
Reconsidering the Issue of Eastern Migrations in Connection with the Artificial Cranial Deformation Practices among the Late Sarmatians

Maria A. Balabanova
Volgograd State University

ABSTRACT

The article is devoted to the custom of artificial deformation of skull which was practiced by the early nomads of the late Sarmatian time in the steppe zone of Eastern Europe. The issues of spread, origin and functional load of this custom are being resolved on the basis of the mass paleoanthropological materials from the burial mounds in the Southern Urals, the Lower Volga and the Lower Don region. The data show that the proportion of deformed skulls varies from 50 per cent to 100 per cent while the dating of the complex, where the materials with deformation marks come from, has shown that no gradual penetration occurred in the late Sarmatian society. Due to the fact that the late Sarmatian society had some peculiar features (e.g., children were not buried under the mounds and only part of women had this kind of privilege and also the high injury level of the skeletons caused by hostilities) it is possible to consider that the custom of the artificial deformation was a constant symbol of intra-group solidarity and inter-group cultural differences. One can hardly define the connection between the practice of deformation and such phenomena as fashion and esthetics, since along with the late Sarmatians a large number of settled and nomadic tribes practiced this custom.

INTRODUCTION

The custom of artificial head deformation is considered to be one of the most common types of body mutilations both in ancient and modern cultures. The practice is abundantly described in written, ethnographic and paleoanthropological sources. In the course of this study, we find it interesting to examine all three above mentioned types of sources, which contribute to understanding of the phenomenon of artificial skull deformation observed

Social Evolution & History, Vol. 18 No. 2, September 2019 191–209

© 2019 'Uchitel' Publishing House

DOI: 10.30884/seh/2019.02.10

in the south of Eastern Europe dating back to the beginning of the new era. The traditional skull deformation practices are observed on the paleoanthropological materials and its analysis and interpretation pose numerous questions.

Let us start by considering the ratio between the deliberately distorted skulls and the non-deformed ones attributed to the late Sarmatians as well as the distribution by territorial and population groups, and then compare and contrast the results to the populations parallel in time and location.

The Lower Volga archeological material with traces of deliberate artificial head deformation is represented by a series of nomadic tribes of the late Sarmatian period, excavated from the burial sites localized along the terraces of Esaulovsky Aksai (Abganerovo II, III, IV, Zhutovo, Ternovsky, Peregruznoye I, Asai I, II, III, IV, V and *etc.*); in the Astrakhan part of the right bank of the Volga River (Staritsa, Kuzin, Krivoi Luka I, IV, VII, XIV, XVI, XVII, *etc.*); in the territory of Kalmykia (Jangr, Duker, Kermen Tolga, Kuptsyn Tolga, Ut, *etc.*); in the Volgograd and Saratov Trans-Volga areas (Berezhnovka I and II, Kalinovka, Kharkovka, *etc.*).

The Lower Don archeological material with traces of artificial skull deformation is found in the burial sites on both left and right banks of the Don River (Sladkovka, Krivolimansky, Podgornenskiy, Moscovskiy I, II, Yasyrev, Mayak, Novyy, *etc.*).

The published research on the late Sarmatian series from the Ural territory excavated from the burial sites of Pokrovka 10, Lebedevka, Solyony Dol, and others also provides craniological material with traces of deliberate skull deformation.

Frequency of occurrence of deliberately deformed skulls in the Lower Volga measures about 70.0 per cent of the total sample; the incidence of the Lower Don territory is lower and amounts to about 50 per cent (Ginzburg 1959; Firshtein 1970; Balabanova 2001: 111; 2004: 172; Batiyeva 2011: 41). The Late Sarmatian Ural series makes the highest rate of deformation reaching almost 100.0 per cent in the Pokrovka 10 and up to 45.0 per cent in the Lebedevka burial sites (Malashev and Yablonsky 2008: 75; Moshkova 1982: 80). According to the researchers who studied and published results on a small series ($n = 5$) excavated in the Sukhoi Dol mound, every skull up in the group (total 100.0 per cent) was intentionally deformed (Kitov and Khokhlov 2011: 127–131).

The distribution of deformed and non-deformed skulls in separately taken burial mounds is at least 50.0 per cent for the Lower Volga region, and 25.0 per cent at the minimum for the Lower Don territory. The highest deformation rates in the Lower Don are encountered in the burial sites of Kirovsky IV, Novosadkovsky, Moskovskiy I and Moskovskiy II (Batiyeva 2011: 42). In some smaller series ($n = 1-3$), there were no deformed skulls. Or else, at the same sample size, all the skulls were distorted by deformation.

In addition to the late Sarmatian nomadic groups, the custom of skull deformation was observed among the population of the Lower Don settlements including the ones excavated from the burial sites of Tanais, Kobyakiv, Nizhnegnilovsky, Rogozhkino XIII and the population from the territory of Azov in the Late antiquity. The rate of deformed skulls falls at about 20.0 per cent or lower in comparison with non-deformed ones. Only the material of the Kobyakiv ancient settlement contains about 25.0 per cent cases of skulls deformation (Batieva 2001: 226–228; 48, 49; Shevchenko and Firshtein 1991: 7–16).

There are few cases of deliberate skull deformation found in the Maeotians materials of the Kuban area originating from the archive of the author of the present article (necropolis: Starokorsunsky ancient settlement No. 2, Sporny, Lenin's farmstead, *etc.*). It can be stated that, only seven deformed skulls were discovered in the series from the cemetery of the 2nd Starokorsun hill-fort with population of more than 1,000 people. All the studied materials were excavated from the burial mounds dating back to the second–fourth centuries AD.

Another region where the custom of deliberate skull deformation was practiced in the late Sarmatian era is the Crimea and the Northern Black Sea coast. A comprehensive analysis of the tradition in various cultural populations and peoples of the Crimea is available in the study conducted by Ivanov (2003). The author argues that in the territory of the Crimea the artificial deformation firstly appeared in the early second – late first centuries BC; it became more commonly practiced in the mid-second century AD and ‘vestigially’ remained until the turn of the eighteenth–nineteenth centuries (Ivanov 2003: 86).

Regarding the late Scythian and Chernyakhov series, there are isolated cases of intentional skull deformation, which could be associated with the Sarmatian-Alan component in the population (Fedorov 1958; Magomedov 2000: 203).

Apparently, the Sarmatian-Alans introduced the practice to Central and Western Europe. It was adopted by various tribes inhabiting the territory of such modern states as Hungary, Bulgaria, France, Germany, Austria, *etc.* (Pap 1983, 1984, 1985; Bereczki and Marcsik 2006; Fothi 2000; Kazanski 2006; Pany and Wiltshcke-Schrotta 2008; Enchevet *al.* 2010). It should be noted that some authors believe that the Sarmatian-Alans were the carriers of this unusual cultural tradition while others believe that those were the Huns (Liptak 1983; Pap 1983, 1984, 1985; Fothi 2000). Besides, the fact that in the process of active migration of these tribes, the custom of deformation spread around Central and Western Europe is proved by anthropological materials from burials dating back to the second century AD. Some written sources provide data on the presence of artificial deformation in the Huns and their leader Attila (Latyshev 1949: 287–293). By the fourth–fifth centuries AD the custom of skull deformation was adopted by some Germanic tribes, such as

the Gepids, as evidenced by the analysis of the series excavated from the Hungarian plain. Craniological complex of the deformed skulls is represented both by the type of northern Caucasians and mixed Caucasian-Mongoloid mestizos (Dingwall 1931: 16–45; Liptak 1983; Pap 1983, 1984, 1985; Fothi 2000: 89; *etc.*).

According to many studies, the custom of deliberate skull deformation was brought to Europe in the early centuries of our era by the Sarmatian-Alan tribes. The Sarmatians themselves had most likely borrowed it from the tribes of Central Asia and Kazakhstan. An even more ancient cultural center of the custom was discovered in this territory. Its geography, chronology and typology are studied by T. K. Khojayov (2006). The author claims that deliberate artificial deformation was carried out from the mid-first century BC to the eighteenth–nineteenth centuries AD. At the same time, this custom was massively practiced in the late Sarmatian period and in the early Middle Ages.

The study by S. S. Tur is solely devoted to the problem of origin and functions of ring strain deformation (Tur 1998). His research is mainly based on the archeological materials of the Kenkol culture. The same author provides a list of circular-type skull deformations originating from Western and Southern Siberia. In those territories the custom was practiced from the second to the tenth centuries AD. Anatoly Bagashev describes the traces of some skull deformations from the late burials of the Sargatian culture (Bagashev 2000: 31, 43, 45). A separate study conducted by D. I. Razhev is devoted to the practice of deliberate deformations in the tribes of the Sargatian population (Razhev 2009). The researcher proves that the ratio of deformed and non-deformed skulls fluctuated during the lifetime in the Late Sargatian series was at its maximum in the Priishima group reaching 20.8 per cent; whereas in Priirtyshskiy and in Pritobolskaya groups the percentage was only 15.0 and 11.0 respectively (*Ibid.*: 150).

According to V. A. Dremov, the overwhelming majority of circularly deformed skulls in Siberia were found in steppe and forest-steppe regions (Dremov 1977). In Central Asia, the tradition of deliberate skull deformation was practiced by some of the Xianbei groups. A series of 50 skulls studied by A. I. Buraev also reveals evident Mongoloid traits in addition to the traces of deformation (Buraev 2005: 369). Moreover, there is evidence that the custom of artificial deformation was also practiced by a part of the population of the Tobol River area in the period of the Great Migration of peoples (in the third–fourth centuries AD) (Sleptsova 2016: 57–59).

As can be seen from the above survey of related literature and archival materials of the author of this paper, it is possible to identify stable centers from which the custom of deliberate head deformation spread towards the south of Eastern Europe in the late Sarmatian time.

PROBABLE ORIGINS AND SPREAD OF THE DEFORMATION PRACTICE IN THE LATE SARMATIAN NOMADIC POPULATION AND THE FUNCTIONAL LOAD OF THE TRADITION

The study of the Late Sarmatian craniological series from various territories shows that in morphological terms the population of this culture was presented predominantly by the long-headed Caucasians whose appearance was different from the previous inhabitants of the territory, which makes it possible to explain the origin of the population and culture by migrations (Ginzburg 1959; Firshtein 1970; Balabanova 2004, 2016; Batiieva 2011; Malashev and Yablonsky 2008). The comparison of the cultural and chronological groups of the Sarmatian time (the fourth – the third centuries BC – the second – the fourth centuries AD) from the territory of Eurasian steppe allows determining when and where the first migrations started. Apparently, this process can be dated back to the second–first centuries BC, as evidenced by both archaeological and anthropological material (Skripkin 2000: 25–27; Simonenko 2003: 54–56; 2010: 394; Balabanova 2010: 72; 2016: 29–31). At any rate, the population of that time differed from its predecessors of the sixth–third centuries BC by a decrease in the share of brachycephalic (round-/short-/broad-headed) Caucasians as a result of migration of dolichocephalic (with oval-/long-/narrow-shaped heads) Caucasians (Balabanova 2010: 72, 75). During the Middle Sarmatian period, between the late first and early second century AD, the subsequent migration waves led to the fact that the proportion of long-headed Caucasians increased while the population acquired more distinctive mesomorphic features. In the late Sarmatian phase, between the second half of the second and fourth centuries AD, the long-headed type becomes predominant everywhere (among the nomadic population of the Southern Urals, the Lower Volga and the Lower Don regions). We could also observe that the change in the morphological appearance of the nomadic population of this period is accompanied by sex-age disproportions. Firstly, there is a significant predominance of men over women and an almost total absence of children from under the burial mounds; besides there are numerous cases of artificial deliberate head deformation (Balabanova 2009; Batiieva 2011; Malashev and Yablonsky 2008).

We suppose that the adoption of this cultural tradition by the Sarmatians took place in the following order. Unlike the parallel Sargatian culture, there was no gradual introduction of the custom into the late Sarmatian practices as it was proved by a thorough analysis of craniological material with traces of deformation (Razhev 2009: 153–160). The total archeological material of the Middle and Late Sarmatian phases includes about 800 skulls, which allows us to make this assumption. So far only five deformed skulls have been discovered (four females and one male) dating back to the late first – early second centuries AD. That is, they belong

to an earlier period than the majority of the Late Sarmatian skulls dating back to the late second – fourth centuries AD. At the same time, all these complexes combine elements of the funeral rites of the Middle and Late Sarmatian cultures. In two burials pits (No 2 from the burial site of Maksyutovo II, and No 34 from the burial site of Kalinovka), the skeletons were placed diagonally, which is a vivid sign of the Middle Sarmatian culture and was also observed at an early stage of the Later Sarmatian culture. Another male skull, possibly located diagonally, was excavated from a robbed square burial pit 29 of Kuzin burial site (?). Firshtein determined the Mongoloid admixture and the frontal type of deformation on the skull from the burial site of Maxyutovo (Firshtein 1970: 81); Ginzbug diagnosed the ring type deformation on the skull from mound 34 of the burial site of Kalinovka. The author of this paper discovered frontal-occipital type of deformation on the skulls from the mound 11 of the Staritsa burial site and mound 29 of the Kuzin site. There is another male skull with possible frontal deformation in the burial 2 of the mound 8 of Staritsa burial site. It was excavated from the burial with indistinct cultural attributes. Convexity index of the frontal bone which lies within the limits of small values as well as vertical angulation of 75 degrees of the slope of the forehead from nasal point – all this indicates deliberate artificial skull deformation. One burial from the mound 11 of Staritsa burial site can be attributed to elite burials as it contains gold jewelry such as necklaces, sewing plaques, *etc.* It is interesting that both Staritsa burials were constructed according to a non-standard funeral rite. The bone remains of the woman from the burial 11 lay on the back with slightly bent legs, the bones of which later fell to the right. Meanwhile, the bone remains of the man from burial 2 of mound 8 are ‘buried on his back as if in a sitting position’ on his knees (Shilov 1960; 1961). The above listed burials due to a combination of both Middle and Late Sarmatian features are difficult to be attributed to one certain culture. That is why, some archaeologists refer them to the Middle Sarmatian, others to the late Sarmatian periods. To make a conclusion, there is not yet sufficient reason to assert that the custom of skull deformation entered the Sarmatian culture earlier than the second century AD.

The ratio of deformed and non-deformed skulls in the early chronological group of the late Sarmatians (the late 2nd – early 3rd century AD) on average is not much higher than that of the late chronological group (the late 3rd – early 4th century AD) and equals 74.0 per cent and 60.0 per cent, respectively. If we consider this problem on the basis of the materials of individual cemeteries, the smallest ratio of deformations is encountered in the series from the burial site Abganerovo II (over 33.0 per cent) and KuptsinTolga (about 50.0 per cent) belonging to the late stage of the Sarmatian culture (the late third – early fourth century AD). According

to these data, it can be assumed that the cultural innovation of deliberate skull deformation in the Lower Volga steppes was not adopted gradually, but immediately in parallel with the mass arrival of migrant groups. This gives grounds to believe that all the late Sarmatian cultural features, including the custom of deliberate head deformation, were formed in some other territory which is now difficult to determine.

HYPOTHESIS ON THE POSSIBLE FUNCTIONAL LOAD OF THE 'ARTIFICIAL-DEFORMED HEAD' AMONG THE LATE SARMATIAN NOMADS

The adoption of the custom of deliberate skull deformation by the Late Sarmatian population also has a functional load.

To understand the significance of this custom for the population under study let us briefly review the concepts suggested by the ethnologists who considered artificial skull mutilations along with other 'bodily injuries,' the latter term was introduced by E. Leach (2001: 75).

So, for example, Ratzel who paid much attention to artificial deformations considers somatic modifications as a means of non-verbal communication, attributing them to the same level as hairstyles and ornaments. Nevertheless, he recognizes their multifunctional character (Ratzel 1902: 101).

Van Gennep addressed the problem of somatic mutilations in his classic work *The Rites of Passage*. He draws attention to the fact that somatic modifications cannot be viewed and studied in isolation from each other singling them out as independent cultural phenomena. In addition, the researcher clearly defines somatic modifications as 'indicators of collective attribution', thereby indicating the social nature of this phenomenon. In addition, Gennep believes that 'adoption of neighboring tribes' rites may occur only if this previously unknown mutilation can serve as a clear separation of the tribe from neighboring groups. Self-harm is a means of ultimate differentiation' (Gennep 1999: 72).

German ethnographer G. Schurz, despite some contradictory judgments, refers to artificial 'mutilation' as 'bodily signs' denoting belonging to a particular tribe. He tries to explain the origins of this phenomenon by the 'whim of fashion,' 'some herd instinct' inherent only to underdeveloped peoples or to some of the lowest layers of modern society (Schurz 1923: 442).

The well-known British cultural anthropologist E. Leach devoted a special place to the problem of 'bodily injuries' in his major work. Similar to van Gennep, Leach examines somatic modifications in the context of the rites of transition and gives two basic interpretations. First, somatic mutilations are a means of purification, since most of them involve a removal of a part of the body boundary (foreskin, clitoris, hair, teeth, *etc.*). The second option suggests that somatic mutilations are

a marker of the carrier's changing social status. In a more detailed form than Tylor and Ratzel, Leach studies the topic of partial sacrifice and non-verbal (sign) communication. However, he introduced new elements considering somatic mutilations as binary oppositions. In this context, in our opinion, the most interesting is his interpretation of bodily injuries as markers for changing the social status of the bearer (Leach 2001: 75).

Russian anthropologist Marina Butovskaya studies non-verbal communication and considers somatic modifications as 'a component of aesthetic stereotypes.' In general terms, the artificial mutilations to the body are rarely considered as a part of non-verbal communication, despite the fact that a lot of scientific and popular scientific works are devoted to the body language. What is important is that in her study Butovskaya notes that 'a particularly shaped body serves to distinguish between friend-or-foe tribesmen' (Butovskaya 2004: 376). The deformation of the head is a lifelong sign which could have been used to identify friends and foes.

Undoubtedly, the practice of deliberate deformation demonstrates a choice to visually distinguish the owner of the somatic mutilation from strangers and to identify oneself with his or her group (Soto-Heim 2004; Gerszten 1993; Hoshower *et al.* 1995; Torres-Rouff 2002). In this case, the difference between the carrier of the modification and the 'foes' becomes visible.

To summarize written and ethnographic sources, as well as paleoanthropological material found in the burials of various archaeological cultures, we can stress that the specific shape of head was obviously a desirable attribute to stand out in some nationalities, estates and social groups.

While analyzing numerous sources, the researcher I. A. Grinko identified and interpreted the main functions of somatic mutilations as follows:

- *marking* function designates age, gender, social or ethnic background of the carrier;
- *ritual-socializing* function;
- *aesthetic* function;
- *apotric* function of sacral protection (Grinko 2006: 13).

There are numerous examples of traditional cultures that postulate the idea of somatic mutilations being indispensable attributes for a closed community (ethnic, sex-age, caste-group, *etc.*). Apparently, societies that initially began to practice deliberate head deformations, view the child's body as an object of material culture which in its essence opens opportunities for body design and creation. In order to deliberately form the head in a particular shape, it was necessary to conduct a continuous set of actions at some time interval. Manipulations carried out on the child's head, eventually lead to the desired form of skull in adulthood. To carry out this complex mutilation, it was necessary to have an idea in advance what form of head was needed, how long it would take to manipulate, what kind of

force was to apply, and what technical methods were to be used. Moreover, we can assume that the head was perceived as 'unfinished' requiring cultural change and manipulation in the Sarmatian society. This idea is not new if it is considered from the perspective of plastic surgery. Formed in a special way, head becomes standard and properly adjusted to social and cultural requirements.

In order to summarize all of the above reflections, one should recognize that head deformation was used as a marker of social difference in status at least for the early period of history. Some scientists believe that deliberate skull deformation is a result not only of the structural complication of the society, but also a component of the social distinction (status and/or belonging to an ethnic group), that is an indicator of a group membership (Dingwall 1931; Garrett 1988: 17; Gerszten 1993; Molleson and Campbell 1995: 50, 52; Boada Rivas 1995: 144; Ortner 2003; Munizaga 1987, 1992; Torres-Rouff 2002, 2003; Lorentz 2003; Schijman 2005; Ayer *et al.* 2010). In this respect, the conversation between a Maya and an early Spanish missionary who asked about the meaning of the custom looks interesting. According to the respondent, the newly born child has a very flexible head which can be easily shaped according to the pattern that reproduces the head of god; thereby the child is connected to god and gets the status of noble, beautiful and better-adapted person to bear the burden of life. According to the opinion of some researchers, based on the analysis of artifacts, the deformation of the head in the Maya culture was carried out in order to obtain resemblance with the head of a jaguar, a sacred animal and a symbol of strength and power; the Mayas also deformed the head to resemble the head of the god Maes, a symbol of fertility (cited in Romero-Vargas *et al.* 2010).

Along with this, it can be assumed that artificial deformations fulfilled purely individual goals, such as personal aesthetics, but not beyond the framework of social and cultural canons of ideal form (Argenta *et al.* 1996; Lorentz 2003). The deformed head as a canon of beauty was recognized in the Songish population of British Columbia; non-deformed head was considered ugly. In Arawe area of Melanesia local tribes viewed an elongated head obtained through lifelong deformation as more attractive to the sexual partner (Blackwood and Danby 1955; Cheverud *et al.* 1992; *etc.*).

Possible motivations of the custom of artificial head deformation among different peoples are given in the works of Russian and foreign scientists. There are also evidences about cultures in which the cranial modification was applied either to women or to men, for example in the American Choctaw, Kedo and Chinook peoples; or to individual estate groups, mainly to the aristocracy (Hippocrates 1994: 279–306; Ratzel 1903: 313, 503, 637; Ozbek 1974: 470; Meiklejohn *et al.* 1992: 89; Mu-

nizaga 1987; 1992; Hoshower *et al.* 1995; Loginov 1998: 279, 629; O'Loughlin 2004; Torres-Rouff 2002, 2003; Ayer *et al.* 2010).

In anthropology, cases of cranial mutilations were very often studied and interpreted as ethnic markers, for instance, in South American peoples, medieval and new sources for Khorezm and Turkmenia (Yaquut al-Hamawi 1939: 483; Makdisi 1939: 286; Al-Biruni 1987; Ratzel 1903: 184; Dunaevskaya 1963: 47; Dingwall 1931; Hoshower *et al.* 1995: 145; *etc.*).

Any individual who wanted to assert his status or simply confirm his or her right to live in a particular society needed to have some somatic modifications. Since the head was deformed in infancy, the adult person did not make the choice, which had been made by the parents and, in the first place, by the mother.

As part of the solution of the problem of motivation for skull deformations among the late Sarmatian nomads, one should remember that the prevailing part of them (≈ 100.0 per cent in the Urals (burial sites of Pokrovka 10, Solyonny Dol), ≈ 70.0 per cent in the Lower Volga region and ≈ 55.0 per cent in the Lower Don territory) deformed the head. Such a massive practice of deformation involuntarily makes us wonder about the function of the custom and whether the deforming device affected human health. A. A. Zaichenko believes that such a custom 'performed the function of consciously ideologically motivated mutual assimilation of people of different ethnicities in order to create a single community or a union of tribes' (Zaichenko 2009: 118). A very similar concept for the Sargatian society was proposed by D. I. Razhev who claimed that an elongated deformed head 'was a marker of belonging to powerful political entities' (Razhev 2009: 164). At the same time, among many peoples including the Sarmatians, the custom of deformation was introduced gradually, firstly, into the elite strata, and then after the decision was made 'politically', was transformed into common practice (*Ibid.*: 160).

Thus, both these researchers interpret the custom of skull deformation from the standpoint of political expediency. That is, deformation is regarded as a way to manage people. We could have agreed with all these assumptions but for the following facts.

In contradiction to the outdated proofs provided by Firshtein about the introduction of the custom into the Sarmatian environment in the period from the first century BC – first century AD, Zaichenko indicates that the ratio of artificially deformed skulls at that time was only 35.7 per cent. The increase in the late Sarmatian period up to 90.0 percent, in his opinion, is evidence of the creation of a union of tribes or a single society by the Sarmatians (Zaichenko 2009: 117).

The analysis of mass anthropological material, including the series from the Trans-Volga region, which formed the basis for the study by Firshtein, shows that there is not a single deformed skull in the period from

the second to the first centuries BC, that is, among the Early Sarmatians. Firshtein reexamined the early group in terms of cultural definitions and chronology. As a result, only a few skulls remained on the list of the burials belonging to the Middle Sarmatian time, including the material found by Ginzburg at the Kalinovka burial site. The rest was reinterpreted as the late Sarmatian culture. This was done because in archaeological sense the burial complexes are not explicit, they can also be referred to the late Sarmatian time, as mentioned above (Ginzburg 1959; Firshtein 1970).

On this basis we can conclude that the late Sarmatians did not introduce the custom gradually, and they had come to the Lower Volga already practicing this tradition. After their arrival in the newly-found homeland which was the territory of the Southern Urals, the Lower Volga and the Lower Don regions, the late Sarmatian tribes partly assimilated the Middle Sarmatian customs, extended their cultural influence and partially borrowed the Middle Sarmatian traditional elements. For example, this can be evidenced by the combination of such Middle Sarmatian features as the diagonal position of the dead in the burial pit with the Late Sarmatian custom of artificial skull deformation. Since it is assumed that the late Sarmatian cultural complex was introduced mainly by men, then apparently, the middle Sarmatian traditions were carried by women whom they married. The 'custom of deformation' was most likely spread among the female part of population, because they had to take care of babies, imposed a deforming device, monitored the deformation process, *etc.* Besides, few female representatives of the same culture as the migrated male group also continued the deformation custom. According to ethnologists, the key innovations are frequently introduced into and spread in the society through the institution of marriage (Arutyunov 1985; Baiburin 1990: 26, 36). All the above allows us to recognize the prestigious and symbolic function of the custom of deliberate head deformation. Nevertheless, it should be noted that deformation labeled not a union of tribes, but a society of highly militarized people. This is evidenced by the features of studied anthropological material. The Late Sarmatian population from the above mentioned burial mounds does not fit the definition of paleopopulation, primarily because of sex disharmony, age imbalance and high incidents of injuries to skeletons (Balabanova 2009; Balabanova and Pererva 2007; Batiyeva 2003; Malashev and Yablonsky 2008; *etc.*).

CONCLUSION

Summarizing the above presented data, it can be assumed that the artificially deformed head among the late Sarmatian nomads, on the one hand, was a permanent symbol of an intragroup solidarity, and on the other, reflected the intergroup cultural difference. Performing the function of a cultural marker, this custom simultaneously ensured a very important regulatory

function for any society, clearly indicating the members' social or ethnic affiliation, helping to avoid mistakes in the communication process.

Speaking about the motivation of the practice of artificial head deformation among the Sarmatian nomads of the first centuries of our era, one can hardly deny such at first glance, rather abstract functions as fashion and aesthetics signs. Apparently, the Sarmatians considered beautiful what was fashionable. Just at this period the artificial deformation of the head becomes a mass cultural phenomenon not only among the peoples of Central Asia and Kazakhstan, but also in Europe. Numerous ethnographic sources describe how jewelry and mutilations to the body were inextricably intertwined with the concepts of beauty and aesthetics (Riefenstahl 1976: 219; Faris 1988: 31; Levin 1947: 184; Dunaevskaya 1963: 47, 48; *etc.*). The Alano-Sarmatian groups who participated in many military activities already before the arrival of the Hunnish hordes, most likely brought the custom of head deformation to Europe. This is evidenced by the fact that those 'Sarmatians' who inhabited the territory of modern Bulgaria, Hungary, and Romania also practiced the custom of deformation.

To conclude, the analysis of various aspects of deliberate head deformation among the ancient peoples of the Lower Volga region allows us to suppose similar behavioral, social and cultural motives prevailing in other regions and cultures practicing it.

NOTES

* The article is written within the framework of the State task of the Ministry of education of the Russian Federation, project no. 33.2830.2017/PCH 'The South of Russia in the Early Iron Age: Dialogue of Cultures East – West.'

REFERENCES

- Al-Biruni, Abu R. 1987. *Selected Works*. Vol. 7. Tashkent: Fan. *Original in Russian* (Бируни, Абу Рейхан. *Избранные произведения*. Т. VII. Ташкент: Фан).
- Argenta, L. C., David, L. R., and Wilson, J. A. 1996. An Increase in Infant Cranial Deformity with Supine Sleeping Position. *Journal of Craniofacial Surgery* 7 (1): 5–11.
- Arutyunov, S. A. 1985. Innovations in the Culture of the Ethnos and their Social and Economic Conditioning. In Pershits, A. I., and Terakopyan, N. B. (eds.), *Ethnographic Studies of the Development of Culture* (pp. 31–49). Moscow: Nauka. *Original in Russian* (Арутюнов, С. А. Инновации в культуре этноса и их социально-экономическая обусловленность. В: Першиц, А. И., Теракопьян, Н. Б., *Этнографические исследования развития культуры*, с. 31–49. М.: Наука).
- Ayer, A. et al. 2010. *The Sociopolitical History and Physiological Underpinnings of Skull Deformation*. *Neurosurg Focus* 29 (6). URL: <http://thejns.org/doi/abs/10.3171/2010.9.FOCUS10202> (Accessed 15.01.2011).
- Bagashev, A. N. 2000. *Paleoanthropology of Western Siberia: The Forest-Steppe of the Early Iron Age*. Novosibirsk: Nauka. *Original in Russian* (Багашев, А. Н.

Палеоантропология Западной Сибири: лесостепь в эпоху раннего железа. Новосибирск: Наука).

- Baiburin, A. K. 1990. Ritual: Insiders and Outsiders. *Folklore and Ethnography: The Problem of Reconstructing the Facts of Traditional Culture. Collection of Research Papers* (pp. 3–17). Leningrad: Science. *Original in Russian* (Байбурин, А. К. Ритуал: свое и чужое. *Фольклор и этнография. Проблема реконструкции фактов традиционной культуры: сб. науч. Тр.*, с. 3–17. Л.: Наука).
- Balabanova, M. A. 2001. The Custom of Artificial Head Deformation in the Late Sarmatian: Issues, Research, Results and Opinions. *Niznevolzhskiy Arkheologicheskii Vestnik* 4: 107–122. *Original in Russian* (Балабанова, М. А. Обычай искусственной деформации головы у поздних сарматов: проблемы, исследования, результаты и суждения. *Нижевожский археологический вестник* 4: 107–122).
- Balabanova, M. A. 2004. Revisiting the Ancient Macrocephales of Eastern Europe. In Mednikova, M. B. (ed.), *OPUS: Interdisciplinary Investigation in Archaeology* 3 (pp. 171–187). Moscow: Institute of Archaeology RAS. *Original in Russian* (Балабанова, М. А. О древних макроцефалах Восточной Европы. В: Медникова, М. Б. (ред.), *OPUS: Междисциплинарные исследования в археологии* 3, с. 171–187. М.: Изд-во ИА РАН).
- Balabanova, M. A. 2009. Sex-Age Structure of the Late Sarmatian Population in the Lower Volga. *Rossiyskaya Arkheologiya* 4: 79–88. *Original in Russian* (Балабанова, М. А. Половозрастная структура населения позднесарматского времени Нижнего Поволжья. *Российская археология* 4: 79–88).
- Balabanova, M. A. 2010. New Data on the Sarmatian Anthropological Type. *Rossiyskaya Arkheologiya* 2: 67–77. *Original in Russian* (Балабанова, М. А. Новые данные об антропологическом типе сарматов. *Российская археология* 2: 65–77).
- Balabanova, M. A. 2016. Revisiting the Issue of Succession in the Sarmatian Population of East European Steppes. *Vestnik Volgogradskogo gosudarstvennogo universiteta. Seriya 4. Istoriya. Regionovedeniye. Mezhdunarodnyye otnosheniya* 21 (2): 25–39. *Original in Russian* (Балабанова, М. А. К вопросу о преемственности населения сарматского времени восточно-европейских степей. *Вестник Волгоградского государственного университета. Серия 4. История. Регионоведение. Международные отношения* 21 (2): 25–39).
- Balabanova, M. A., and Pererva, E. V. 2007. *Identification of Types of Weapons for Combat Injuries in Sarmatians: Armament of the Sarmatians.* Regional Typology and Chronology: The report to the VIth International Conference ‘Problems of Sarmatian Archeology and History’, pp. 173–181. Chelyabinsk: Izdatelstvo YuUrGU. *Original in Russian* (Балабанова, М. А., Перерва, Е. В. Идентификация типов оружия по боевым травмам у сарматов. *Вооружение сарматов: региональная типология и хронология: доклад к VI международной конференции «Проблемы сарматской археологии и истории»*, с. 173–181. Челябинск: Изд-во ЮУрГУ).
- Batieva, E. F. 2001. *New Data on the Anthropology of the Necropolis of Tanais.* In Arsenyeva, T. M., Bezuglov, S. I., Tolochko, I. V. (eds.), *Necropolis of the Tanais Excavations 1981–1995* (pp. 223–260). Moscow: Palaeograf. *Original*

- in Russian (Батиева, Е. Ф. Новые данные по антропологии некрополя Танаиса. В: Арсеньева, Т. М., Безуглов, С. И., Толочко, И. В. (ред.), *Некрополь Танаиса. Раскопки 1981–1995 гг.*, с. 223–260. М.: Палеограф).
- Batieva, E. F. 2003. *Traumatic Lesions of Skeletal Bones of the Lower Don Population in the Sarmatian period*. In Alekseeva, T. I., Balabanovskaya, E. V., Godina, E. Z., Dubova, N. A. (eds.), *Anthropology on a Threshold of the 3rd Millennium*. Materials of Conference. Moscow, 29–31 May 2002, pp. 250–267. Moscow: ООО Старый сад. *Original in Russian* (Батиева, Е. Ф. Травматические поражения костей скелета у населения Нижнего Подонья в сарматское время. В: Алексеева, Т. И., Балабановская, Е. В., Година, Е. З., Дубова, Н. А. (ред.), *Антропология на пороге III тысячелетия. Материалы конференции*. Москва, 29–31 мая 2002, с. 250–267. М.: ООО Старый сад).
- Batieva, E. F. 2011. *The Population of the Lower Don Region of the 9th Century BC – 4th Century AD (Paleoanthropological Research)*. Rostov-on-Don: Izdatel'stvo YuNTs RAN. *Original in Russian* (Батиева, Е. Ф. *Население Нижнего Дона в IX в. до н. э. – IV в. н.э. (палеоантропологическое исследование)*). Ростов-на-Дону: Изд-во ЮНЦРАН).
- Bereczki, Z., and Marcsik, A. 2006. Artificial Cranial Deformation in Hungary. Artificial Deformation of Human Head in Eurasian Past. In Mednikova, M. V. (ed.), *OPUS: Interdisciplinary Investigation in Archaeology*. Vol. 5 (pp. 96–114). Moscow: Izdatel'stvo IA RAN. *Original in Russian* (Беречки, Ц., Марчек, А. Искусственная черепно-мозговая деформация в Венгрии. Искусственная деформация головы человека в евразийском прошлом. В: Медникова, М. В. (ред.), *OPUS: Междисциплинарное исследование в археологии*. Том 5, с. 96–114. Изд-во ИА РАН).
- Blackwood, B., and Danby, P. M. 1955. A Study of Artificial Cranial Deformation in New Britain. *Journal of the Royal Anthropological Institute of Great Britain and Ireland* 85: 173–191.
- Boada Rivas, A. M. 1995. La deformacion craneana como marcador de diferenciacion social. *Boletindel Museo del Oro* 38–39: 135–147.
- Buraev, A. I. 2005. *Who are the Xianbi?* In Chistov, Yu. K. (ed.), *Abstracts of the 6th Congress of Ethnologists and Anthropologists of Russian Federation* (p. 369). Saint Petersburg: Muzei antropologii i etnografii imeni Petra Velikogo (Kunstkamera). *Original in Russian* (Бураев, А. И. Кто такие сяньби? В: Чистов, Ю. К. (ред.), *Тезисы VI Конгресса этнографов и антропологов России*, с. 369. СПб.: Музей антропологии и этнографии им. Петра Великого (Кунсткамера)).
- Butovskaya, M. L. 2004. *The Body Language: Nature and Culture (evolutionary and Cross-Cultural Bases of Nonverbal Human Communication)*. Moscow: Nauchniy mir. *Original in Russian* (Бутовская, М. Л. *Язык тела: природа и культура (эволюционные и кросс-культурные основы невербальной коммуникации человека)*. М.: Научный мир).
- Cheverud, J. M., Kohn, L. A. P., Konigsberg, L. W., and Leigh, S. 1992. The Effects of Fronto-Occipital Artificial Cranial Modification on the Cranial Base and Face. *American Journal of Physical Anthropology* 88: 323–345.
- Dingwall, E. J. 1931. *Artificial Cranial Deformation. A Contribution to the Study of Ethnic Mutilations*. London: John Bale, Sons and Danielsson.

- Dremov, V. A. 1977. The Custom of Artificial Head Deformation in the Ancient Tribes of Western Siberia and its Origin. *Problems of Archeology and Ethnography*. Vol. 1 (pp. 99–110). Leningrad: Nauka. *Original in Russian* (Дремов, В. А. Обычай искусственного еформирования головы у древних племен Западной Сибири и его происхождение. *Проблемы археологии и этнографии*. Вып.1. Л.: Наука, с. 99–110).
- Dunaevskaya, T. N. 1963. The Influence of Artificial Deformation on the Shape of the Head in Turkmen. *Voprosy Antroploghii* 15: 46–62. *Original in Russian* (Дунаевская, Т. Н. Влияние искусственной деформации на форму головы у туркмен. *Вопросы антропологии* 15: 46–62).
- Enchev, Y., Nedelkov, G., Atanassova-Timeva, N., and Jordanov, J. 2010. Paleo-neurosurgical Aspects of Proto-Bulgarian Artificial Skull Deformations. *Neurosurgical Focus* 29 (6): E3. URL: www.medeley.com. Accessed 15.01.2011.
- Faris, J. 1988. Significance of Differences in the Male and Female Personal Art of the Southeast Nubia. In Rubin, A. (ed.), *Marks of Civilization: Artistic Transformations of the Human Body* (pp. 29–40). Los Angeles: Museum of Cultural History.
- Fedorov, G. B. 1958. Revisiting the Question of the Two Rituals of the Burial of the Chernyakhov Culture (The Monuments of Moldavia). *Sovetskaya Arkheologhia* 3: 234–243. *Original in Russian* (Федоров, Г. Б. О двух обрядах погребения Черняховской культуры (По памятникам Молдавии). *Советская археология* 3: 234–243).
- Firshtein, B. V. 1970. The Sarmatians of the Lower Volga Region in an Anthropological Light. In Tot, T. A., and Firshtein, B. V. (eds.), *Anthropological Data on the Issue of Great Migration: The Avars and the Sarmatians* (pp. 69–201). Leningrad: Nauka. *Original in Russian* (Фирштейн, Б. В. Сарматы Нижнего Поволжья в антропологическом освещении. В: Тот, Т. А., Фирштейн, Б. В. *Антропологические данные к вопросу о великом переселении народов. Авары и сарматы*, с. 69–201. Л.: Наука).
- Fothi, E. 2000. Anthropological Conclusions of the Study of Roman and Migration Periods. *Acta Biologica Szegediensis* 44 (1–4): 87–94.
- Garrett, J. 1988. Status, the Warrior Class and Artificial Cranial Deformation. In Blakely, R. L. (ed.), *King Site: Continuity and Contact in Seventeenth Century Georgia* (pp. 35–46). Athens: The University of Georgia Press.
- Gennep, A. van. 1999. *Rites of Passage. Systematic Study of Rituals*. Moscow: Moscow: Vostochnaya literatura. *Original in Russian* (Геннеп, А. ван. *Обряды перехода. Систематическое изучение обрядов*. М.: Восточная литература).
- Gerszten, P. 1993. An Investigation into the Practice of Cranial Deformation among the Pre-Columbian Peoples of Northern Chile. *International Journal of Osteoarchaeology* 3: 87–98.
- Ginzburg, V. V. 1959. Ethno-Genetic Connections of the Ancient Population of the Stalingrad Trans-Volga Region (On Materials of the Burial Site of Kalinovskiy). *Materials and Researches on Archeology № 60*. Vol. 1 (pp. 524–594). Moscow – Leningrad: Academy of Sciences USSR Press. *Original in Russian* (Гинзбург, В. В. Этногенетические связи древнего населения Сталинградского Заволжья (По материалам Калиновского могильника).

- Материалы исследования по археологии* № 60. Т. 1, с. 524–594. М. – Л.: Изд-во АН СССР).
- Grinko, I. A. 2006. *Artificial Changes of the Body in the System of Socio-Cultural Symbols of Traditional Societies*: Author's thesis of Candidate of Historical Sciences. Moscow. *Original in Russian* (Гринько, И. А. *Искусственные изменения тела в системе социокультурных символов традиционных обществ: автореф. дисс. ... канд. ист. наук.* М.).
- Hippocrates. 1994. *On Air, Waters and Localities. Selected Works*. Transl. by Rudnev, V. I., pp. 279–306. Moscow: Svarog). *Original in Russian* (Гиппократ. *О воздухе, водах и местностях. Избранные книги.* Пер. В. И. Руднева, с. 279–306. М.: Сварог).
- Hoshower, L. M. *et al.* 1995. Artificial Cranial Deformation at the Omo M10 Site: A Tiwanaku Complex from the Moquegua Valley, Peru. *Latin American Antiquity* 6 (2): 145–164.
- Ivanov, A. V. 2003. On the Practice of Artificial Head Deformation in the Territory of the Crimean Peninsula. *Vestnik antropologii* 10: 75–90. *Original in Russian* (Иванов, А. В. О практике искусственной деформации головы на территории Крымского полуострова. *Вестник антропологии* 10: 75–90).
- Kazanski, M. M. 2006. *Concerning Artificial Cranial Deformation in the Burgundias at the Great Migration Period*. Artificial Deformation of Human Head in the Eurasian Past. In Mednikova, M. B. (ed.), *OPUS: Interdisciplinary Investigation in Archaeology*. Vol. 5 (pp. 127–139). Moscow: Izdatel'stvo IARAN. *Original in Russian* (Казанский, М. М. Об искусственной деформации черепа у бургунов в эпоху великого переселения народов. В: Медникова, М. Б. (ред.), *OPUS: Междисциплинарные исследования в археологии. Сборник статей.* Вып. 5, с. 127–139. М.: Изд-во ИА РАН).
- Kitov, E. P., and Khokhlov, A. A. 2011. Paleoanthropology of the Burial Ground of the Solyonyu Dol (Southern Trans-Urals). *Vestnik antropologii* 19: 139–145. *Original in Russian* (Китов, Е. П., Хохлов, А. А. Палеоантропология могильника Солёный Дол (Южное Зауралье). *Вестник антропологии* 19: 139–145).
- Latshev, V. V. 1949. Bulletin of Ancient Writers on Scythia and the Caucasus. *Vestnik drevnei istorii* 4: 287–293. *Original in Russian* (Латышев, В. В. Известия древних писателей о Скифии и Кавказе. *Вестник древней истории* 4: 287–293).
- Leach, E. 2001. *Culture and Communication: The Logic by which Symbols are Connected*. Introduction to the Use of Structural Analysis in Social Anthropology. Moscow: Vostochnaya literatura. *Original in Russian* (Лич, Э. *Культура и коммуникация: Логика взаимосвязи символов. К использованию структурного анализа в социальной антропологии.* М.: Восточная литература).
- Levin, M. G. 1947. Deformation of the Head of the Turkmens (Revisiting the Question of Turkmen Dolichocephaly). *Sovetskaya etnografia* 6–7: 184–190. *Original in Russian* (Левин, М. Г. Деформация головы у туркмен (К вопросу о туркменской долихоцефалии). *Советская этнография* 6–7: 184–190).
- Liptak, P. 1983. *Avars and Ancient Hungarians*. Budapest: Akademiai Kiado.

- Loginov, A. V. 1998. Caddo. Choctaw. In Tishkov, V. A. (ed.), *Peoples and Religions of the World. Encyclopedia* (pp. 279, 629). Moscow: Bolshaya Rossiyskaya entsiklopediya. *Original in Russian* (Логинов, А. В. Кэддо. Чокто. В: Тишков, В. А. (ред.), *Народы и религии мира. Энциклопедия*, с. 279, 629. М.: БРЭ).
- Lorentz, K. O. 2003. Cultures of Physical Modifications: Child Bodies in Ancient Cyprus. *Stanford Journal of Archaeology* 2: 1–17.
- Magomedov, B. V. 2000. The Ethnical Components of the Chernyakhov Culture. *Stratum Plus*. 4: 322–330. *Original in Russian* (Магомедов, Б. В. Этнические компоненты черняховской культуры. *Stratum plus* 4: 322–330).
- Makdisi, Abu Abdallah. 1939. *Extracts from 'Askhi At-Takasim Fimah'arat Al-Akalim'. Materials on the History of Turkmens and Turkmenia: Arabian and Persian Sources of the 7th – 15th Centuries*. Vol. 1 (pp. 166–208). Moscow – Leningrad: Publishing House of the Academy of Sciences of the USSR. *Original in Russian* (Макдиси, Абу Абдаллах. Извлечения из «Асхой Ат-Такасим Фи-ма'рифат Ал-Акалим»). *Материалы по истории туркмен и Туркмении. Арабские и персидские источники VII–XV вв.* Том 1, с. 166–208. М. – Л.: Изд-во АН СССР).
- Malashev, V. Yu., and Yablonsky, L. T. 2008. *The Steppe Population of the South Urals Area in the Late Sarmatian Time. Materials of the Burial Site of Pokrovka 10*. Moscow: Vostochnaya literatura. *Original in Russian* (Малашев, В. Ю., Яблонский, Л. Т. *Степное население Южного Приуралья в позднесарматское время. По материалам могильника Покровка 10*. М.: Восточная литература).
- Meiklejohn, C. et al. 1992. Artificial Cranial Deformation in the Proto-Neolithic and Neolithic Near East and its Possible Origin: Evidence from Four Sites. *Paleorient* 18 (2): 83–97.
- Molleson, T., and Campbell, S. 1995. Deformed Skulls at Tell Arpachiyah: The Social Context. In Campbell, S., and Green, A. (eds.), *The Archaeology of Death in the Ancient Near East* (pp. 45–55). Oxford: Oxbow Monograph.
- Moshkova, M. G. 1982. Late Sarmatian Burials of the Lebedev Burial Ground in Western Kazakhstan. *Brief Communications of the Institute of Archeology* 170: 80–87. *Original in Russian* (Мошкова, М. Г. Позднесарматские погребения Лебедевского могильника в Западном Казахстане. *Краткие сообщения института археологии* 170: 80–87).
- Munizaga, J. R. 1987. Deformacion Craneana Intencionalen America. *Revista Chilena de Antropologia* 6: 113–147.
- Munizaga, J. R. 1992. Antropología física de los Andes del Sur. In Meggers, B. (ed.), *Prehistoria Sudamericana. Nuevas Perspectivas* (pp. 65–75). Washington: Taraxacum.
- O'Loughlin, V. D. 2004. Effects of Different Kinds of Cranial Deformation in the Incidence of Wormian Bones. *American Journal of Physical Anthropology* 123: 146–155.
- Ortner, D. J. 2003. *Identification of Pathological Conditions in Human Skeletal Remains*. New York: Academic Press.
- Ozbek, M. A. 1974. Propos des Deformation Craniennes Artificielles observees au Proche-Orient. *Paleorient* 2 (2): 469–476.

- Pany, D., and Wiltshcke-Schrotta, K. 2008. Artificial Cranial Deformation in a Migration Period Burial of Schwarzenbach, Lower Austria. *VIAVIVAS Vienna Institute for Archaeological Science*: 18–23.
- Pap, I. 1983. Data to the Problem of Artificial Cranial Deformation, Part I. *Annles historico-naturales Musei nationalis Hungarici* 75: 339–350.
- Pap, I. 1984. Data to the Problem of Artificial Cranial Deformation, Part II. *Annles historico-naturales Musei nationalis Hungarici* 76: 335–350.
- Pap, I. 1985. Data to the Problem of Artificial cranial Deformation, Part III. *Annles historico-naturales Musei nationalis Hungarici* 77: 281–289.
- Ratzel, F. 1902. *Völkerkunde*. 2 vols. Vol. 1. Saint Petersburg: Prosveshchenie. *Original in Russian* (Ратцель, Ф. *Народоведение*. В 2-х томах. Т. 1. СПб.: Просвещение).
- Ratzel, F. 1903. *Völkerkunde*. 2 vols. Vol. 2. Saint Petersburg: Prosveshchenie. *Original in Russian* (Ратцель, Ф. *Народоведение*. В 2-х томах. Т. 2. СПб.: Просвещение).
- Razhev, D. I. 2009. *Bioarchaeology of the Population of the Sargat Population*. Yekaterinburg: Russian Academy of Sciences, Ural Branch. *Original in Russian* (Ражев, Д. И. *Биоархеология населения саргатской общности*. Екатеринбург: УрОРАН).
- Riefenstahl, L. 1976. *People of Kau*. London: Collins.
- Romero-Vargas, M. D. S. *et al.* 2010. A Look at Mayan Artificial Cranial Deformation Practices Morphological and Cultural Aspects. *Neurosurgical Focus* 29 (6): E2. URL: www.medeley.com. Accessed 15.01.2011.
- Schurz, G. 1923. *History of Primitive Culture*. Transl. from German by Kushner, (Кнышев) P. I. Moscow: The Sverdlov Communist University. *Original in Russian* (Шурц Г. *История первобытной культуры*. Пер. с нем. П. И. Кушнера (Кнышева). М.: Коммунистический университет имени Я. М. Свердлова).
- Shevchenko, A. V., and Firshtein, B. V. 1991. *Paleoanthropology of the Kobaykovas Population of Ancient Settlement, New Collections and Researches on Anthropology and Archeology*. Bulletin of the Museum of Anthropology and Ethnography XLIV (pp. 5–41). Saint Petersburg: Nauka. *Original in Russian* (Шевченко, А. В., Фирштейн, Б. В. Палеоантропология населения Кобякова городища. *Новые коллекции и исследования по антропологии и археологии*. Сборник Музея антропологии и этнографии 44, с. 5–41. СПб.: Наука).
- Shilov, V. P. 1960. *Report on Excavations of the Archaeological Astrakhan Expedition in 1960*. Archive of the IARAS, R-1, No. 2155). *Original in Russian* (Шилов, В. П. *Отчет о раскопках археологической Астраханской экспедиции в 1960 году*. Архив ИАРАН. Р-1, № 2155).
- Shilov, V. P. 1961. *Report on Excavations of the Archaeological Astrakhan Expedition in 1961*. Archive of the IARAS, R-1, No. 2380). *Original in Russian* (Шилов, В. П. *Отчет о раскопках археологической Астраханской экспедиции в 1961 году*. Архив ИАРАН. Р-1, № 2380).
- Simonenko, A. V. 2003. Chinese and Asian Elements in Sarmatian Culture of the Northern Black Sea Region. *Nizhnevolzhskiy Arkheologicheskii Vestnik* 6: 45–65). *Original in Russian* (Симоненко, А. В. Китайские и центрально-

- азиатские элементы в сарматской культуре Северного Причерноморья. *Нижеволжский археологический вестник* 6: 45–65).
- Simonenko, A. V. 2010. 'The Gunno-Sarmaty' (to the Formulation of the Problem). *Nizhnevolzhskiy Arkheologicheskii Vestnik* 11: 392–402). *Original in Russian* (Симоненко, А. В. «Гунно-сарматы» (к постановке проблемы). *Нижеволжский археологический вестник* 11: 392–402).
- Skripkin, A. S. 2000. New Aspects of Investigation of the History of the Sarmatian Material Culture. *Nizhnevolzhskiy Arkheologicheskii Vestnik* 3: 17–40. *Original in Russian* (Скрипкин, А. С. Новые аспекты в изучении истории материальной культуры сарматов. *Нижеволжский археологический вестник* 3: 17–40).
- Sleptsova, A. V. 2016. *Artificial Skull Deformation in the Tobol River Region during the Great Migration. Ecology of Ancient and Traditional Societies: Proceedings of the 5th International Conference*, Tyumen, 7–11 November, pp. 57–60. Tyumen: Izdatel'stvo Tyumenskogo gosudarstvennogo universiteta. *Original in Russian* (Слепцова, А. В. Обычай искусственной деформации черепа у населения Притоболья эпохи Великого переселения народов. *Экология древних и традиционных обществ: Материалы V Международной конференции, Тюмень, 7–11 ноября 2016 г.* В 2-х частях. Ч. 1, с. 57–60. Тюмень: Изд-во Тюменского госуниверситета).
- Soto-Heim, P. 2004. Une marque d'identite imprimee sur l'os: la deformation cranienne intentionnelle. *Biometrie Humaine et Anthropologie* 22: 81–98.
- Torres-Rouff, C. 2002. Cranial Vault Modification and Ethnicity in Middle Horizon San Pedro de Atacama, Chile. *Current Anthropology* 43 (1): 163–171.
- Torres-Rouff, C. 2003. *Shaping Identity: Cranial Vault Modification in the Pre-Columbian Andes*. Thesis Ph.D. Santa Barbara: University of California.
- Tur, S. S. 1998. Revisiting the Question of the Origin and Functions of the Traditional Ring Deformation. *Archeology, Anthropology and Ethnography of Siberia* (pp. 237–249). Barnaul: Altaiskiy gosudarstvennyi universitet. *Original in Russian* (Тур, С. С. К вопросу о происхождении и функциях обычая кольцевой деформации. *Археология, антропология и этнография Сибири*, с. 237–249. Барнаул: Алтайский государственный университет).
- Yaqut al-Hamawi. 1939. *Extracts from Kitab Mu Jabal-Buldan Yakut. Materials on the History of Turkmens and Turkmenia Arab and Persian Sources 7th–15th Centuries*. Vol. 1 (pp. 409–438). Moscow – Leningrad: Izdatel'stvo AN SSSR. *Original in Russian* (Йакутал-Хамави. Извлечения из «КитабМу' Джабал-Булдан Якут». *Материалы по истории туркмен и Туркмении. Арабские и персидские источники VII – XV вв.* Т. 1, с. 409–438. М. – Л.: Издательство АН СССР).
- Zaichenko, A. A. 2009. *Demonstration of 'Body Politics': Artificial Skull Deformation. Psychology of Corporeality: Theoretical and Practical Research*. Collected articles of the 2nd International Scientific and Practical Conference (pp. 113–120). Penza: PGPU imeni V. G. Belinskogo. *Original in Russian* (Зайченко, А. А. Манифестация «Политики тела»: искусственная деформация черепа. *Психология телесности: теоретические и практические исследования*. Сб. статей II Международной научно-практической конференции, с. 113–120. Пенза: ПГПУ им. В. Г. Белинского).