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Let's stop speaking "cultures"!

Alternative means to assess historical developments in the prehistoric Balkans

Zoi Tsirtsoni

Introduction

The use of the term "culture" in Balkan prehistory, from the creation of the discipline (i.e. roughly the late 19th century) until today, has followed generally the theoretical principles of the culture-historical approach, which was the dominant trend in the humanities during the second part of the 19th and much of the 20th century (see among others Trigger 2006; Webster 2008, with previous references). It displayed, however, some local particularities, which perhaps explain why it achieved such a success in the Balkans and lasted longer than in other parts of Europe.

One of these particularities was the connection of "cultures" with the debate about the chronological priority of local historical phenomena, as an expression of rivalry among prehistorians from different Balkan countries. It seems indeed that the multitude of archaeological "cultures" put forward, as well as the choice of terms (such as Late and Final Neolithic, Chalcolithic, etc.), used to describe the presumed socio-economic realities behind them, have been directly connected to the fragmentation of the local archaeological landscape, both in the interior of each country and in the region as a whole (see detailed discussion in Tsirtsoni 2006). In order to understand the development of archaeological discipline in the area, one should not forget that many modern Balkan countries were at war against each other at the beginning of the last century, at the time of gaining their independence from the Ottoman Empire. Furthermore, many of them were in opposite camps both during the First and the Second World Wars (Sivignon 2009). From 1945 to 1989, a well-guarded frontier separated the Kingdom (later Republic) of Greece from the Socialist Republics of Albania and Bulgaria and the former Socialist Federal Republic of Yugoslavia. The historical conditions that led to the formation of these modern states (annexations or losses of territories, presence of minorities, interference of foreign powers, etc.) shaped local antagonisms and had a direct impact on archaeological thought (see among others: Lampe and Mazower 2004; Todorova 2004; Daskalov and Mishkova 2014). The latter involved not only native scholars but also foreign ones working in different Balkan countries (Kaiser 1995; Fotiadis 2001). In this context, the definition of a new "culture" (or "cultural stage") has been not only a convenient tool for comparing local past phenomena with what was observed a few kilometres away, but also a way of claiming their difference or originality, and ulti-mately the superiority of the modern country/area they represented.

The situation has much improved since the turn of the 21st century as a somehow delayed result of the general decline of the culture-historical approach, and more importantly as a response to the opening of frontiers and the broader political restructuring that took place on the Balkan Peninsula (despite the often terrible conflicts that accompanied it). This is certainly a very positive development. On a purely "logistical" level, one cannot but appreciate that the number of "cultures" has stopped growing with the frenetic rhythm that it did in the previous decades. On an epistemological level, this attitude illustrates a significant change in the local archaeological discourse. Rivalry probably still exists between scholars but does not pass through the same channels anymore. Indeed, being "eponymous" does not seem to be so important today as it was a few decades ago. There have been several important discoveries in recent years and many of them turned around questions of chronological priority in a given area, but no one considered speaking, for instance, of a new "Yabalkovo culture" referring to the Early Neolithic settlement excavated in the 2000s in Bulgarian Thrace, the first of the flat, extended type investigated over such a large area (Leshtakov et al. 2007; Roodenberg et al. 2014), or a "Mavropigi culture" referring to the very Early Neolithic settlement and cemetery of Mavropigi in Greek Western Macedonia, whose start could precede by one or two centuries the neighbouring reference-site of Nea Nikomedeia (Karamitrou-Mentessidi et al. 2013). Such a change proves that the Balkan scientific community is able to abandon old explanatory models when they prove inefficient.

It is perhaps time now that we make the next step and abandon completely the use of "cultures" as a taxonomic entity, both in its synchronic and in its diachronic dimension (i.e. ranging them horizontally and vertically in chronological tables), or at least seriously question what might possibly lie behind these labels. The aim should be not to revise simply their duration but to recognise that the methodological tool used – the concept of archaeological "cultures" – does not suit well the described phenomena. There are reasons to believe that the social landscape in the prehistoric Balkans, from at least the 6th millennium BCE, was much more diversified, and at the same time much more coherent, than implied by the extremely fragmented schemes currently in use. People produced, exchanged and used things, and we should rather focus on learning more about these relationships instead of investing our efforts in even finer definitions of artificially constructed "cultures".

Some methodological considerations about the use of "cultures" in Balkan prehistory

The very concept of "archaeological culture" relies, in the Balkans like anywhere else, on two basic assumptions: a) that the associations of material remains recorded on a given spot are real, i.e. that the objects have been truly deposited there together; b) that they are historically meaningful, i.e. they betray aesthetic, ideological or social choices and relations between human groups. Both these assumptions are conditioned by the dimension of time. And both are hiding traps that we need to be aware of.

Archaeological "cultures" have been defined fi rst on the basis of specifi ci-ties of the material evidence (especially pottery) recovered from presumably distinct layers from a site, sometimes grouped in phases, and have been extended later to other sites on the basis of affi nities with the material evi-dence from the "eponymous" site (see the paradigmatic works of Childe 1925, 1929; and discussion in Webster 2008: 14-16). These "cultures", however, should not be confused with the sequences of individual sites. It is true that in some cases every layer or phase in a site's sequence is regarded as typical of a "culture" (e.g. Karanovo I, II, III, Ezero A-B), but in many others, "cultures" are defined upon only one or only some phases of a site's sequence (e.g. the "culture" of Sesklo), or sit astride two phases (e.g. "Karanovo III/IV culture"). Finally, some "cultures" combine elements from several sites (e.g. Veluška-Porodin, Attica-Kephala, Akropotamos-Topolnica, Bubanj-Hum, etc.). While a phase in a site's sequence reflects, at least theo-retically, the reality of the archaeological record, a "culture" is an artificial entity that puts together the "highlights" of separate records. The wide-spread practice of assimilating the latter to the former and using them as synonyms has been one of the major problems in Balkan prehistory.

The definition of archaeological "cultures" postulates, as already mentioned, that the material assemblages perceived in the field are not only real but also socially and historically meaningful (Lichardus et al. 1985: 225; Trigger 2006: 244). This assumption obscures the understanding of historical developments as it assigns to artificial entities, whose contemporaneity (or succession) is not always ascertained, the characteristics of true relations between human groups. Thus, the "Rachmani culture", defi ned on the basis of a presumably characteristic range of artefacts from the excavations at the eponymous Thessalian site (Wace and Thompson 1912), has been used as an autonomous chronological unit, supposedly crystallising at a particular moment the social and economic evolution in the biggest part of Central Greece. As such, it is thought to succeed the "culture of Dimini" in this area (Tsountas 1908) and to be contemporary with the "Karanovo VI culture" in Thrace (Georgiev 1961) and the "Krivodol culture" in northwestern Bulgaria (Vajsová 1966). "Rachmani" and "Krivodol" are further compared directly with phases from individual sites in other areas (e.g. Dikili Tash II, Sitagroi III, etc.). The different parts are then considered according to their

socio-economic dimensions, in order to decide whether they should be ranged or not in the same evolutionary stage (Neolithic, Chalcolithic, or else). A serious semantic and methodological shift is obvious.

With the improvement of excavation and analytical methods, it becomes clear, in fact, that the material evidence recorded at a spot is not necessarily the faithful reflection of any particular choice or social strategy of past popu-lations. It is simply a compilation of different remains, which are found – or seen – together in this particular circumstance but are not always intention-ally associated in a straightforward manner (see among others Schnapp 1980, especially the contributions of Ferdière, Galinié, Cleuziou and Demoule; Bailey 2005; Lamotta and Schiffer 2005; Lucas 2005: 32–43). The denial of this fact produces an infi nite series of entities and sub-entities. And establishing chronological sequences by ordering these artificial entities might seriously distort our perception of historical developments.

In the following discussion, I give examples from the area of the Balkan Chalcolithic, showing why "cultures" are inefficient and even misleading as chronological tools, and propose some alternative means of assessing historical realities.

First example: The Late Chalcolithic "KGK VI" cultural complex

The "Kodzhadermen-Gumelniţa-Karanovo VI cultural complex", usually abbreviated KGK VI, is among the best known in the Balkans. It is characterised by tell settlements, rich cemeteries and the broad use of graphite paint in pottery, and covers the eastern part of Bulgaria and Southeast Romania. The term (Georgiev 1961: 74; Todorova 1978: 4, 35; 1986: 33), which replaced the previous "Mound Culture" (Gaul 1948: 79), is a typical example of mixing of ingredients with different semantic and chronological values (see also Lichardus et al. 1985: 372-73). Kodzhadermen and Gumelnita refer to "cultures" named after the eponymous tell-sites without any precision of phase, although it is evident that both sites show longer periods of occupation (Popov 1916/18; Dumitrescu 1925; see also Gaul 1948: 130–39; Berciu 1961: 82–6), whereas Karanovo participates with the features recorded only in the layers that are assigned to phase VI (Georgiev 1961: 73-86). The KGK VI "cultural complex", whose chronological position is roughly in the second half of the 5th millennium BCE, is compared to a number of presumably coeval phenomena, some of which are considered more or less as its extensions (e.g. the advanced stages of the Sitagroi III "culture" in Greek Eastern Macedonia: Evans 1986; Demoule 2004: 107–10, 164, and 264–5: tab. 4.15).

One of the most important regional variants of the complex is the "Varna culture", whose hallmark is the necropolis excavated near the modern city of Varna in the late 1970s and 1980s (Ivanov 1978; Ivanov and Avramova 2000; Slavchev 2010). The dominant version until recently, based on the typological comparisons between the finds from the graves and those from

other sites in the area, was that the use of the necropolis marked an advanced stage of the "culture" (phase III) and ended, much like the KGK VI complex in general, at the end of the 5th millennium BCE (Todorova 1986: 27, tab. 1, 2002: 39, 46; Bojadjiev et al. 1993: 81–2; Bojadžiev 2002: 67). It should be noted that this idea about the lower chronological limit of the "culture" and of the complex, in general, did not rely completely on the available radiocarbon dates, which did not seem to go beyond 4300 cal BCE, but was based on an interpretation of how things should be in order to produce the recorded thickness of deposits in tells and respect the presumed pottery evo-lution (Boyadjiev 1998) (Fig. 4.1).

This idea has been seriously put into question a few years ago with the publication of the first ¹⁴C dates from the graves at Varna (Chapman et al. 2006; Higham et al. 2007). They showed that the use of the necropolis fell in the years between 4500 and 4400 cal BCE, and therefore should rather mark the early stages of the eponymous "culture". The scientific community split in two: those who thought that it was not possible to have that kind of material at such an early stage of the Late Chalcolithic, and, consequently, considered the ¹⁴ C dates wrong (Boyadzhiev 2015; Boyadzhiev and Aslanis 2016); and those who believed that the 14C dates were reliable, and that what needed to be revised was the internal phasing of the Late Chalcolithic or perhaps of the Chalcolithic as a whole (Borić 2009: 237; Reingruber and Thissen 2009: 763; Gaydarska 2011). The latter were supported in their belief by the release of ¹⁴C dates from other sites in the Balkans, especially Pietrele in Southern Romania, which challenged the validity of the distinction between the various phases of the Gumelnita "culture", and its duration as a whole (Hansen et al. 2008; Reingruber 2015).

This view is today reinforced by additional evidence from Greece and Bulgaria (see Tsirtsoni 2014, 2016a, 2016c). The new ¹⁴C dates (88 relevant dates from 25 sites produced in three different laboratories; full listing in Maniatis et al. 2016: 50–65), as well as the material and contextual evidence that accompany them, show that the "abnormally high" date given by the radiocarbon scientists of Oxford for the Varna graves is not that high compared to the overall developments of the Chalcolithic (Fig. 4.2).

They confi rm indeed two things: First, that the majority of the mature "KGK VI" sites, both in Bulgaria and the adjacent regions (i.e. Greek Eastern Macedonia), were destroyed and eventually, although not in all cases, abandoned between 4350 and 4250 cal BCE. This is true for emblematic sites like Karanovo (Nikolov and Petrova 2016), but also for others like Smyadovo (Chohadziev 2016), Kosharna (Chernakov 2016) or Yunatsite (Boyadzhiev and Aslanis 2016), to mention only those falling in the heartland of the "complex". The acquisition of similar results from sites in other regions further to the south, as well as the general coherence of the dating series, seriously weakens the hypothesis of local anomalies in the ¹⁴C atmospheric content that would affect the measuring and/or the calibration process (Boyadziev 1995, 1998 with previous literature), pushing us instead to take them

	NW Bulgaria Eastern Serbia		SW Bulg. SE Romania Rhodope Region Eastern Bulgaria		Black Sea West coast		Moldova Ukraine			Cal. BC	
K 2	5445±45		K G K	5560±100 5530±60 5480±60 5400±90 3	V A R	5595±100 5520±100 5495±100 5475±100	Т	A	5610±55 5485±60 5565±100 5330±80	4400	
S 3	5295±40 5400±50 5295±40 5295±70 5330±50 5240±60 5240±50 5230±50	5060±50 5000±50 4960±50 5250±60 5190±60 5150±50 5150±50 5030±80	VI		N A		R	В1	5355±100 5345±100 5440±70 5310±160	4200	
В	5230±30 5170±50				С		I		4700±90	4100	
	30901280		P E	5025±60 4910±60 4885±80 5110±50 4950±60 4950±60 4890±60 4830±60	E R		P		5180±65 5100±100	3900	
	5085±60 5015±50				N	L	B2	5100±50 5066±129	2000		
			V E C		A V			4950±60 4940±105 4792±105 4790±100 4890±60	3700		
					0				4810±140 4770±100 4890±50 4600±80 4370±180 4651±35	3600 3500	
					D Ă		Е		4670±110 4615±35 4515±35	3400	
М						4505±100 4385±100 4260±100		C2	4315±33 4651±100 4400±100 4375±110	3300	
M A G U R A		R 4420 R 4305)±50	Pit Grave Culture 4530±95 4360±50 4260±60 4170±50 4080±50 4110±50 4090±160 4060±160		III	P		4340±65 4330±60	3200	
C O T O F E N I			130±50 120±50 115±40 105±60 175±100 130±80 1310±80 1310±80 1310±80 1310±80 130±80 1				I T		4750±140 4590±110 4530±130 4770±120 4370±120 4405±120 4310±105	3100	(KSB) = Krivodol - Sălcuţa - Bubanj (KGK) = Kodžadermen - Gumelniţa - Karanovo V
F E N I		4390 4310 4335 4365 4260 M 4130			E Z E	4210±60 4155±60 4070±60	G R A V E		4290±90 4270±120 4215±65 4160±170 3980±200 4020±80 4000±100 4080±100	2900	Late Encolithic - dated according to the calibration curve Late Encolithic - dated according to the author
		A 4030 A 3990 A 4020 4180 L 4050 4000 I 3990			R O V O	4060±50 4040±50	C U L T U R		4150±80 4210±85 3920±50 3990±100 4080±90 3970±80 4000±190 4150±40 4010±180	2800	Transitional period Early
		C 4090)±50				E		4070±120		Bronze Age

Figure 4.1 Chronological chart. After Boyadjiev (1998: fig. 1).

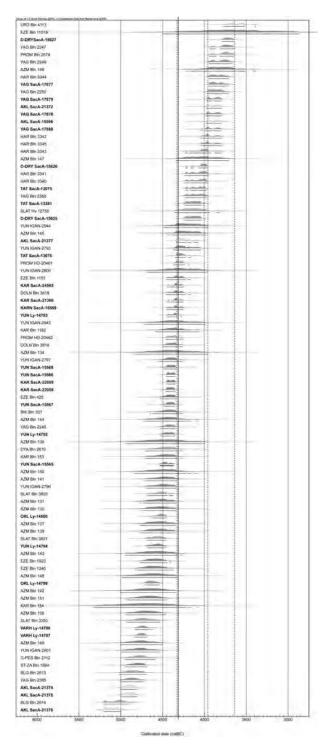


Figure 4.2 Diagram with ¹⁴C dates from KGK VI sites. In bold are the new dates produced by the "Balkans 4000" project.

as secure and reliable evidence – with all the precautions of course related to the statistical treatment of the raw measurements.

Second, the new ¹⁴C dates demonstrate that material evidence traditionally assigned to the "KGK VI" is found already in contexts dated to 4600 cal BCE or earlier. This is the case at Smyadovo, but also at Orlitsa, a single-layered settlement in the Rhodopes, whose two dates (both however from charcoal from big posts, i.e. susceptible to presenting an oldwood effect) fall in the interval between 4700–4500 cal BCE (Boyadzhiev and Boyadzhiev 2016). Similar developments are recorded, again, in sites connected with other "complexes" further south (see below). If the start of the Late Chalcolithic "KGK VI complex" – including the "Varna culture" – has to be pushed earlier, the association of the Varna graves with an advanced stage of it (although definitely not its final stage) could still be valid.

Therefore, it seems that the whole "KGK VI complex" has to be replaced, or better, re-defi ned. Indeed, this is probably not just a question of chrono-logical re-positioning but a question of broader re-defi nition of the label, as shown also by the next example.

Second example: Chalcolithic Dikili Tash

The tell settlement of Dikili Tash in Greek Eastern Macedonia can be considered, by its geographical and chronological position, as one of the south-ernmost components of the Balkan Chalcolithic complexes. Together with the neighbouring Sitagroi, it is one of the key sites for the study of develop-ments at the interface between the Balkan, Anatolian and Aegean zones (Treuil 1983, 1992; Darcque and Tsirtsoni 2010). With its century-long his-tory of research, Dikili Tash is also one of the sites where the evolution of local archaeological ideas and practices can be best observed (Treuil 2014). The firstlarge-scaleexcavationsatthesite, in the 1960–70s, had an essen-tially stratigraphic character, i.e. they were carried out with little care about the horizontal association of finds. Analysis of a representative sample of the pottery from these excavations led to the distinction of ten "pottery hori-zons" (which should not be confused with occupation layers, properly speak-ing), further grouped into three subphases (IIA – C), that were assumed to fall almost entirely in the realm of the Maritsa and Karanovo-V Early and Middle Chalcolithic "cultures", hardly entering the "KGK VI" (Late Chal-colithic) stage. Thus, occupation at Dikili Tash would end before the end of the period in the surrounding areas, and certainly before Sitagroi, whose last C halcolithic sub-phase (IIIC) appeared as one of the latest in the regional sequence (Demoule 2004: 98–9, 102–77, tabl. 1.4, 3.25 and 4.15). The avail-able ¹⁴C evidence (Treuil 1992: 33-6) did not allow confi rming or rejecting this statement. First, because not all horizons were dated; second, because it was not always clear to what precise event the dated samples corresponded; third, because the dates, like all those measured in the early years of the

method, had big statistical errors and spanned very long periods (see also introductory chapter in Tsirtsoni 2016a).

The next excavations at the site, in the 1980–90s, followed a different strategy, exposing levels horizontally (Koukouli-Chryssanthaki and Treuil 2008: 3–19). Among other discoveries, they brought to light a group of four houses, representing probably the last Chalcolithic level, at least in this part of the tell. This discovery provided the opportunity to study truly closed contexts at a large scale and to date them accurately, thanks to the big quantities of short-lived charred remains in secured positions (Darcque et al. 2011b). Additional investigation has been carried out in one of the buildings in the years after 2008 (Darcque et al. 2009, 2011a, 2015; Dar-cque 2013).

The 25 radiocarbon dates available so far show that the four houses were indeed contemporaneous, and provide interesting details about their life. Their construction and use fall in the years between 4500 and 4300 cal BCE, as indicated by most of the dates from charcoals, and their destruction towards 4300/4260 cal BCE, as shown by the dates from seeds (Maniatis et al. 2014: 46–7; Tsirtsoni 2016b). These dates fall entirely in the timespan to which, as already mentioned, most of the "KGK VI" settlements have been dated. In addition, all four houses contain pottery material typical of (or at least compatible with) "KGK VI" assemblages, found however together with vessels that should be assigned, theoretically, to the median or upper part of the previous Dikili Tash pottery sequence, and therefore should be attributed to the Karanovo V "culture" (Fig. 4.3).

This coexistence shows clearly that what was perceived until now as two successive stages in the middle part of a broad cultural development (the



Figure 4.3 Pottery vessels from Dikili Tash: a) Graphite painted plate from House 1; b) black-on-red amphora from House 1.

Balkan Chalcolithic in general) is in fact a multi-faceted, synchronous assemblage, falling at an advanced stage of this development.

This brings us again to the same general conclusion: the need for a redefi ni-tion of the whole idea of Chalcolithic "cultural complexes". The aim is not to revise simply the duration assigned to the existent chrono-cultural stages, or to merge them and create a new "Karanovo V/VI" group, but to stop using them altogether as taxonomical tools. Social relations are certainly reflected in material assemblages, but not in the linear, clustered, oversimplified way presumed by the defenders of this concept (cf. Webster 2008: 17, 21). To understand the exact meaning of the coexistence of "Karanovo V" and "Karanovo VI" vessels inside the same buildings at Dikili Tash, we should take a closer look at their technology, their provenances and their functions, and compare them with the results from the study of pottery technology, provenance and function at other sites. The synchronicity of the compared assemblages has to be ascertained, in the absence of written documents, by reliable physical measurements radiocarbon or others (e.g. thermolumines-cence, archaeomagnestism, although the latter provide results that are much less precise and therefore not easy to exploit in this direction). Eventually, the natural environmental potential at this particular moment and the gen-eral crafts environment of the respective societies (technological achieve-ments in other fi elds) should be considered as well. We could then start talking about cultural contacts (without quotation marks), transfers and relationships between true human groups instead of staying trapped in com-parisons between artificially built "cultures".

Third example: The Chalcolithic-Final Neolithic "cultures" in Southern Greece

The last example challenges the validity of the chrono-cultural schemes advanced for the late stages of the Neolithic in the rest of Greece. The two major "cultural" complexes here are "Rachmani" in Thessaly and "Attica-Kephala" in Southern Greece and the islands. Both of them presumably start in the second half of the 5th millennium BCE and continue for most of the 4th millennium, until the advent of what is commonly taken as the Early Bronze Age (Alram-Stern 1996: 95–101; Andreou et al. 1996; Gallis 1996; Johnson 1999; Alram-Stern 2007; Papadimitriou and Tsirtsoni 2010). The only scholar so far in Greece to contest the continuous character of this transition is John Coleman (2000, 2011), who claimed that both these "complexes" ended in fact at the end of the 5th millennium BCE. After that, the territory of present-day Greece would have been almost completely emptied, and later repopulated by foreign groups, presumably the first Greeks (in the ancient meaning of the term). These groups arrived from the north shortly after 3500 BCE, as attested by a number of settlements in Central Greece featuring new types of pottery (especially the so-called "Bratislava bowls", characteristic of this Proto-Bronze "Petromagoula-Doliana group":

Coleman 2011). Coleman's scheme, which is inspired of course by the much more widespread analogous scenarios found in Bulgaria and the Danube valley (Gimbutas 1977; Todorova 1995: 89–90; Boyadjiev 1998: 358–9; and also syntheses by Ivanova 2008: 163–9; Anthony 2010: 45–51), has the merit to draw the attention of the local scientific community to the contexts and the values of radiocarbon dates. It adheres, however, too fi rmly to the break hypothesis, sometimes ignoring the existent signs of continuity.

The results from the recently conducted ¹⁴C dating of a number of Thessalian sites agree with the first part of Coleman's proposal, since none of the levels with "Rachmani" features ("crusted" paints, incised pottery, etc.) provided dates after 4000 cal BCE (Tsirtsoni 2014, 2016a). Levels with "early Rachmani" features have sometimes been dated as early as 4700/4600 cal BCE (e.g. at Prodromos: Karagiannopoulos 2016), suggesting an overall earlier start of the local Chalcolithic/Final Neolithic, Other sites however in the same region (Mandra, Rachmani) provide similar dates from layers with "classic Dimini" material (supposed to precede the "Rachmani" phase), suggesting that the chronological value of these "cultural stages" should be taken with caution when applied to different sites. Both these trends recall what has been noticed before for "Karanovo V" and "KGK VI". Occupation at the site of Rachmani itself seems to end as early as 4300 cal BCE, as indicated by one date from the fill of a well with Final Neolithic material (Toufexis et al. 2000; Maniatis et al. 2016: 60). Therefore, the use of the term "Rachmani culture" for the description of the phenomena taking place in Thessaly after this date appears inappropriate.

But life did go on in the area. We know now at least two sites, Palioskala and Galini, which continue to be occupied until 3900 or possibly 3700 cal BCE (Toufexis 1999, 2016). Their material culture shows "hybrid" features with affi nities both to what preceded, i.e. the late-5th millennium materials, and what will follow, namely the finds from the "Petromagoula-Doliana group". To the latter group belongs also the single-layered Thessalian site of Mikrothives, dated by radiocarbon around 3500 cal BCE (Adrymi-Sismani 2007, 2016). It is true that there still exists an interval without any ¹⁴C dates between the two groups, whose precise duration is hard to defi ne, but the affi nities at both ends of it and with what comes next, in the Early Bronze Age, clearly suggest that the area continued to be inhabited (for problems in preservation and taphonomy that would explain the low visibility of the intermediary sites or levels, see Tsirtsoni 2014: 386; also Johnson and Perlès 2004: 75). Therefore, the transformation process must have started already in the fi nal stages of the Neolithic proper, and not at the "Proto-Bronze", as suggested by Coleman. This process involved contacts with the northern parts of the Balkan Peninsula during all this period.

The start of the "Attica-Kephala culture" could lie, again, closer to 4600 cal BCE, but the evidence is less conclusive. Although there seems to exist a sort of "threshold" in the settlement evolution (i.e. a fall in site numbers) around 4200/4000 cal BCE, several sites continue to be inhabited until 3900

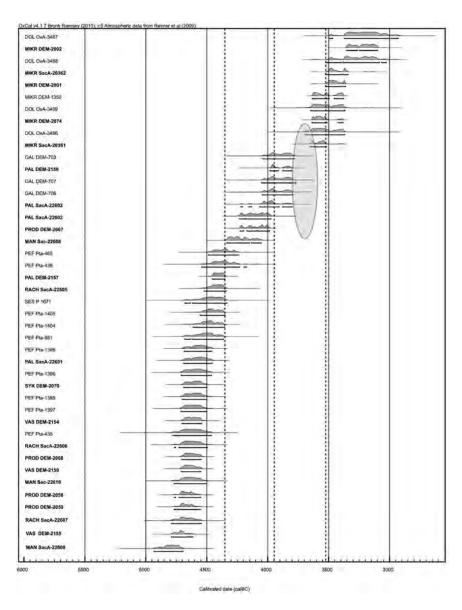


Figure 4.4 Diagram dates from Thessaly. After "Balkans 4000".

or possibly 3700 cal BCE, and feature practically the same material culture as before (e.g. crusted and pattern-burnished pottery). This is particularly clear in the sequence of Agia Triada in Southern Euboea (Mavridis and Tankosic 2016). Contrary to what we saw in Thessaly in the case of

Rachmani, the eponymous site here, Kephala, might be among those that continue in the 4th millennium BCE – despite the fact that its excavator considers the unique ¹⁴C date from the site as erroneously low and prefers dating it in the late 5th millennium BCE (Coleman 1977: 110, 2011: 15, Fig. 2, and 17). This is not a reason, however, to continue using the term "Attica-Kephala culture" as a chronological marker: On the contrary, as we know now that the evolution in material culture is particularly slow, we realize how confusing it is to use it for chronological purposes. Furthermore, it appears that the term is totally inappropriate for the description of phenomena post-dating 3900/3700 BC. The latter are still very poorly known (see Alram-Stern 2007, 2014), but there are clear affi nities in material culture between this stage and the next well-attested stage in Attica - the local Proto-Bronze stage, best represented in the older graves and in the pit 39 from the cemetery at Tsepi (Pantelidou-Gofa 2005, 2008; Petrakos 2012), and possibly in the earliest subterranean chambers from Merenta (Kakavogianni et al. 2009, 2016). This observation suggests that occupation in the area continued between 3900/3700 and 3500/3400 BC despite the apparent gap.

Conclusion

The above examples show how misleading the focus on archaeological "cultures" can be. One can regard this focus as obsolete, since the overall validity of the concept is supported neither by the history of later periods, nor by ethnography, ancient or modern (Skinner 2014: 172; see also other contributions in the present volume). In the particular Balkan context, the chronological value of the "archaeological complexes" is now seriously put into question with several independent, converging examples. We cannot claim anymore that the observed inconsistencies are due to problems in the content of ¹⁴C in the atmosphere and in the way of measuring or calibrating it (Boyadziev 1995: 171, 1998: 349, 367). On the contrary, the radiocarbon dating method appears today as one of the most reliable, and perhaps the most accurate, means for determining the age of archaeological events or series of events. However, this is only true on two conditions.

First, we have to be certain about the physical quality of the dated samples, i.e. ensure that they contain enough organic matter and that they have not been contaminated during their stay in the ground or during sampling and processing. Secondly, the relation of the samples to the archaeological context has to be ascertained, i.e. be sure that the collected samples correspond indeed to the event that we intend to date (with all the precautions taken in the way we defi ne the term "event": see Bailey 2005: 270). The latter condition is particularly important, for it resumes good command of taphonomical processes at the site, for instance the primary or secondary character of the deposits, possible disturbances or reworking of sediments, etc. This kind of fi ne stratigraphic evaluation was not much practiced in excavations in the Balkans during the previous decades, and this might explain some of the "anomalies" observed in the chronological sequences – both

absolute and relative – of many prehistoric sites. But at present, most archaeological projects, including those of rescue character, involve also persons that are skilled enough to carry out such evaluations, thus minimising the risk of wrong attribution or mixing of materials belonging to different historical events.

In fact, more than just their date, it is the very content of archaeological "cultures" that needs to be revised. It appears that it is time to abandon the external, largely artificial, shape of classification, and try to achieve more meaningful, more "true" connections between artefacts and people. But before starting a discussion on the meaning of the affi nities in material expression, we should be sure that the things we put together really go together. For this, we need better contexts and a more accurate chronological framework (not one without the other!). This might have seemed hard to attain a few decades ago, but today it is perfectly possible.

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References

Adrymi-Sismani, V. 2007. Le site chalcolithique de Microthèbes au carrefour du

monde Égéen et des Balkans du Nord. In: I. Galanaki, H. Thomas, Y. Galanakis and R. Laffineur (eds.), Between the Aegean and the Baltic Seas: Prehistory across Borders: Proceedings of the International Conference "Bronze and Early Iron Age Interconnections and Contemporary Developments between the Aegean and the Regions of the Balkan Peninsula, Central and Northern Europe", University of Zagreb, 11–14 April 2005. Aegaeum 27, 447–58. Liège: Université de Liège.

Adrymi-Sismani, V. 2016. The settlement at the Mikrothives interchange and the transition from the Chalcolithic to the Early Bronze Age period. In: Z. Tsirtsoni

- (ed.), The Human Face of Radiocarbon. Reassessing Chronology in Prehistoric Greece and Bulgaria, 5000–3000 cal BC. TMO 69, 395–416. Lyon: Maison de l'Orient et de la Méditerranée.
- Alram-Stern, E. 1996. Die Ägäische Frühzeit, 2. Serie: Forschungsbericht 1975–1993. Bd. 1. Das Neolithikum in Griechenland mit Ausnahme von Kreta. Wien: Österreicheischen Akademie der Wissenschaften.
- Alram-Stern, E. 2007. Das Chalkolithikum in Südgriechenland: Versuch einer chronologischen und topographischen Gliederung. In: F. Lang, C. Reinholdt and J. Weilhartner (eds.), Στέφανος Αριστείος. *Archäologische Forschungen zwischen Nil und Istros: Festschrift für Stefan Hiller zum 65. Geburtstag*, 1–10. Wien: Phoibos.
- Alram-Stern, E. 2014. Times of change: Greece and the Aegean during the 4th millennium BC. In: B. Horejs and M. Mehofer (eds.), Western Anatolia before Troy: Proto-Urbanisation in the 4th Millennium BC? Proceedings of the International Symposium Held at the Kunsthistorisches Museum Wien, Vienna, Austria, 21–24 November, 2012. OREA 1, 305–28. Wien: Österreicheischen Akademie der Wissenschaften.
- Andreou, S., M. Fotiadis and K. Kotsakis. 1996. Review of Aegean prehistory V: The Neolithic and Bronze Age of Northern Greece. *American Journal of Archaeology* 100: 537–97.
- Anthony, D.H. 2010. The rise and fall of Old Europe. In: D.W. Anthony and J.Y. Chi (eds.), *The Lost World of Old Europe: The Danube Valley, 5000–3500 BC*, 29–57. New York and Princeton: ISAW/Princeton University Press.
- Bailey, G. 2005. Concepts of time. In: C. Renfrew and P. Bahn (eds.), *Archaeology: The Key Concepts*, 268–73. London: Routledge.
- Berciu, D. 1961. Contribuții la problemele neoliticului în Romînia în lumina noilor cercetări. București: Academiei Republicii populare romîne.
- Bojadjiev, J., T. Dimov and H. Todorova. 1993. Les Balkans orientaux. In: J. Kozlowski (ed.), *Atlas du néolithique européen. Vol. 1, L'Europe orientale*, 61–110. Liège: ERAUL.
- Bojadžiev, J. 2002. Die Grabanlagen der prähistorischen Gräberfelder von Durankulak. In: H. Todorova, T. Dimov, J. Bojadžiev, I. Vajsov, K. Dimitrov and M. Avramova (eds.), *Durankulak*, *Band II. Die prähistorischen Gräberfelder*. Teil 1, 71–80. Sofia and Berlin: Deutsches archäologisches Institut.
- Borić, D. 2009. Absolute dating of metallurgical innovations in the Vinča culture of the Balkans. In: T.L. Kienlin and B.W. Roberts (eds.), *Metals and Societies: Studies in Honour of Barbara S. Ottaway*, 191–245. Bonn: Rudolf Habelt.
- Boyadjiev, J. 1998. Radiocarbon dating from Southeastern Europe and the cultural processes during the fourth millennium b.c. In: M. Stefanovich, H. Todorova and H. Hauptmann (eds.), *James Harvey Gaul In Memoriam*. In the steps of James Harvey Gaul 1, 349–70. Sofia: James Harvey Gaul Foundation.
- Boyadzhiev, Y. 2015. Tell Yunatsite: Development and absolute chronology of the settlements from the beginning of the Chalcolithic to the Early Bronze Age. In: S. Hansen, P. Raczky, A. Anders and A. Reingruber (eds.), Neolithic and Copper Age between the Carpathians and the Aegean Sea: Chronologies and Technologies from the 6th to the 4th Millennium BCE: International Workshop Budapest, 30 March-1 April 2012. Archäologie in Eurasien 31, 381–93. Bonn: Rudolf Habelt.
- Boyadzhiev, Y. and I. Aslanis. 2016. Radiocarbon dates from Tell Yunatsite. In: Z. Tsirtsoni (ed.), *The Human Face of Radiocarbon. Reassessing Chronology in*

- Prehistoric Greece and Bulgaria, 5000–3000 cal BC. TMO 69, 157–66. Lyon: Maison de l'Orient et de la Méditerranée.
- Boyadzhiev, Y. and K. Boyadzhiev. 2016. The Late Chalcolithic site of Orlitsa. In: Z. Tsirtsoni (ed.), *The Human Face of Radiocarbon. Reassessing Chronology in Prehistoric Greece and Bulgaria*, 5000–3000 cal BC. TMO 69, 209–29. Lyon: Maison de l'Orient et de la Méditerranée.
- Boyadziev, Y. 1995. Chronology of prehistoric cultures in Bulgaria. In: D. Bailey and I. Panayotov (eds.), *Prehistoric Bulgaria*. Monographs in World Archaeology 22, 149–91. Madison, WI: Prehistory press.
- Chapman, J., T. Higham, V. Slavchev, B. Gaydarska and N. Honch. 2006. The social context of the emergence, development and abandonment of the Varna cemetery, Bulgaria. *European Journal of Archaeology* 9, 2–3: 159–83.
- Chernakov, D. 2016. Settlement mound near the village of Kosharna. In: Z. Tsirtsoni (ed.), *The Human Face of Radiocarbon. Reassessing Chronology in Prehistoric Greece and Bulgaria*, 5000–3000 cal BC. TMO 69, 85–96. Lyon: Maison de l'Orient et de la Méditerranée.
- Childe, V.G. 1925. The Dawn of European Civilization. London: Kegan Paul.
- Childe, V.G. 1929. The Danube in Prehistory. Oxford: Oxford University Press.
- Chohadziev, S. 2016. The prehistoric cemetery at Smyadovo, Shumen district. In: Z. Tsirtsoni (ed.), *The Human Face of Radiocarbon: Reassessing Chronology in Prehistoric Greece and Bulgaria, 5000–3000 cal BC.* TMO 69, 69–83. Lyon: Maison de l'Orient et de la Méditerranée.
- Cleuziou, S. and J.P. Demoule. 1980. Enregistrer, gérer, traiter les données archéologiques. In: A. Schnapp (ed.), *L'archéologie aujourd'hui*, 87–132. Paris: Hachette.
- Coleman, J.E. 1977. Keos, Vol. 1. Kephala: A Late Neolithic Settlement and Cemetery. Princeton, NJ: American School of Classical Studies.
- Coleman, J.E. 2000. An archaeological scenario for the "Coming of the Greeks" ca. 3200 BC. *Journal of Indo-European Studies* 28, 1–2: 101–53.
- Coleman, J.E. 2011. The Petromagoula-Doliana group and the beginning of the Aegean Early Bronze Age. In: D. Katsonopoulou (ed.), Αρχαία Ελίκη και Αιγιαλεία. Πρωτοελλαδικά: Η Νότια και Κεντρική Ελλάδα, Πρακτικά Δ΄ Διεθνούς Επιστημονικού Συνεδρίου, Νικολαίϊκα Διακοπτού, 1–3 Σεπτεμβρίου 2007 Helike IV. Ancient Helike and Aigialeia: Protohelladika: The Southern and Central Greek Mainland, 13–44. Athens: The Helike Society.
- Darcque, P. 2013. Dikili Tash, un village néolithique dans le Nord de la Grèce. Comptes Rendus de l'Académie des Inscriptions et Belles-Lettres: 51–73.
- Darcque, P., H. Koukouli-Chryssanthaki, D. Malamidou and Z. Tsirtsoni. 2009. Rapports sur les travaux de l'École française d'Athènes en 2008. Dikili Tash. *Bulletin de Correspondance Hellénique* 133: 529–41.
- Darcque, P., H. Koukouli-Chryssanthaki, D. Malamidou and Z. Tsirtsoni. 2011a. Rapports sur les travaux de l'École française d'Athènes en 2010. Dikili Tash. *Bulletin de Correspondance Hellénique* 135: 497–516.
- Darcque, P., H. Koukouli-Chryssanthaki, D. Malamidou, R. Treuil and Z. Tsirtsoni. 2011b. The Chalcolithic period at Dikili Tash (Eastern Macedonia, Greece). In: Y. Boyadzhiev and S. Terzijska-Ignatova (eds.), Златното пето хилядолетие. Тракия и съседните райони през каменно-медната enoxa The Golden Fifth Millennium: Thrace and Its Neighbour Areas in the Chalcolithic, Proceedings of the

- *International Symposium in Pazardzhik, Yundola,* 26–30.10.2009, 191–201. Sofia: Bulgarian Academy of Sciences-National Institute of Archaeology with Museum.
- Darcque, P., H. Koukouli-Chryssanthaki, D. Malamidou, R. Treuil and Z. Tsirtsoni. 2015. New insights to the Copper Age economy and chronology at the tell settlement of Dikili Tash (Northern Greece). In: S. Hansen, P. Raczky, A. Anders and A. Reingruber (eds.), Neolithic and Copper Age between the Carpathians and the Aegean Sea: Chronologies and Technologies from the 6th to the 4th Millennium BCE: International Workshop Budapest, 30 March–1 April 2012. Archäologie in Eurasien 31, 403–17. Bonn: Rudolf Habelt.
- Darcque, P. and Z. Tsirtsoni. 2010. Evidence from Dikili Tash (Eastern Macedonia, Greece) and the tell issue. In: S. Hansen (ed.), *Leben auf dem Tell als soziale Praxis*. *Beiträge des Internationalen Symposiums in Berlin vom 26.–27. Februar 2007*. Kolloquien zur Vor- und Frühgeschichte 14, 55–69. Bonn: Rudolf Habelt.
- Daskalov, R. and D. Mishkova (eds.). 2014. Entangled histories of the Balkans: Vol. 2, Transfers of Political Ideologies and Institutions. Leiden and Boston: Brill.
- Demoule, J.-P. 2004. Les recipients en céramique du Néolithique Récent (Chalcolithique): description, évolution et contexte régional. In: R. Treuil (ed.), *Dikili Tash, village préhistorique de Macédoine orientale, I. Fouilles de Jean Deshayes* (1961–1975), Vol. 2. BCH Suppl. 37, 63–270. Athènes: École française d'Athènes.
- Dumitrescu, V. 1925. Fouilles de Gumelnița. Dacia 2: 29-103.
- Evans, R. 1986. The pottery of phase III. In: C. Renfrew, M. Gimbutas and E.S. Elster (eds.), *Excavations at Sitagroi: A Prehistoric Village in Northeastern Greece*, *Vol. 1.* Monumenta Archaeologica 13, 393–428. Los Angeles: University of California.
- Ferdière, A. 1980. La fouille, pour quoi faire? In: A. Schnapp (ed.), L'archéologie aujourd'hui, 23–60. Paris: Hachette.
- Fotiadis, M. 2001. Imagining Macedonia in prehistory, ca. 1900–1930. *Journal of Mediterranean Archaeology* 14, 2: 115–35.
- Galinié, H. 1980. De la stratigraphie à la chronologie. In: A. Schnapp (ed.), L'archéologie aujourd'hui, 63–85. Paris: Hachette.
- Gallis, K. 1996. The Neolithic world. In: G.A. Papathanasopoulos (ed.), *Neolithic Culture in Greece*, 23–37. Athens: Museum of Cycladic Art-N.P. Goulandris Foundation.
- Gaul, J.H. 1948. The Neolithic Period in Bulgaria: Early Food Producing Cultures of Eastern Europe. American School of Prehistoric Research Bulletin 16. New York: American School of Prehistoric Research.
- Gaydarska, B. 2011. A сега накъде? Абсолютни дати от Варненския халколитен некропол. In: Y. Boyadzhiev and S. Terzijska-Ignatova (eds.), Златното пето хилядолетие. Тракия и съседните райони през каменно-медната епоха The Golden Fifth Millennium: Thrace and Its Neighbour Areas in the Chalcolithic, Proceedings of the International Symposium in Pazardzhik, Yundola, 26–30.10.2009, 93–105. Sofia: Bulgarian Academy of Sciences-National Institute of Archaeology with Museum.
- Georgiev, G. 1961. Kulturgruppen der Jungstein- und der Kupferzeit in der Ebene von Thrazien (Südbulgarien). In: *L'Europe à la fin de l'âge de la pierre, Symposium International*, 45–100. Prague: Académie tchécoslovaque des Sciences.
- Gimbutas, M. 1977. The first wave of Eurasian Steppe pastoralists into Copper Age Europe. *Journal of Indo-European Studies* 5, 4: 277–338.

- Hansen, S., M. Toderas, A. Reingruber, I. Gatsov, F. Klimscha, P. et al. 2008. Pietrele: Der kupferzeitliche Siedlungshügel "Magura Gorgana" und sein Umfeld. Bericht über die Ausgrabungen und geomorphologischen Untersuchungen im Sommer 2007. Eurasia Antiqua 14: 19–100.
- Higham, T., J. Chapman, V. Slavchev, B. Gaydarska, N. Honch, Y. Yordanov and B. Dimitrova. 2007. New perspectives on the Varna cemetery (Bulgaria): AMS dates and social implications. *Antiquity* 81: 640–54.
- Ivanov, I. 1978. Les fouilles archéologiques de la nécropole chalcolithique à Varna. *Studia Praehistorica* 1–2: 13–26.
- Ivanov, I. and M. Avramova. 2000. Varna Necropolis: The Dawn of European Civilisation. Sofia: Agato.
- Ivanova, M. 2008. Dunkle Übergangszeit? Wandel und Kontinuität im (End) Chalkolithikum an der Unteren Donau. In: V. Slavchev (ed.), *Studia in Memoriam Ivani Ivanov: The Varna Eneolithic Necropolis and Problems of Prehistory in Southeast Europe*. Acta Musei Varnaensis 6, 163–90. Varna: Regional Historical Museum.
- Johnson, M. 1999. Chronology of Greece and South-East Europe in the Final Neolithic and Early Bronze Age. *Proceedings of Prehistoric Society* 65: 319–36.
- Johnson, M. and C. Perlès. 2004. An overview of Neolithic settlement patterns in Eastern Thessaly. In: J. Cherry, C. Scarre and S. Shennan (eds.), *Explaining Social Change. Studies in Honour of Colin Renfrew*, 65–79. Cambridge: McDonald Institute.
- Kaiser, T. 1995. Archaeology and ideology in Southeast Europe. In: P.L. Kohl and C. Fawcett (eds.), *Nationalism, Politics, and the Practice of Archaeology*, 99–119. Cambridge: Cambridge University Press.
- Κακανοgianni, O., Κ. Dimitriou, C. Koutsothanassis and A. Petrou. 2009. Οικισμός της Πρωτοελλαδικής εποχής και δύο μεμονωμένα κτίρια στη Μερέντα. In: V. Vassilopoulou and S. Katsarou (eds.), Από τα Μεσόγεια στον Αργοσαρωνικό. Β' Εφορεία Προϊστορικών Αρχαιοτήτων: Το έργο μιας δεκαετίας, 1994–2003. Πρακτικά Συνεδρίον, Αθήνα, 18–20 Δεκεμβρίου 2003 From Mesogeia to Argosaronikos. Β' Ephorate of Prehistoric and Classical Antiquities: Research of a Decade, 1994–2003: Proceedings of Conference, Athens, December 18–20, 2003, 143–58. Markopoulo Mesogaias: Markopoulo Municipality.
- Kakavogianni, O., E. Tselepi, K. Dimitriou, Ch. Katsavou and K. Douni. 2016. The Neolithic and Early Bronze Age settlement in Merenta, Attica, in its regional context. In: Z. Tsirtsoni (ed.), *The Human Face of Radiocarbon: Reassessing Chronology in Prehistoric Greece and Bulgaria*, 5000–3000 cal BC. TMO 69, 437–51. Lyon: Maison de l'Orient et de la Méditerranée.
- Karagiannopoulos, C. 2016. Prodromos Karditsas, Magoula Agios Ioannis: A prehistoric settlement in the Western Thessalian plain. In: Z. Tsirtsoni (ed.), *The Human Face of Radiocarbon: Reassessing Chronology in Prehistoric Greece and Bulgaria*, 5000–3000 cal BC. TMO 69, 381–93. Lyon: Maison de l'Orient et de la Méditerranée.
- Karamitrou-Mentessidi, G., N. Efstratiou, J. Kozlowski, M. Kaczanowska, Y. Maniatis, A. Curci, S. Michalopoulou, A. Papathanasiou and S.M. Valamoti. 2013. New evidence on the beginning of farming in Greece: The Early Neolithic settlement of Mavropigi in Western Macedonia (Greece). *Antiquity* 87: 336, Project Gallery.
- Koukouli-Chryssanthaki, H. and R. Treuil. 2008. Dikili Tash, village préhistorique de Macédoine orientale. Recherches franco-helléniques dirigées par la Société

- Archéologique d'Athènes et l'École française d'Athènes (1986–2001). Bibliothèque de la Société Archéologique d'Athènes n° 254. Athènes: Société Archéologique d'Athènes.
- Lamotta, V.M. and M.B. Schiffer. 2005. Archaeological formation processes. In: C. Renfrew and P. Bahn (eds.), *Archaeology: The Key Concepts*, 121–7. London: Routledge.
- Lampe, J.R. and M. Mazower (eds.). 2004. *Ideologies and National Identities: The Case of Twentieth-Century Southeastern Europe*. Budapest and New York: Central European University Press.
- Leshtakov, K., N. Todorova, V. Petrova, R. Zlateva-Uzunova, O. Özbek, Tz. Popova, N. Spassov and G. Iliev. 2007. Preliminary report on the salvage archaeological excavations at the Early Neolithic site Yabalkovo in the Maritsa valley, 2000–2005 field seasons. *Anatolica* 33: 185–234.
- Lichardus, J., M. Lichardus-Itten, G. Bailloud and J. Cauvin. 1985. La Protohistoire de l'Europe: le Néolithique et le Chalcolithique entre la Méditerranée et la mer Baltique. Paris: Presses Universitaires de France.
- Lucas, G. 2005. The Archaeology of Time. London: Routledge.
- Maniatis Y., C. Oberlin and Z. Tsirtsoni. 2016. "Balkans 4000": The radiocarbon dates from archaeological contexts. In: Z. Tsirtsoni (ed.), *The Human Face of Radiocarbon: Reassessing Chronology in Prehistoric Greece and Bulgaria*, 5000–3000 cal BC. TMO 69, 41–65. Lyon: Maison de l'Orient et de la Méditerranée.
- Maniatis, Y., Z. Tsirtsoni, C. Oberlin, P. Darcque, H. Koukouli-Chryssanthaki, D. Malamidou, T. Siros, M. Miteletsis, S. Papadopoulos and B. Kromer. 2014. New ¹⁴C evidence for the Late Neolithic-Early Bronze Age transition in Southeast Europe. In: R.H. Tykot (ed.), *Proceedings of the 38th International Symposium on Archaeometry, May 10th–14th 2010, Tampa, Florida. Open Journal of Archaeometry 2: 5262 (43–50).*
- Mavridis, F. and Z. Tankosic. 2016. The Later Neolithic stages in Central-Southern Greece based on the evidence from the excavations at the Agia Triada Cave, Southern Euboea. In: Z. Tsirtsoni (ed.), *The Human Face of Radiocarbon: Reassessing Chronology in Prehistoric Greece and Bulgaria*, 5000–3000 cal BC. TMO 69, 419–36. Lyon: Maison de l'Orient et de la Méditerranée.
- Nikolov, V. and V. Petrova. 2016. Tell Karanovo: The hiatus between the Late Chalcolithic and the Early Bronze Age. In: Z. Tsirtsoni (ed.), *The Human Face of Radiocarbon: Reassessing Chronology in Prehistoric Greece and Bulgaria*, 5000–3000 cal BC. TMO 69, 127–39. Lyon: Maison de l'Orient et de la Méditerranée.
- Pantelidou-Gofa, Μ. 2005. Τσέπι Μαραθώνος: Το πρωτοελλαδικό νεκροταφείο (Βιβλιοθήκη της εν Αθήναις Αρχαιολογικής Εταιρείας 235). Athens: Archaeological Society at Athens.
- Pantelidou-Gofa, M. 2008. The EHI deposit pit at Tsepi, Marathon: Features, formation and the breakage of the finds. In: N.J. Brodie, J. Doole, G. Gavalas and C. Renfrew (eds.), Horizon Opiζων: A Colloquium on the Prehistory of the Cyclades, Cambridge, 25th–28th March 2004, 281–89. Cambridge: McDonald Institute-Stavros Niarchos Foundation.
- Papadimitriou, N. and Z. Tsirtsoni (eds.). 2010. Η Ελλάδα στο ευρύτερο πολιτισμικό πλαίσιο των Βαλκανίων κατά την 5η και 4η χιλιετία π.Χ. Athens: Museum of Cycladic Art-N.P. Goulandris Foundation.
- Petrakos, V. 2012. Τσέπι Μαραθώνος. Ergon Archaiologikis Etaireias 59: 18–22.

- Popov, R. 1916–18. Коджадерменската могила при гр. Шумен. *Izvestija na Balgarskoto Archeologicesko Druzhestvo* 6: 71–155.
- Reingruber, A. 2015. Absolute and relative chronologies in the Lower Danube Area during the 5th millennium BC. In: S. Hansen, P. Raczky, A. Anders and A. Reingruber (eds.), Neolithic and Copper Age between the Carpathians and the Aegean Sea: Chronologies and Technologies from the 6th to the 4th Millennium BCE: International Workshop Budapest, 30 March–1 April 2012. Archäologie in Eurasien 31, 301–24. Bonn: Rudolf Habelt.
- Reingruber, A. and L. Thissen. 2009. Depending on 14C data: Chronological frameworks in the Neolithic and Chalcolithic of Southeastern Europe. *Radiocarbon* 51: 751–70.
- Roodenberg, J., K. Leshtakov and V. Petrova (eds.). 2014. *Yabalkovo*, *Vol. 1*. Sofia: ATE/Sofia University.
- Schnapp, A. (ed.). 1980. L'archéologie aujourd'hui. Paris: Hachette.
- Sivignon, M. 2009. Les Balkans: une géopolitique de la violence. Paris: Mappemonde.
- Skinner, J. 2014. Greek ethnography and archaeology: Limits and boundaries. In: Müller, C. and Veïsse, A.E., *Dialogues d'histoire ancienne*. Supplément 10, 171–203. Besançon: Presses Universitaires de Franche-Comté.
- Slavchev, V. 2010. The Varna Eneolithic cemetery in the context of the Late Copper Age in the east Balkans. In: D.W. Anthony and J.Y. Chi (eds.), *The Lost World of Old Europe: The Danube Valley, 5000–3500 BC*, 192–210. New York and Princeton: ISAW/Princeton University Press.
- Todorova, H. 1978. The Eneolithic period in Bulgaria in the 5th millenium B.C., BAR I.S. 49, Oxford.
- Todorova, H. 1986. Каменно-медната епоха в България (пето хилядолетие преди новата ера), Sofia.
- Todorova, H. 1995. The Neolithic, Eneolithic and transitional period in Bulgarian prehistory. In: D. Bailey and I. Panayotov (eds.), *Prehistoric Bulgaria*. Monographs in World Archaeology 22, 83–91. Madison, WI: Prehistory Press.
- Todorova, H. 2002. Chronologie, horizontale Stratigraphie und Befunde. In: H. Todorova, T. Dimov, J. Bojadžiev, I. Vajsov, K. Dimitrov and M. Avramova (eds.), *Durankulak, Band II. Die prähistorischen Gräberfelder*, Teil 1, 35–52. Sofia and Berlin: Deutsches archäologisches Institut.
- Todorova, M. 2004. Balkan Identities: Nation and Memory. London: Hurst & Cie. Toufexis, G. 1999. Σωστική ανασκαφή στη χ.θ. 3220–3316 της ανατολικής Παράκαμψης Λάρισας (νεολιθική θέση στο Κοινοτικό Διαμέρισμα της Γαλήνης, Δ. Πλατυκάμπου). Archaiologiko Deltio 54, Chronika: 424–6.
- Toufexis, G. 2016. Palioskala: A Late Neolithic, Final Neolithic and Early Bronze Age settlement in the Eastern Thessalian plain (Central Greece). In: Z. Tsirtsoni (ed.), *The Human Face of Radiocarbon: Reassessing Chronology in Prehistoric Greece and Bulgaria, 5000–3000 cal BC*. TMO 69, 361–80. Lyon: Maison de l'Orient et de la Méditerranée.
- Toufexis, G., S. Karapanou and M. Mangafa. 2000. Ανασκαφική έρευνα στη μαγούλα Ραχμάνι. Πρώτα συμπεράσματα. In: 1^η Επιστημονική Συνάντηση. Το έργο των Εφορειών Αρχαιοτήτων και Νεωτέρων Μνημείων του ΥΠΠΟ στη Θεσσαλία και στην ευρύτερη περιοχή της από το 1990 μέχρι σήμερα, Βόλος, Μάιος 1997, 105–14. Volos: Ministry of Culture-13 EPKA.

- Treuil, R. 1983. Le Néolithique et le Bronze Ancien égéens. Les problèmes
- stratigraphiques et chronologiques, les techniques, les hommes. BEFAR 248. Paris: De Boccard.
- Treuil, R. (ed.). 1992. Dikili Tash, village préhistorique de Macédoine orientale,
 - Fouilles de Jean Deshayes (1961–1975), Vol. 1. BCH. Suppl. XXIV. Athènes: École française d'Athènes.
- Treuil, R. 2014. A century of research in Dikili Tash. In: E. Stefani, N. Merousis and A. Dimoula (eds.), 1912–2012: A Century of Research in Prehistoric Macedonia: Proceedings of the International Conference, Archaeological Museum of Thessaloniki, 22–24 November 2012, 57–65. Thessaloniki: Archaeological Museum of Thessaloniki.
- Trigger, B.G. 2006. *A History of Archaeological Thought* (2nd edition). Cambridge: Cambridge University Press.
- Tsirtsoni, Z. 2006. "Mon Récent est plus ancien que ton Moyen": motifs d'une guerre balkanique en cours. In: P. Darcque, M. Fotiadis and O. Polychronopoulou (eds), *Mythos, la préhistoire égéenne du xixe au xxie siècle après J.-C., Actes de la Table ronde internationale, Athènes, novembre 2002. BCH* Suppl. 46, 231–44. Athènes: École française d'Athènes.
- Tsirtsoni, Z. 2014. Formation or transformation? The 4th millennium BC in the Aegean and the Balkans. In: B. Horejs and M. Mehofer (eds.), Western Anatolia before Troy: Proto-Urbanisation in the 4th Millennium BC? Proceedings of the International Symposium Held at the Kunsthistorisches Museum Wien, Vienna, Austria, 21–24 November, 2012. OREA 1, 275–304. Wien: Österreicheischen Akademie der Wissenschaften.
- Tsirtsoni, Z. (ed.). 2016a. The Human Face of Radiocarbon: Reassessing Chronology in Prehistoric Greece and Bulgaria, 5000–3000 cal BC. TMO 69. Lyon: Maison de l'Orient et de la Méditerranée.
- Tsirtsoni, Z. 2016b. The Late Neolithic II (Chalcolithic)–EBA transition at the tell of Dikili Tash. In: Z. Tsirtsoni (ed.), *The Human Face of Radiocarbon: Reassessing Chronology in Prehistoric Greece and Bulgaria*, 5000–3000 cal BC. TMO 69, 271–97. Lyon: Maison de l'Orient et de la Méditerranée.
- Tsirtsoni, Z. 2016c. The end of the Balkan Chalcolithic: A viewpoint from the South. In: V. Nikolov and W. Schier (eds.), Der Schwarzmeerraum vom Neolithikum bis in die Früheisenzeit (6000–600 v. Chr.). Kulturelle Interferenzen in der Zirkumpontischen Zone und Kontakte mit ihren Nachbargebieten [Proceedings of the Humboldt-Kolleg held at Varna], May 16–20, 2012, PAS 30, 339–58. Rahden: Leidorf.
- Tsountas, Ch. 1908. Αι Προϊστορικαί Ακροπόλεις Διμηνίου και Σέσκλου. Βιβλιοθήκη της εν Αθήναις Αρχαιολογικής Εταιρείας 14. Athens: Archaeological Society at Athens.
- Vajsová, H. 1966. Stand der Jungsteinforschung in Bulgarien. *Sloveská Archeológia* 14: 5–48.
- Wace, A.J.B. and M.S. Thompson. 1912. *Prehistoric Thessaly*. Cambridge: Cambridge University Press.
- Webster, G. 2008. Culture history: A culture-historical approach. In: R.A. Bentley, H. Maschner and C. Chippindale (eds.), *Handbook of Archaeological Theories*, 11–27. Lanham: Altamira Press.