Aspect	Mokrin	Szóreg	Deszk A	Deszk F	Ószentiván	Pitvaros	Óbéba	Ostojićevo
Left	42%	36%	52%	43%	38%	48%	43%	50%
Right	58%	64%	48%	57%	62%	52%	57%	50%
Total	258	148	44	56	26	21	14	66

Table 15. Body Aspect in the Maros cemeteries (adapted from Милашиновић 2008, 63; O'Shea, 1996, 153)

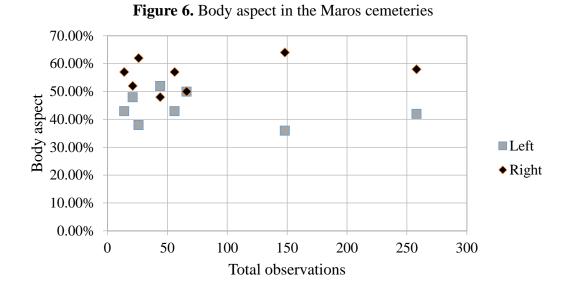


Table 16. Body Aspect by Sex at Mokrin (after O'Shea, 1996, 154)

Sex		Left		Right	Total
Female	7	6.73%	97	93.27%	104
Male	65	89.04%	8	10.96%	73
Totals	72		105		177

Grave	Sex	Age	Orientation	Side	Comments
Mokrin					
88	Female	Adult	North	Left	
160	Female	Adult	North	Left	Feet missing?
299	Female	Adult	Northeast	-	Rhomboidal posture
10	Male	Senile	South	Right	
79	Male	Mat/Sen	South	Right	Partially supine
122	Male	Adult	South	Right	Multiple burial
147	Male	Adult	South	Right	
210	Male	Senile	South	Right	
281	Male	Senile	South	Right	Trepanned cranium. Feet missing
Szóreg					
55	Female	Mature	North	Left	Trepanned cranium
87	Male	Adult	South	Right	Farkas and Rega agree
Deszk A					
62	Male	Adult	South	Right	
Deszk F					
64	Female	Mature	North	Left	
8	Male	Adult	South	Right	
9	Male	Adult	South	Right	
32	Male	Mature	Southeast	Right	
48	Male	Adult	South	Right	
60	Male	Adult	South	Right	
68	Male	Adult	South	Right	
Pitvaros					
15	Male	Adult	South (?)	Right	Farkas and Rega agree
Ostojićevo					
36	Female	Adult	Southwest	Left	
107	Male	Adult	Southeast	Left	
114	Male	Adult	Southeast	Right	
115	Male	Senile	Southeast	Right	
121	Male	Adult	Southeast	Right	
203	Male	Mature	North	Right	

Table 17. Type A: Body orientation and placement inconsistencies in the Maros cemeteries (after Милашиновић 2008, 64; O'Shea, 1996, 157)

Grave	Sex	Age	Orientation	Side	Comments
Mokrin					
138	Female	Adult	South	Left	
141	Female	Mature	South	Left	
153	Female	Adult	South	Left	
270	Female	Adult	South	Left	
167	Male	Ad/Mat	South	Right	
278	Male	Mature	South	Right	
272	Female	Ad/Mat	Southeast	Left	
Szóreg					
58	Female	Senile	North	Right	
147	Male	Senile	North	Right	
177	Unknown	Unknown	North	Right	
182	Unknown	Unknown	South	Left	
Deszk A					
33	Unknown	Unknown	South	Left	
41	Unknown	Unknown	South	Left	
43	Unknown	Adult	South	Left	
44	Unknown	Adult	South	Left	
Deszk F					
45	Female	Adult	South	Left	
10	Male	Adult	South	Left	
44	Unknown	Adult	South	Left	
58	Male (?)	Adult	North	Right	Trepanned cranium
Ószentiván					
17	Male	Adult	North	Right	Face turned downward
Pitvaros					
41	Unknown	Adult	North	Right	
Ostojićevo					
36	Female	Adult	Southwest	Left	
203	Male	Mature	North	Right	

Table 18. Type B Inconsistencies: West-Facing Graves in the Maros Cemeteries (after Милашиновић 2008, 64; O'Shea, 1996, 158)

Grave	Sex	Age	Side	Facing	Comments
Szóreg					
74	Male	Adult	Left	South	Nagyrév ceramics
111	Female	Adult	Left	South	Nagyrév ceramics
189	Male	Mature	Left	South	
Deszk A					
2	Male	Adult	Left	South	
5	Unknown	Adult (?)	Left	South	
8	Unknown	Adult (?)	Left	South	
11	Unknown	Adult (?)	Left	South	
19	Unknown	Adult	Left	South	
20	Unknown	Adult	Right	South	
22	Unknown	Adult (?)	Left	South	
23	Unknown	Adult	Left	South	
51	Unknown	Child	Left	South	
78	Female	Adult	Left	South	
80	Unknown	Child	Left	South	
Deszk F					
6	Female	Adult	Right	North	
27	Unknown	Adult (?)	Right	North	
29	Unknown	Infant	Right	North	
Oszentiván					
20	Male	Adult	Left	South	
22	Unknown	Child	Left	South	
103	Unknown	Unknown	Left	South	
104	Unknown	Child	Right	North	Nagyrév ceramics
105	Unknown	Child	Left	South	
109	Unknown	Unknown	Left	South	Nagyrév ceramics
111	Unknown	Unknown	Left	South	
113	Unknown	Unknown	Left	South	
114	Unknown	Adult	Left	South	
115	Unknown	Unknown	Left	South	
119	Unknown	Unknown	Left	South	Nagyrév ceramics
Ostojićevo					
250	Unknown	Child	Right	North	

Table 19. East-Oriented Graves in the Maros Cemeteries (after Милашиновић 2008, 64; O'Shea, 1996, 160)

Grave	Sex	Age	Side	Facing
Mokrin				
193	Unknown	Infant	Right	South
Szóreg				
62	Male	Mature	Right	South
63	Unknown	Adult	Right	South
64	Female	Adult	Left	North
65	Male	Mature	Right	South
136	Male (?)	Juvenile	Left	North
199	Unknown	Adult	Right	South
214	Unknown	Child	Right	South
226	Unknown	Adult	Right	South
Deszk A				
9	Unknown	Child	Right	South
Ószentiván				
12	Unknown	Adult	Right	South
101	Unknown	Unknown	Right	South
102	Unknown	Unknown	Right	South
112	Unknown	Unknown	Right	North
118	Unknown	Unknown	Right	South
Ostojićevo				
127	Unknown	Juvenile	Right	North

Table 20. West-oriented graves in the Maros cemeteries (after Милашиновић 2008, 64: O'Shea, 1996, 162)

	~	Body orientation								
Site	East	West	Northeast	Northwest	Southeast	West-facing				
Mokrin	-	+	+	+	+	+				
Szóreg	+	+	?	?	?	+				
Deszk A	+	+	+		-	+				
Deszk F	+	-	-	+	+	+				
Ószentiván	+	+	-	-	+	+				
Pitvaros	-	-	+	+	+	+				
Óbéba	-	-	+	+	+	-				
Ostojićevo	+	+	+	+	+	+				

Table 21. Summary of alternative body placements in the Maros cemeteries (after Милашиновић 2008, 64-66; O'Shea, 1996, 168)

Table 22. Basic data on gender, age and burial finds of inversely oriented graves at Mokrin (adopted from Порчић 2010, 168)

Grave	Gender	Age	Ceramics	Jewelry	Needles	Total
94	Female	Infant I	1	0	0	1
95	Female	Infant I	2	0	0	2
160	Female	Adult	0	0	0	0
88	Female	Adult	0	0	0	0
10	Male	Senile	2	6	2	10
79	Male	Senile	1	2	0	3
122/1	Male	Adult	0	3	0	3
281	Male	Senile	1	0	0	1

Table 23. Incidence of other funerary treatments in the Maros cemeteries (after Munanuuropub 2008, 67-70; O'Shea 1996, 169)

Treatment	Mokrin	Szóreg	Deszk A	Deszk F	Ószentiván	Pitvaros	Óbéba	Ostojićevo
Alternative posture	8	1	0	0	1	1	0	22 (?)
Multiple burial	4	4	0	0	0	1	0	0
Symbolic burial	5	0	1	0	2	1	0	0
Cremation	3	4	2	0	0	0	0	0
Hearth burial	0	0	0	0	1	1	0	0
Urn burial	0	1	2	0	0	0	0	0
Mutilation	41	?	?	?	?	?	?	4
Trepanation	7	6	0	2	0	0	0	2
Total	278	179	57	49	29	34	15	77

Site	Males/Females	Adult/Sub-adult
Mokrin	No	Yes
Szóreg	No	Yes
Deszk A	No	No
Deszk F	No	Yes
Ószentiván	?*	No
Pitvaros	No	Yes
Óbéba	?*	?*
Ostojićevo	No	Yes (?)

Table 24. Differences in grave depth in the Maros cemeteries (adapted from Милашиновић 2008, 67; O'Shea, 1996, 182)

\*Too few cases for meaningful assessment.

Table 25. Occurrence of bone needles by sex/age in the Maros graves

	Adult females (%)	Subadult females (%)
Mokrin	13	12,5
Szöreg	13	3
Deszk A and Deszk F	10-20	0
Pitvaros	30	0
Óbéba	17-20	0
Ostojićevo	15	3

Table 26. Occurrence of metal pins by sex/age in the Maros graves

	Adult females (%)	Subadult females (%)
Mokrin, Szöreg, Deszk A and Deszk F	9-12	0
Óbéba	17	0
Ostojićevo	15	3

	No. of graves		Sex	Age	2			
Site	with bracelets	Male	Female	Subadults	Adults	Single coil	Multicoil	%
Mokrin	36	10	25	14	21	19	25	12.95%
Szöreg	10	1	5	0	10	1	10	6.49%
Deszk A	0	0	0	0	0	0	0	0.00%
Deszk F	1	1	0	0	1	0	1	1.75%
Óbéba	3	2	1	0	3	6	0	20.00%
Pitvaros	6	3	1	0	4	3	6	17.65%
Ószentiván	3	0	0	1	0	1	0	10.34%
Ostojićevo	3	2	0	1	2	2	1	3.90%

Table 27. Occurrence of bracelets in the Maros cemeteries (after Милашиновић 2008, 72; O'Shea, 1996, 202-203)

Table 28. Breakdown of hair rings and finger rings in the Maros cemeteries (adopted from Милашиновић 2008, 73; O'Shea, 1996, 205)

	No. of		Sex	Age	e	
Site	graves	Male	Female	Subadults	Adults	%
	1.100		Hair ring	s		
Mokrin	19	7	12	9	10	6.83%
Szöreg	1	0	0	0	1	0.65%
Óbéba	4	2	2	0	4	26.67%
Pitvaros	2	1	1	0	2	5.88%
Ostojićevo	3	1	2	0	3	3.90%
			Finger ring	gs		
Mokrin	3	1	2	9	3	1.08%
Szöreg	2	0	2	0	2	1.30%
Deszk A	1	0	1	0	1	2.04%
Deszk F	1	1	0	0	1	1.75%

Site	Number	Frequency of occurrence
Mokrin	54	19%
Szóreg	15	8%
Deszk A	2	4%
Deszk F	4	7%
Ószentiván	2	7%
Pitvaros	2	6%
Óbéba	4	27%
Ostojićevo	21	33%

Table 29. Occurrence of head ornaments in the Maros cemeteries (adopted from Милашиновић 2008, 73; O'Shea, 1996, 206)

Figure 7. Occurence of head ornaments in the Maros cemeteries

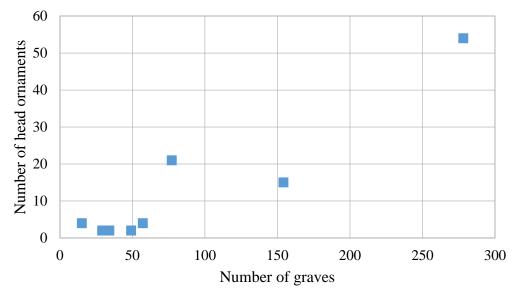


Table 30. Distribution of head ornament types by sex at Mokrin (after O'Shea, 1996, 217)

	Ν	Males		Females		
Ornament type	Number	Percentage	Number	Percentage	Total	
Plaque + Spectacle	8	53%	21	55%	29	
Small disks	4	27%	12	32%	16	
Copper strip	2	13%	3	8%	5	
Plaque + Spectacle + Disk	1	7%	2	5%	3	

Table 31. Necklaces found in Maros cemeteries (adopted from Милашиновић 2008, 76; O'Shea, 1996, 124)

	Number of necklaces	Number of graves	%
Mokrin	58	278	20.86%
Szöreg	18	154	11.69%
Deszk A	0	49	0.00%
Deszk F	2	57	3.51%
Ószentiván	10	29	34.48%
Pitvaros	10	34	29.41%
Óbéba	4	15	26.67%
Ostojićevo	7	77	9.09%
Total	102	415	24.58%

Figure 8. Neckleces found in Maros cemeteries

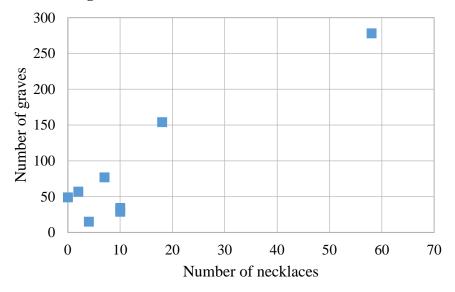


Table 32. Distribution of necklaces forms by sex at Mokrin (after O'Shea 1996, 217)

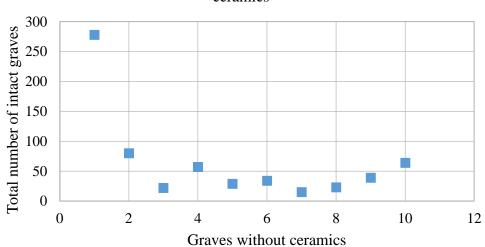
	]	Female	17	_	
Necklace type	Count	Percentage	Count	Percentage	Total
Round only	11	23%	9	56%	20
Tubes, no Pendant	20	42%	4	25%	24
Pendant	6	12%	2	13%	8
Round, Tube and Pendant	11	23%	1	6%	12
Totals	48		16		64

	No. of graves		s	Sex	Age	e		
Site	with small tools	Male	Male Female	Undetermined	Subadults	Adults	Undetermined %	%
Mokrin	19	5	13	1	3	15	1	6.83%
Szöreg	6	2	4	3	2	7	0	5.84%
Deszk A	1	1	0	0	0	1	0	2.04%
Deszk F	3	2	1	1	2	0	0	5.26%
Óbéba	1	0	1	0	0	1	0	6.67%
Pitvaros	1	1	0	0	0	1	0	2.94%
Ószentiván	2	0	0	2	0	2	0	6.90%
Ostolićevo	3	0	2	1	1	2	0	3.90%

**Table 33.** Maros graves assemblages containing small tools by sex and age (adopted from Милашиновић 2008, 79; O'Shea, 1996, 227)

Locality	Graves without ceramics	Total number of graves
Mokrin	35.00%	278
Szöreg, early phase	5.00%	80
Deszk A, early phase	Unknown	22
Deszk F	6.00%	57
Ószentiván	14.00%	29
Pitvaros	26.00%	34
Óbeba	40.00%	15
Deszk A, late phase	Unknown	23
Szöreg, late phase	5.00%	39
Ostojićevo	27.00%	64

 
 Table 34. Overview of graves in localities without ceramics (after Милашиновић 2008, 80)



**Figure 9.** Overview of graves in Maros localities without ceramics

Table 35. Distribution of aceramic graves at Mokrin by age and sex (adopted from O'Shea, 1996, 232)

Sex	Age category	Number	Percentage
Male	Subadult	8	24%
	Juvenile	2	40%
	Adult	24	35%
Female	Subadult	28	60%
	Juvenile	1	50%
	Adult	27	27%

	Num	Number of metal or	letal or	namen	t types	
Grouping	0	1	2	3	4	Total
All Females	116	20	7	5	2	150
All Males	91	12	5	0	0	105
Adult Females	81	10	5	ŝ	2	101
Adult Males	63	ŝ	1	0	0	67

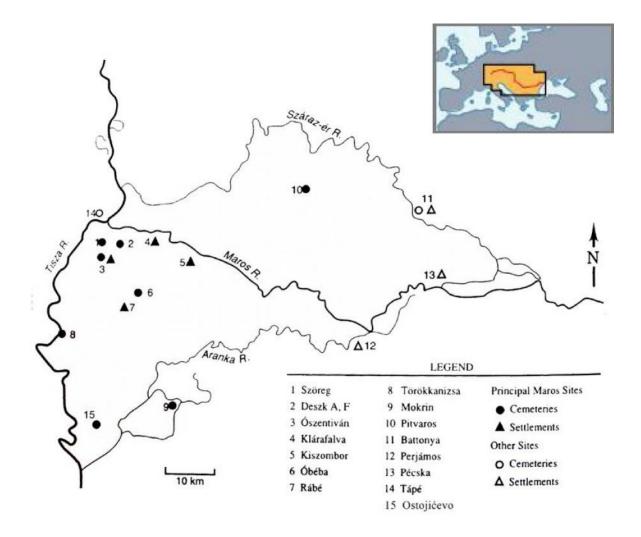
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Total Sample

Table 36. Mokrin: numbers of metal ornament types in graves (adopted from O'Shea 1996, 268)

Elements of the Maros funerary treatment		Relevance scale					
		-1	0	1	2		
Body orientation					1		
Body facing			~				
Body placement				1			
Burial treatment (inhumation, multiple burial, etc)	~						
Postmortem mutilation of hands and feet	~				1		
Grouping of various alternative treatment	~						
Meat/plant consumption	~						
Activity patterns (musculoskeletal stress markers)			~				
Number of grave goods per individual burial				~			
Presence or absence of grave goods in a grave	~						
Number and diversity of grave goods	~						
Class of grave goods				1			
Grave size		~					
Grave depth	~						
Grave furnishing (leather cover)	1			1			
Bone needle					~		
Metal pin					1		
Neck ring	2			1			
Finger ring			~				
Hair ring				~			
Bracelet				~			
Necklace			~				
Head ornament				1			
Sash					1		
Worry beads			~				
Dagger		0 0			~		
Axe					~		
Other tools		~					
Ceramics	~	1					
Food offerings	~						

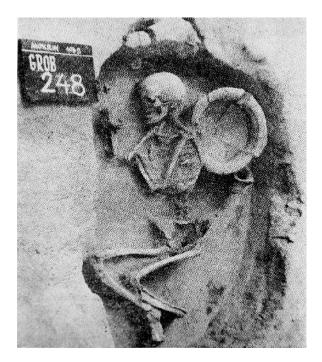
Table 37. Maros funerary treatment elements relevance to gender



**Picture 1.** Map of the Maros culture territory with the principal archaeological sites (adapted from Markovi -Marjanovi 1971, 10)



Picture 2. Grave 308, Mokrin (male, Maturus-Senium) (adapted from Giri 1971, 189)



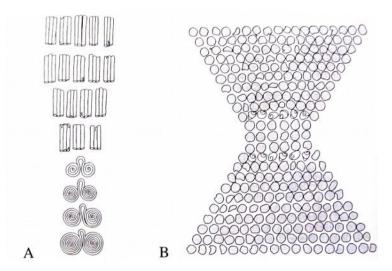
Picture 3. Grave 248, Mokrin (female, Maturus) (adapted from Giri 1971, 158)



Picture 4. Grave 247, Mokrin (female, Infans II) (adapted from Giri 1971, 157)



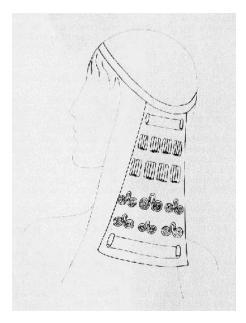
Picture 5. Head ornament from the grave 246, Mokrin (adapted from Giri 1971,155)



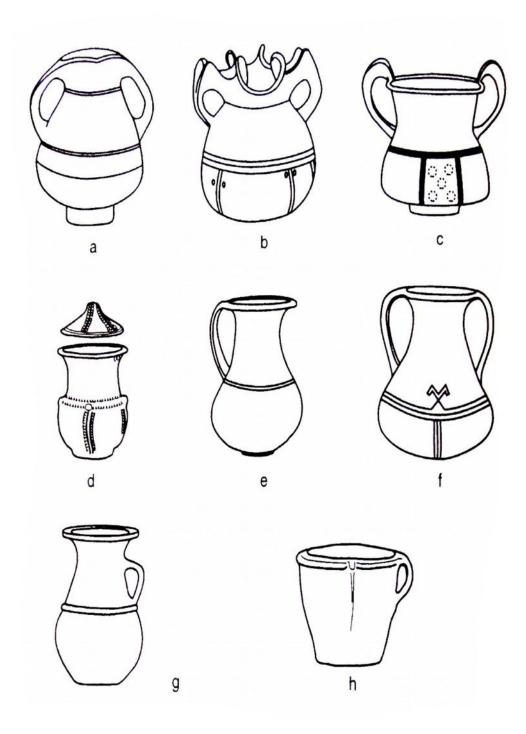
**Picture 6.** Reconstruction of the head ornaments on the basis of findings from Mokrin (adapted from O'Shea 1996, 106)

A: grave 287, composed of tabular copper plaques and spectacle pendants

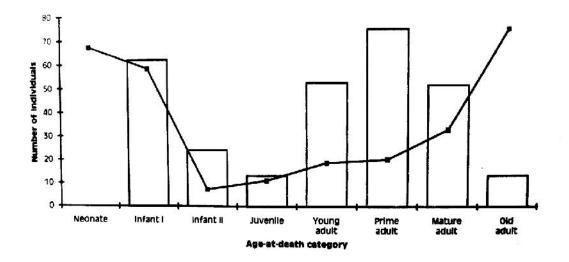
B: grave 259, composed of small copper discs and Columbella shell beads



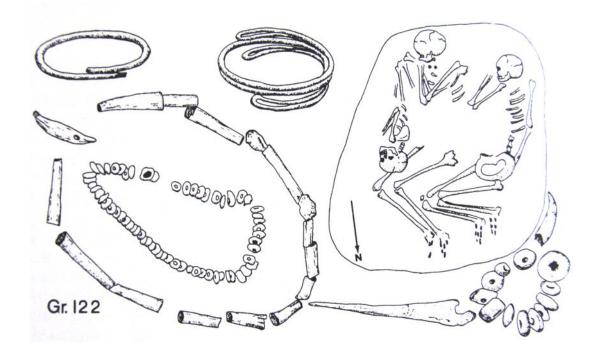
**Picture 7.** Reconstruction of the head ornaments on the basis of findings from Mokrin, grave 140 (adapted from Giri 1971, 109). Ornament is composed of copper tabular plaques, spectacle pendants and strips.



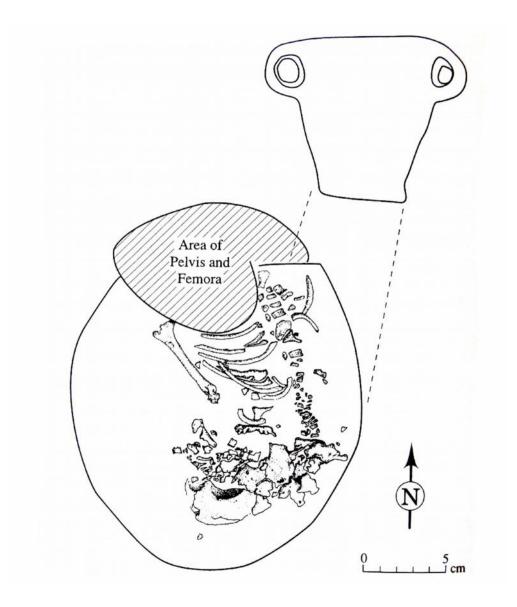
**Picture 8.** Maros ceramic forms: (a-c) Late phase Baroque forms; (d-f, h) Early phase forms; (g) Nagyrév-style pitcher, (i) Large serving bowl; (j) Biconical storage jar (adapted from O'Shea 1996, 48). Individual vessels are not drawn to scale.



**Picture 9.** Mokrin mortality profile. For comparison, the line indicates expected mortality for an identical sample with life expectancy at birth of 30 years. Different life expectancies change the values but not the essential U-shape of the curve (adapted from Rega 1996, 236)



Picture 10. Multiple burial in grave 122 at Mokrin (adapted from Rega 1996, 232)



Picture 11. Infant burial found at Kiszombor-Új Élet, Hungary (after O'Shea 1996, 146)