

## **SOCIAL CHANGES AND CULTURAL INTERACTIONS IN LATER BALKAN PREHISTORY LATER FIFTH AND FOURTH MILLENNIA CAL BCE**

*Lolita Nikolova (Salt Lake City, Utah, USA)<sup>1</sup>*

Investigations during the past few decades have revealed significant new information about the end of the Copper Age and the genesis of the Bronze Age cultures in the Balkans (Nikolova 1999). In this communication a model of social changes and transformations on later Copper Age in the Balkans is aimed (see details in Nikolova 2003), and an interaction model of genesis of the Early Bronze Age in the Western Pontica, based on two new cultural horizons for the fourth millennium Cal BCE recently proposed, Hotnitsa-Vodopada – Ilipinar IV – Kuruçay 6A-6, and earlier Dubene-Sarovka IIA – Dyadovo 12/13 - Drama-Merdzhumekya – earlier Kum Tepe IB (Nikolova, in print), as well as additional data for their further constitution.

### **Balkan Later Copper Age Society**

Recent archaeological evidence infers a regional variety of cultural development of the Balkan Later Copper societies. A variety of factors that posed as the background of their crisis in later fifth millennium Cal BCE, focused on this approach on the ceramic production. Further, the dynamic controversial process in early Balkan fourth millennium Cal BCE included social-economic changes (nomadization), social conflicts (Yunatsite), infiltration of population from the North-west Black Sea, and intensification of the cultural integration processes with neighbors and distant cultures.

Theoretical difficulties concerning the topic of cultural processes of the Balkans in the fourth millennium Cal BCE arise by the fact that theory needs to be explained by not only a given body of records but also the absence of evidence. There is no tradition for social archaeology interpretations of Balkan Prehistory, which would usually be exemplified by selected topical issues or an approach of utilizing only the frameworks of analysis, as in this case, attempting the social change theory to be applied to the region and period under discussion.

The core of the Balkan Late Copper society includes the communities of Karanovo VI – Gumelnița – Varna complex and Krivodol–Sălçuța–Bubanj complex. Both complexes were in close interaction, which resulted in a unification of basic traits of the material culture despite the Olt – Osum – Western Sredna Gora Mountains being a visible border between them. New evidence from the Upper Stryama valley (Dubene-Sarovka I (Nikolova 2000c) confirms the importance of the Western Sredna Gora as a geographical and cultural border. But the Yunatsite tell (close to the Western Sredna Gora foothills) is a clear instance of strong diffusion of the Krivodol cultural ceramic style from the west (possibly from the Struma valley). At the same time, re-excavations of Devetaska Peshtera (not far from left Osum River side) and Drăgănești-Olt (close to the Olt River bed) represent models of synthetic material culture or even expansion of the Sălçuța culture to the west (Nikolova 1999a and ref. cited there).

Comparing Karanovo-Gumelnița-Varna and Krivodol-Sălçuța-Bubanj complexes, Upper Thrace (an area of the former) and the western lower Danube (an area of the latter) had favorable preconditions for intensive and extensive agricultural activity. In the area of the Krivodol-Sălçuța-Bubanj complex, the agriculture depended on more limited land resources. They are archaeologically represented by the predominance of thin level or low tell villages, in contrast to the large tells in the Upper Thrace and more numerous low tells in the eastern lower Danube. However, even in Upper Thrace, in micro-regions such as the Upper Stryama valley, the tradition of big multilevel tell villages was not introduced in Late Copper Age (Dubene-Sarovka I, Chernichevo), possibly because of the popularity of stockbreeding. In other words, stockbreeding and agricultural economies were in dynamic interactions in the Balkans in Late Copper Age and the Balkan Late Copper society cannot be straightforward described as society with homogenous economic base. This conclusion is very important for the reconstruction of the social processes. Once there is no homogeneity in the basic economic structure, exchange could be expected of the main subsistence products (regular, periodical or accidental).

The second important component of the economic system was metallurgy. As the last is dependent extremely upon the ore resources, the development of the early Balkan metallurgy was based on extensive contacts between the Eastern and Western Balkans, the inner characteristics of which requires an additional detailed research. For later Copper Age, of importance is the fact that such important metal ore resources, as Ai Bunar, in fact were explored at least partially after the pick of development of the Karanovo VI culture (Nikolova 1999). Also, the prospering of the copper production in the North-western Balkans contrasted to the tendency of the decreasing of the representative Krivodol-Sălçuța-Bubanj pottery, then, there were asymmetric interrelations – cp. for instance Telish 2 and 3; in the last village a Jászladány axe has been discovered.

There are many reasons to believe that the pottery production was one of the important components of the economic-and-social organization of the Balkan Late Copper society. But, unfortunately, the organization of the pottery production of that society is a non-investigated problem.

There are four hierarchical systems recognized in the organization of the ceramic production: household production, household industry, workshop industry, and large-scale industry (after Van der Leeuw). Household production is typically handmade, periodic, and based on little investment of raw materials, tools, facilities, and time, made to satisfy the household's yearly needs, but possibly including a part for gifts, dowry, and exchange for other goods. The household industry produces similar pottery but in larger quantity, as part of it

<sup>1</sup>International Institute of Anthropology, 29 S State Street #206, Salt Lake City, Utah; Adjunct-Assistant Professor at the University of Utah & SLCC, Salt Lake City, Utah, USA; Prehistory Foundation, Sofia - Karlovo, Bulgaria. E-mail: lnikolova@iianthropology.org.

has been exchanged for agricultural or other sources of incomes, while the workshop presumes emergence of pottery specialists (usually family members), and of changes in ceramic technology (wheel- or mold-made ceramics). The large-scale production is based on workshops or factory and produce vessels on a tremendous scale, increasingly standardized, “as potters attempt to minimize time and energy invested per vessel”. Additionally, itinerant potters have their own productive system (Sinopoli 1991: 99-100).

In the evolution of the ceramic pottery production, there are two factors that increase the standardization – increased frequency and scale of pottery production, and / or introducing new technology (mold or wheel). In both cases, the result influences the efficiency of production. Then, if the society needs more efficient production, it may result in the increased standardization and development of the organization of the pottery production.

Facing the Late Copper Age, Karanovo-Gumelnița-Varna and Krivodol-Sălcuța-Bubanj pottery is possibly the culmination of the prehistoric standardized production in the Balkans. We do not have direct evidence, but according to the result, the pottery was made as household seasonal production, household industry, and I assume, workshop industry, as well as by itinerant potters. All these aspects of the pottery production require interactions at a different scale with close and distant communities, developing an exchange system (Nikolova 2003 and references cited there).

Formulated in such way, a research problem appear as if for some reasons the system of exchange transgresses, it will affect all components of the cultural systems. M. Gimbutas believed that the scepter invaders were those who destroyed the Balkan Late Copper system (Nikolova 2003 and references cited there). But in 1990s, neither the data on scepters became more nor the narrow chronology of their distribution was confirmed, on one hand. On the other hand, the increased evidence base inferred a gradual, but not one-step and non-linear, process of transformations and innovations in the Balkans.

Then, the exclusive possibility is to look for inner reasons to explain the changes in the Balkans (Nikolova 1999; Nikolova 2003). We can start with one of the most popular household activities – the pottery production. The enormous amount of earthenware from Karanovo-Gumelnița-Varna and Krivodol-Sălcuța-Bubanj complexes infers it was the main storage; cooking and serving ware in the different household, despite some wooden vessels, might have existed.

The tendency towards standardization of the pottery limited the potters in clay use as not every paste was suited to assumed mold or primitive wheel-like technique. As the graphite pottery might have involved two or more level burning process, it can be assumed that at least part of it was a result of local or itinerant workshops. But the exhausting of the quality clay (and graphite) resources might have followed by a decrease in the profession of the producers of luxury ceramics and re-specialization. Closed in the border of the household production, the pottery become more utilitarian, while the luxury pottery was spread over vast areas (for instance the Maritsa – Drama – Struma – Iskur areas in Final Copper I) from possible large-scale artisan centers in the occupied marginal agricultural lands. But along with its spreading, the quantity of the luxury ceramics decreased. Using prospective instances, it can be assumed that such pottery could document access of elite to fine wares, or it may be signify contacts between the certain social groups throughout vast territories.

As far as the technomic pottery is concerned, I believe it was mainly household production, being long-term, often low-burned in open air and produced seasonally by members of the community households. Of importance for the analysis of the ceramic and social change

is the problem of the transmission of the ceramic knowledge production. The simplistic model of production techniques and decorative styles is passed on from mother to daughter, according to which the similar pottery results from co-resident women who had replicated matrilineal residence pattern. In fact, potters “must be seen as active transmitters and transformers of their craft rather than as passive recipients of traditional knowledge” (Sinopoli 1991:120-121 and references cited there).

The assumed decreasing of the pottery workshop specialized production can be related to another economic trait – the exhausting of the land and decreasing of the agricultural surplus that would support the so-called non-agricultural segment of the population. That economic variable again affected the organized system of production and exchange, as well as the inner structure of the Balkan Late Copper society.

Social changes are a complex cultural process that usually influences all or most of the elements of the social system. As the archaeological record consists of material evidence, to reconstruct the social changes we need to explain the changes in the material culture. The migration theory seemed accurate for Late Copper – Final Copper – Early Bronze changes as it was assumed the Balkan cultures changed from being more complex towards more ordinary. That assumption was based on the pottery evidence inasmuch as in the Cernavoda I culture and the cultures from *Scheibhenkel* horizon have dominated the plain pottery with a more low-burned and exception ornamented (mostly incised, pricked, stamped or encrusted) earthenware. As the interruption was assumed to have been caused by outer factors (imaginable steppe invaders), for the migration theory there were no other research problems than migrated factors for material culture changes.

After increasing the non-popularity of M. Gimbutas’ theory, some authors replaced the migration theory with the climatic catastrophe, that it is again based in the assumption that the material culture dramatically decreased and changed in the Balkans.

Strictly speaking, the palaeoclimatic characteristics of the Balkans are from limited regions and in my opinion, the recent record does not infer any climatic catastrophe at the end of the Copper Age (Nikolova 2003 and references cited there). For instance, neither pollen data from key regions, such as Drama valley next to the North Aegean coast area, nor that from the Black Sea, indicates drastic changes. Similar conclusions follow from the pollen diagrams from Pirin Mountains where the authors found some evidence of possible human impact (seasonal high-mountain pasture) traced back in prehistoric times. As far as the Black Sea is concerned, difficulties in the interpretation of the marinepalynological data for the Late Holocene have been reported because of the involved climatic, anthropogenic and hydrodynamic processes, as well as the limited samples. Furthermore, enlargement of the herb communities dominated by *Artemisia* and *Chenopodiaceae* is explained with possible variability in precipitation and the drier condition of the European Subboreal documented also in the South Dobroudja Black Sea coast. The 5000 BP as a commonly accepted lower chronological border of Subboreal characterized as “warm and dry” gives in calibrated dates *circa* 3800-3700 Cal BCE while the end of the Copper Age correspond to a Late Atlantic climatic period generally characterized as “warm and wet.” Beyond these general characteristics, local fluctuations and deterioration have been reported as being documented from different parts of Europe. However, there is no single evidence to confirm that at the end of the fifth and the beginning of the fourth millennium cal BCE, the proposed transgression of the Black Sea catastrophically impacted Upper Thrace and the Lower Danube (Nikolova 2003 and references

Period	Cal BC	The Yantra Basin (North Central Bulgaria)	The Sryama Basin (South Central Bulgaria)	The Upper Maritsa Valley	The Suzliyka Basin (Southeast Bulgaria)	The Lower Tundzha Basin (Southeast Bulgaria)	Northwest Anatolia	Southwest Anatolia	Period
Early Bronze I	3000	Hotnitsa-Vodopada 1-2	Dubene-Sarovka IIA	Yunatsite 17-15	Ezero 13-11 Dyadovo Pithoi 1-9(?)	Drama-Merdzhumekya	Kumtepe IB	Kuruçay 6A-6	The so-called Late Chalcolithic
	3100								
	3200								
	3300								
	3400								
	3500								
	3600								
	3700								
	3800								
	3900								
Final Copper	4000								

Table 1. Chronological position of the main sites cited in the text.

cited there).

As the social change theory proposes, in the late fifth and earlier fourth millennium Cal BCE the crisis was of the Balkan society but not of the region.

The applications for the eastern parts of the Balkans are based on the retrospective-prospective analysis of the evidence, but the evidence is not so expressive as from the Central and Northwestern Balkans.

The first region from the Eastern Balkans is the eastern lower Danube basin, between the Olt – Osum Rivers and the Danube Delta. This is the one usually thought to have been invaded by steppe tribes that caused the end of Gumelnița cultures. But it has been shown that there are common ceramic elements between Gumelnița and Cernavodă I cultures. The migrationists have not ignored the last, but explained them as survival in the new culture. The same elements occur in the social change theory as a record of continuation in the transformation process. The migrationists do not stress on the fact that there is a topographic continuity in the settlement pattern, nor does the pattern of the Cernavodă I culture correspond to nomadic and semi-nomadic pastoralists that have had short-lived villages supplemented by a central place (e.g. Cernavodă). This pattern contrasts to Early Bronze when the indisputable pastoral nomads (Pit Grave Culture) occupied vast territories in the eastern Lower Danube without leaving any significant traces of sedentarization that could argue at least seasonal occupations.

The retrospective-prospective cultural analysis infers that on the one hand, in the eastern Lower Danube were preconditions for pastoral nomadism archaeologically documented for the Early Bronze. As in the migration theory, in both cases the population comes from the territories of typical pastoral nomadism, it should be an expected similar way of exploitation of the environment. In fact, the archaeological map shows big differences that in turn questions the validity of that postulation. At the same time, agricultural-stockbreeding communities traditionally occupied the eastern lower Danube that had different degrees of a mobile social pattern. In fact, the tradition of tell villages occurs very late there and only in some micro-regions. In other words, the Cernavodă I culture following the northeastern Balkan settlement pattern represents a model of transformation of the material culture in context of social changes such as increasing mobility, segmentation and decreasing of the population including the dominance of the household pottery production.

### Data from the Fourth Millennium Cal BCE

The high arsenic bronze technology in Anatolia is steadily practiced at least from the beginning of the fourth millennium Cal BCE (Yener 2000). The finds from Ilipinar IV (Begemann et al. 1994) (Figure 1) not only confirm this early dating, but probably show that the direction of the distribution of this innovation was from Anatolia to the eastern Balkans (towards Cernavodă III – Usatovo horizon) and/or there were social interactions.

In the Balkans, for the time being, the site of Hotnitsa-Vodopada best represents some of the earliest high arsenic bronze finds and respectively the beginning of the Early Bronze Age in the Balkans (Manzura 2003; Nikolova, in print), dated from c. 3600 Cal BCE. Of significance for recent research are some analogies of the pottery from Hotnitsa-Vodopada and from Western Anatolia – Ilipinar and Kuruçay that have been proposed (Nikolova, in print) (Figure 2) (Table 1). In light of the comparable data, the cultural horizon possibly begins with Ilipinar IV (c. 3900/3800 Cal BCE) and ends with Hotnitsa-Vodopada and Kuruçay (after 3600 Cal BCE). Following the Western Pontic periodization systems, the beginning of Ilipinar IV could have been in the later Final Copper Age.

One of the lines of comparison of the pottery from Hotnitsa-Vodopada is Ilipinar IV (Northwest Anatolia) since vessels with a rounded body share both sites (Figure 2:3,6). However, at Hotnitsa-Vodopada the cups documented are with a high handle (Figure 2:6). The other line of comparison is Kuruçay 6 (Southwest Anatolia) (Duru 1996) where a specific arched shaped handle connects both sites (Figure 2:7-8). Since all these sites are very distant, we believe that the similarity could indicate an indirect relationship and points to one of the directions of the flow of cultural interactions in the Eastern Balkans within the earlier fourth millennium Cal BCE, that is, contacts with Anatolia. Inasmuch as pottery is a very ambiguous record, it is worth noting that Ilipinar IV and Northwest Anatolia were an integrated part of the earliest distribution of the arsenic bronze in the Western Pontica (Begemann et al. 1994). Typologically, the daggers of Ilipinar are similar to the Bodrogkeresztúr type from Central Europe (Vajsov 1993:Fig. 34), although the last were made of poor copper (Vajsov 1993). Technologically, the Ilipinar bronze finds are in one group with the high arsenic finds from Hotnitsa-Vodopada and Usatovo (or Tripolje CII) (see the map in Vajsov 1993 for the arsenic bronze finds

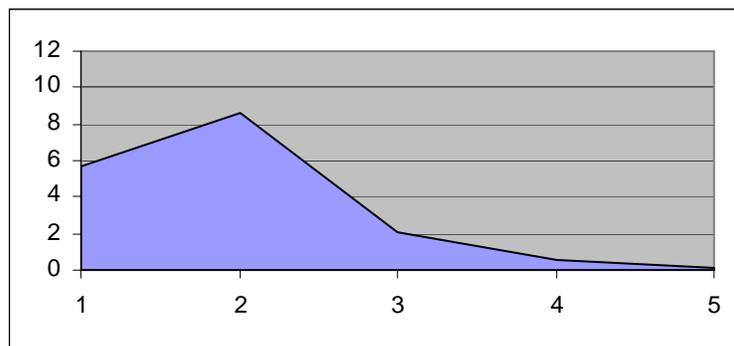


Chart 1. Channeled, stamped and incised pottery from Yunatsite 17-13 (data from Mishina 2002:235). 1 - horizon 17 (5.7%), 2 - horizon 16 (8.6%), 3 - horizon 15 (2.1%), 4 - horizon 14 (0.5%), and 5 - horizon 13 (0.08%).

from Usatovo).

Dubene-Sarovka IIA – Drama-Merdzhumekya – Kum Tepe IB is the second important cultural horizon that can be defined as related to the genesis of the Bronze Age in the Western Pontic region. Dubene-Sarovka is located in the Upper Stryama valley (Nikolova 2000a). The Early Bronze levels were divided into three stages – Dubene-Sarovka IIA, IIB, and IIC (a total of 9 building levels documented stratigraphically in different parts of the sites for the time being), and the earliest (IIA) representing the Early Bronze I on the tell (Dubene-Sarovka 6-9). The levels of stage IIA are not excavated extensively, but the control trench from 2000 reveals 4 levels which were below the ones excavated in 1993-1999 and represents an extended duration of the Early Bronze I multilevel village. In light of the stratigraphic data (Nikolova 2000a), one radiocarbon date (Nikolova & Görtsdorf 2002), and the archaeomagnetic data (Kovacheva et al. 2002), one can argue that Dubene-Sarovka II was founded before Yunatsite 17.

In Western Thrace and in the Upper Marista valley in particular, the Early Bronze I is represented at Yunatsite 17-15, as well as by the earliest Bronze Age levels of Ognyanovo (Nikolova 1999; Leshtakov 2000). There are also data from Plovdiv-Nebet Tepe that perhaps indicate an Early Bronze I occupation (see the discussion in Nikolova 1999). Recent information on the pottery from Yunatsite confirmed our periodization system, according to which the first stage of the Yunatsite culture comprises the 17<sup>th</sup> - 15<sup>th</sup> horizon (Mishina 2002:235). T.N. Mishina provided some conclusions from the statistics of ornamented pottery, according to which channeled, stamped and incised pottery gradually decreases from the 17<sup>th</sup> to 14<sup>th</sup> and 13<sup>th</sup> horizons (Chart 1). This fact can be explained with the increasing popularity of the encrusted pottery (Nikolova 2000a).

Important new evidence has been published from Drama-Merdzhumekya (the lower Tudzha Valley in Southeast Bulgaria). At that site was found settlement pottery with some parallels at Cernavodă III (Lichardus & Iliev 2001), as well as at Dubene-Sarovka IIA, Dyadovo and Karanovo VIIA (Nikolova 2003) (Figure 3). Evaluation of the site data suggests that the pottery from Drama-Merdzhumekya represents the earliest phase of the Ezero culture in Thrace, thereby demonstrating that the genesis of the Ezero culture was a long process (Nikolova, in print).

In my explanation model (Nikolova 2003), Drama-Merdzhumekya settlement pottery documents a local pastoral community that was in

intensive interactions with other pastoral or semi-pastoral communities in Upper Thrace and in direct contact with the North. It can be proposed that the site belongs to early Ezero culture and marks the process of sedenterization of the local mobile pastoralists in later fourth millennium Cal BCE.

New data also came from the Dyadovo tell (Suzlijka basin, Southeast Bulgaria) including radiocarbon dates (see the discussion in Nikolova, in print). The pottery from the ovens of the lowest Early Bronze levels (in the Japanese Sector) has the typical early Ezero under-hole ornaments (Kamuro et al. 2000), but is missing the other specific characteristics of the Ezero 13 ceramic style (Figure 3:10-12).

The pottery of Karanovo VIIA also differs in some details from Ezero 13 (Nikolova 1999 and references cited there). Although the published information on ceramic material from all three listed sites (Drama-Merdzhumekya, Dyadovo, and Karanovo VIIA) is very limited, we can determine, based on comparative analysis, that the beginning of the Early Bronze Age cultures in Northeast Thrace (the Ezero culture) was earlier than Ezero 13. Two new chronological levels have possibly been documented: Drama/Merdzhumekya, and Dyadovo (the earliest EB levels) / Karanovo VIIA (Table 1).

The radiocarbon dates from Kum Tepe IB came from well-documented stratigraphic context (Korfmann et al. 1996; Gabriel 2001). The pottery is typical of the pre-Troy stage of the Early Bronze Age development in Northwest Anatolia. The range of two certain dates from the IB layer is between 3500 Cal BCE and 3020 Cal BCE (at 68.2% probability) (Nikolova, in print and references cited there).

### Towards the Genesis of the Early Bronze Age in the Western Pontic Region

In the last decades, the material evidence base for the social change theory employed to later Balkan Prehistory generally increased. In its core is the long-term transformation of the Krivodol-Salcuta-Bubanj complex in the western lower Danube recently argued based on the detailed cultural-chronological sequence, the data on relocations of cultural patterns, as well as the evidence of graduate sedentarization in the Balkans in later fourth millennium Cal BCE.

The recent data that include a new regional evidence for cultural sequence indicate that the origin of the Bronze Age in the Western

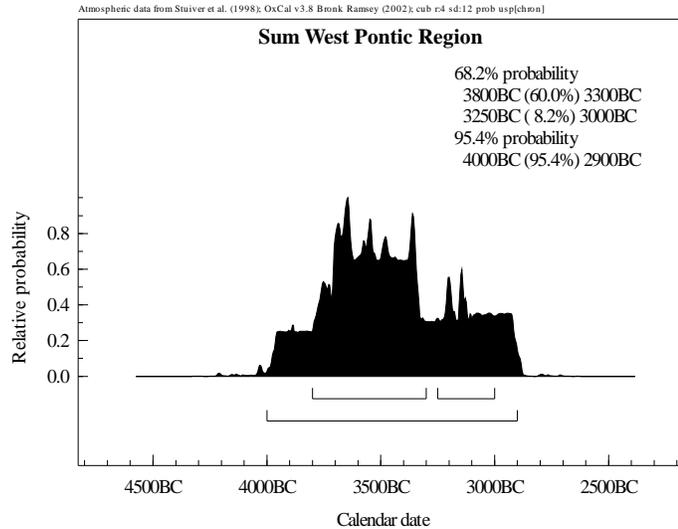


Chart 2. Sum-probability of the calibrated radiocarbon dates from Hotnitsa-Vodopada, Ilipinar IV, Kuruçay 6A & 6b, Dubene-Sarovka IIA, Dyadovo and Kumtepe. N=22.

Pontic region was the result of an interrelated process of multi-aspected cultural interactions between close and distant communities. In our view, at this early stage, the semi-mobile Balkan and Western Anatolian groups were involved in different kinds of interaction including possible transhumance-traders of metal and other goods (Nikolova, in print).

On the other hand, the Kuruçay 6A was explained as a new culture in Southwest Anatolia (Duru 1996). As support for our hypothesis, metal finds from Kuruçay have analogies at Ilipinar. We can add that there exists some typological similarities or common tendencies in morphological development in the pottery of Kuruçay 6A-6 and Ilipinar IV (Figure 2:1-6). These similarities also relate the former site to Northwest Anatolia. Unfortunately, Western Anatolia from the earlier fourth millennium Cal BCE is not well known, and for now, we can only hypothesize that the ceramic changes may possibly relate to social changes and economic developments of the semi-mobile and semi-sedentary communities in the different parts of Western Anatolia in the earlier fourth millennium Cal BCE (for the Balkans see Nikolova 2003).

The significant scientific value of the recent complex investigation into the cultural processes in the Balkans and Anatolia stems from the fact that for several decades it has been popular for social scientists to posit an invasion theory for the genesis of the Bronze Age in the Balkans. As stated by this theory (especially the works of Marija Gimbutas), the beginning of the Bronze Age in the Balkans was closely interrelated with the nomadic tribes of the Pit Grave Culture (or the so-called Kurgan culture) from the Northwest Black Sea which gradually penetrated into the Balkans during the fourth millennium Cal BCE. Recent research, however, suggests that the change in the material culture of the Balkans in the latest fifth and during the fourth millennium Cal BCE was the result of a complex of factors (Nikolova 1999). At its core were the social changes and transformations of Old Europe from a sedentary and semi-mobile system to a system of mobile and semi-mobile communities (Nikolova 2003). The process was mostly internal within the latest fifth and earlier fourth millennium Cal BCE, while in the later fourth millennium Cal BCE there was a reverse process of sedentarization, one of the causes of which was possibly climatic variations as recently documented by geomorphological research at Dubene-Sarovka (Kenderova 2000).

Therefore, in light of recent evidence, one can argue that the later fourth millennium Cal BCE consisted of a dynamic process of gradu-

ated sedentarization of Thrace by groups of communities that may have had dominated, mobile or semi-mobile socio-economic structures in the earlier fourth millennium Cal BCE, archaeologically documented in the Central Rhodopes (the Yagodina group) (Final Copper Age).

In modern historiography, the fourth millennium Cal BCE of Western Anatolia is usually defined as Late Chalcolithic (Roodenberg (ed.) 1995; Roodenberg & Thissen (eds.) 2001; cp. Yakar 1985). However, such a definition does not describe the cultural process, since the Chalcolithic period in Anatolia started in the sixth millennium Cal BCE (Yakar 1991). Arsenic bronze had been known and widely distributed since the earlier fourth millennium Cal BCE (Yener 2000), and there are periodization differences between Eastern and Western Anatolia. Thus, recently our attention has turned to the other school of thought that sees the genesis of the Bronze Age in Anatolia in the later fourth millennium Cal BCE and even earlier (Kavtaradze 1999). We propose that Ilipinar IV and Kuruçay 6A-6 were at least partially synchronous and represent the earliest Early Bronze in Western Anatolia. However, it is possible that the cemetery of Ilipinar IV was founded in the Final Copper Age (see above).

Another early stage of Early Bronze is documented at Kumtepe IB. It is the so-called pre-Troy stage, named from the time before the re-excavation of the site when that stage was known only ceramically. The investigation of the team of Professor M. Korfmann confirms that Kumtepe IB dates to the later fourth millennium Cal BCE (Korfmann et al. 1996). The radiocarbon dates are close to both Sitagroi IV (see the discussion for Sitagroi IV in Nikolova 1999), as well as to the newly obtained date from Dubene-Sarovka IIA.

The correlation of the new stratigraphic, typological, and radiocarbon data from the sites of Kumtepe IB, Drama – Merdzhumekya, and Dubene-Sarovka IIA represent the second cultural horizon from the Early Bronze I in the Western Pontic region dated from ca. 3400 Cal BCE. Strictly interpreted, the radiocarbon dates offer possible dating as early as ca. 3500 Cal BCE (68.2% probability) while the sum-probability of discussed radiocarbon dates from Ilipinar, Kuruçay, Kumtepe IB, Hotnitsa-Vodopada, Dyadovo and Dubene-Sarovka IIA (Chart 2) is between 3800 Cal BCE and 3000 Cal BCE (at 68.2% probability), then, the early values only correspond to the presumed calendar dates.

The increasing evidence for cultural transformation stands in contrast to the invasion model of M. Gimbutas. Because the evidence

of the North Pontic region is very limited in the Eastern Balkans in the earlier fourth millennium Cal BCE, we assume that nomads were also integrated in the Western Pontic cultural network, not as invaders, but as partners and groups with similar social-economic structures.

### Conclusions and Summary

The settlement pattern and pottery production is the most expressive characteristic of the social changes, which gives argument to a shift from sedentary and semi-sedentary toward mobile and semi-mobile communities in the late fifth and earlier fourth millennium Cal BCE in the Balkans (Final Copper I-II). In turn, in later fourth millennium Cal BCE, there is a reverse tendency – towards intensive sedentarization. In the lower Danube, that process is exemplified through the possible semi-sedentary Cernavodă III culture; the earliest communities of which occupied microregions with excellent environment for mixed (agriculture and stockbreeding) economy, i.e. Hotnitsa-Vodopada. Of special importance is the success in the Early Bronze I investigation of Upper Thrace. In light of new evidence from Upper Thrace (Dubene-Sarovka; Drama- Merdzhumekya, Dyadovo etc.), the process of sedentarization appears to be a long process that covered all or most of the second half of fourth millennium Cal BCE. The last model generally contrasts to the 1980s – earlier 1990s view seeing Upper Thrace contemporaneously re-occupied by sedentary population just at the very end of fourth millennium Cal BCE, or the beginning of third millennium Cal BCE (Ezero A1 culture).

Recent archaeological evidence suggests that similar cultural processes and strong interactions between communities developed in vast regions of the prehistoric Circumpontica. During the fourth millennium Cal BCE these processes and interactions produced a similarity in the material culture and the distribution of advanced bronze technology as initiated by arsenic bronze artifacts (the so-called Circumpontic metallurgical province after E. Chernykh). It can be presumed that arsenic bronze technology was invented in Anatolia and then spread rapidly in the Western Pontica during the first half of the fourth millennium Cal BCE (and even to Central Europe – e.g. Mondsee (Begemann et al. 1994)) or at least there were intensive social interactions in the distribution of this innovation. We assume the transmitters of this innovation were transhumance-traders from Anatolia and the Balkans. The data from Thrace confirm a graduated sedentarization of this territory during the period of the initial development of the Ezero and Yunatsite cultures (the later fourth millennium Cal BCE).

Ceramic evidence, metal finds, and radiocarbon dates constitute a basis from which to argue that Hotnitsa-Vodopada – Ilipinar IV and Kuruçay 6A-6 represents a cultural horizon which possibly represents the end of Final Copper Age (earlier Ilipinar) (?) and the genesis of the Early Bronze Age in the Western Pontica, to which also belongs the Usatovo culture (i.e., the horizon of the first high-arsenic bronze finds in the Western Pontica) (?3800 Cal BCE – 3600/3500 Cal BCE). Recent stratigraphic, ceramic, radiocarbon, and archaeomagnetic data allow one to posit a second Early Bronze cultural horizon in the Western Pontica: Dubene-Sarovka IIA – Dyadovo 13/12 – Drama-Merdzhumekya – earlier Kum Tepe IB (c. 3400-3300/3200 Cal BCE) which preceded Ezero 13 – Yunatsite 17 (Table 1).

Thus, in light of recent evidence, we propose a theory of interactivity for the genesis of the Bronze Age in the Western Pontica that included Western Anatolia, the Eastern and Central Balkans, and the Northwest Black Sea. We presume that a process of similar social

change and transformation characterized both near and distant communities in this vast region. The Baden culture complex was, through the Central Balkans and the Danube, integrated into the Western Pontica cultural network and possibly even continental Greece was linked. In vast regions of Eurasia, similar cultural processes and strong interactions between communities resulted in a similarity in the material culture and in the distribution of advanced bronze technology initiated by high-arsenic bronze artifacts.

The change in the material culture in southeastern Europe in the fourth millennium Cal BCE has been a background for many speculations including a development of Indo-European archaeology. As the recent investigations show, cultural changes in the Balkans have not been a result of a new population, on one hand. On the other hand, the dialectic understanding of language formation and development do not require such a population change as a precondition for language change. There is no reason to connect the formation, distribution and development of the Indo-European languages with any material culture changes because these are two different cultural phenomena. As the Thracians, the core of Balkan ancient population from the later second and first millennia Cal BCE, were Indo-Europeans, then, the bearers of the earlier archaeological cultures can be seen as Proto-Indo-Europeans communities with long, dynamic and controversial history in Europe, particularly in the Balkans.

The archaeological data are in accord with recent Indo-European research that describes the prehistoric continuity of the Balkans and Indo-Europeanization as a long process of development of the autochthonous population (Stefanovich 2003 and references cited there).

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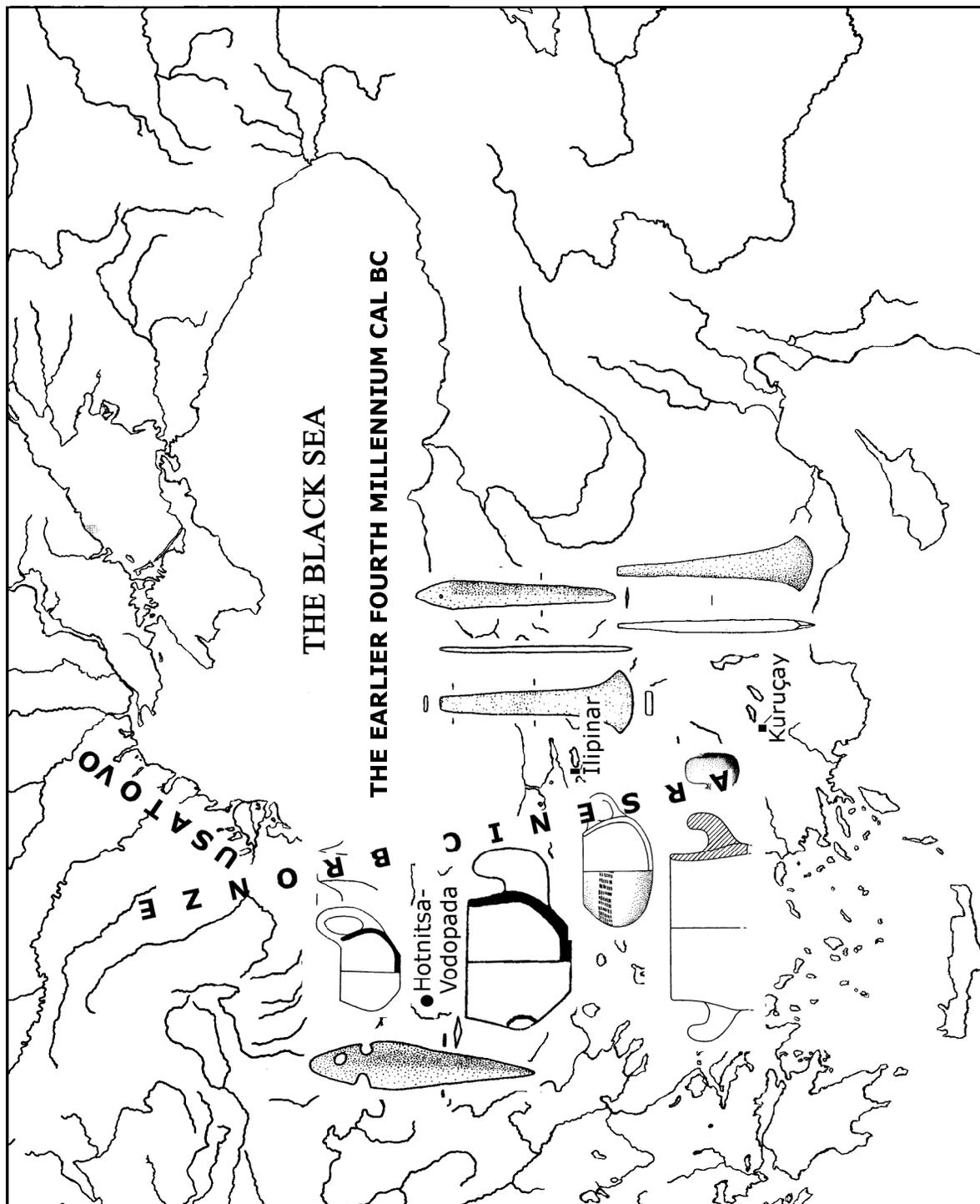


Figure 1. Horizon Kuruçay 6 - Ilipinar - Hotnitsa-Vodopada. Comparable metal and ceramic data (after Begemann et al. 1994; Duru 1996; Vajsov 1993 & Manzura 2003 ).

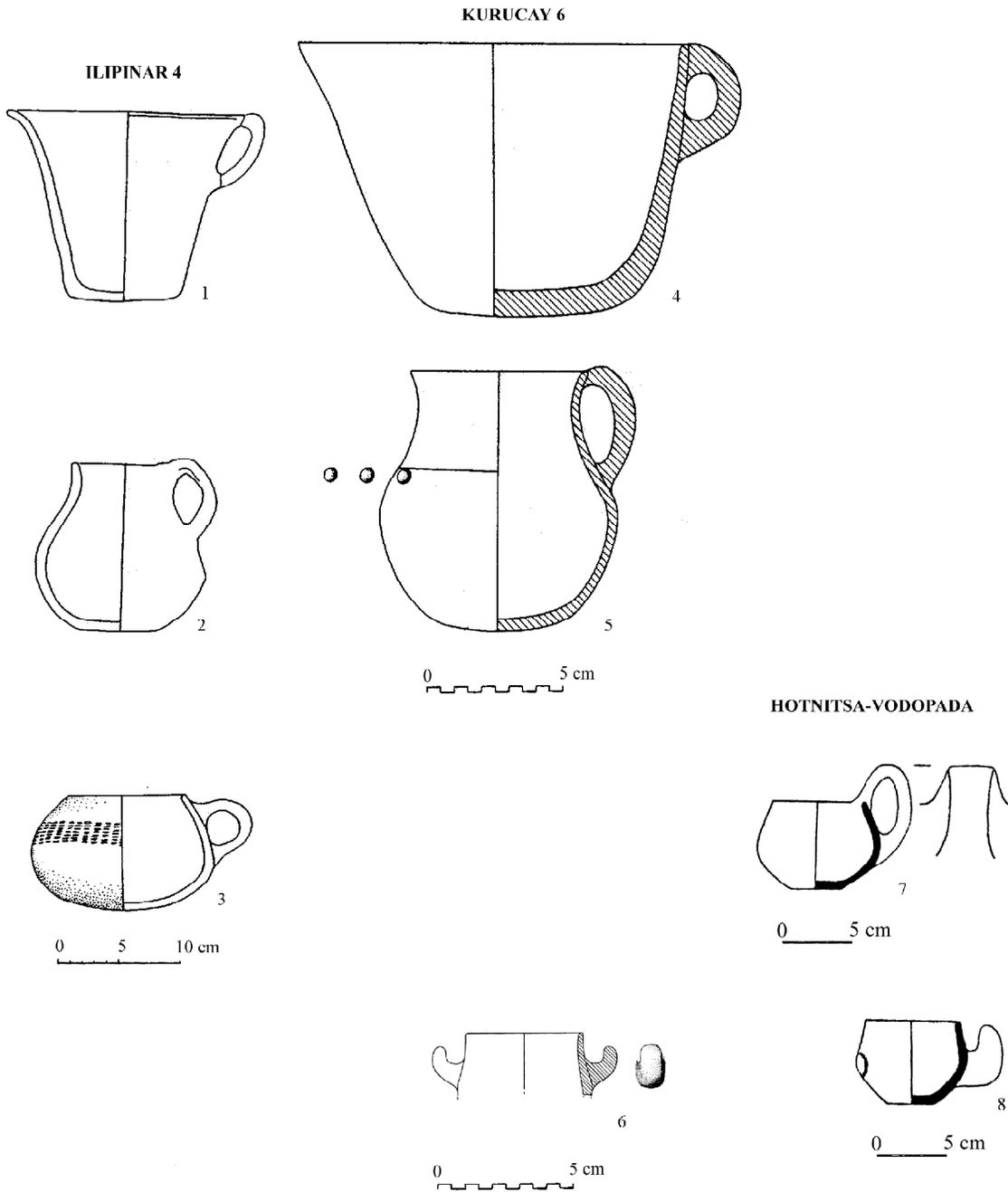


Figure 2. Horizon Kuruçay 6 - Ilipinar - Hotnitsa-Vodopada. Comparable ceramic data (after Roodenberg 2001; Duru 1996 & Manzura 2003).

DYADOVO

DRAMA-MERDZHUMEKYA

DUBENE-SAROVKA

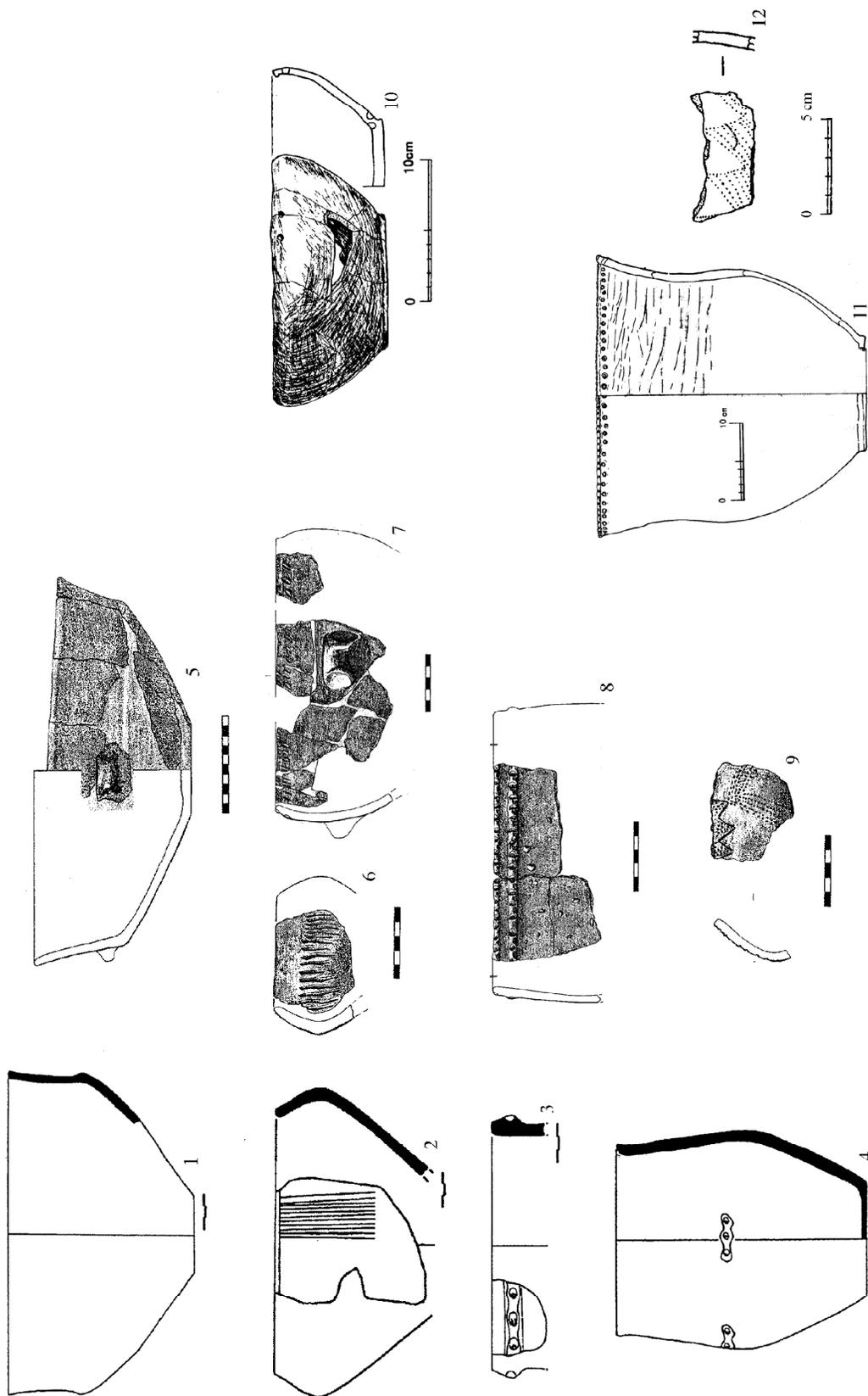


Figure 3. Dubene-Sarovka IIA - Dyadovo - Drama-Merdzhumekya. Comparable ceramic data (after Nikolova 2000b; Kamuro et al. 2000; Lichardus and Iliev 2001).

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