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The Militarization of a Society: The Example of Transcaucasia in the Early Iron Age

An Archaeological Overview

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Abstract

The aim of the present paper is to analyze the particular political and social process which began in the lands south of the main Caucasus range at the end of the Late Bronze Age and continued and strengthened during the following Iron Age. This process was characterized by the marked militarization of the society, which involved many related aspects, not just the political system but also social life and organization. The following pages will be dedicated to an analysis of some well-defined aspects, such as the organization of the human landscape, architecture, funerary customs, arts, politics and economy. Emphasis will be placed on how these were affected by this process of militarization and the main features of the latter will be described.

Keywords

militarization – fortresses – weaponry – chiefdom – Iron Age – Caucasus

Introduction

Militarization can be considered as a process by which a political or social entity organizes and structures itself for military conflict. Military conflict is not necessarily intended as a "war of aggression", waged for territorial gain and subjugation, but may instead simply be the result of a situation of tension

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and insecurity, in which the main efforts are directed toward a policy of self-defence. The process of militarization involves many interrelated aspects that encompass all levels of society, strongly affecting its organization and economy. The re-organization of power is probably the most important aspect since the military can work as a means of social restructuring. Lower classes might gain status and mobility within the military organization and usually there is a change of leadership, from political or religious leaders to those with military expertise. The new leaders necessarily establish new policies distinguished by their military character, which result in novel actions affecting both internal and foreign politics. A situation of conflict gives the military leaders strong, if not total, control over the entity they rule, organizing its policies according to their needs. Thus economic resources are drawn toward the development of weaponry and military efforts.

It must be specified that militarization is not always achieved by the efforts of a central and structured political authority, such as a state, a kingdom or an empire. In fact there are many instances where the absence of a recognized central authority in a specified territory allows the emergence of militant groups. The use of force as a mode of social control is typical of areas with the absence of an effective national rule. Under such circumstances, many newly formed groups make use of their military force in order to gain or strengthen their local power, obtain effective control over the local population, and expand their control towards the surrounding lands, fighting with other neighboring polities for sovereignty.

Archaeologically speaking, such processes can be identified by means of various types of evidence. The presence of specified settlements with military characteristics are the most tangible sign, since their remains are often still clearly visible and recognizable through surface surveys or digital analysis. Moreover, they may constitute clear examples of the organization of the landscape according to strategic needs. Other signs might be the presence of weapons as grave goods or iconographic representations related to military activities.

The present article seeks to analyze these dynamics during the first centuries of the Iron Age in a well-specified area located south of the main Caucasus range, *i.e.* Transcaucasia, today divided among the republics of Armenia, Azerbaijan and Georgia.

Since the fall of the Soviet empire, there has been a growth of interest in the study of this area, formerly part of the Soviet Union which, for political reasons, was inaccessible to outsiders for almost one century.[1] In the past

1 In recent years some comprehensive presentations of the history of research in the republics of Transcaucasia have appeared in various specialist journals, (Lindsay & Smith 2006;

decade there has been an increase in the interest and activity of Western institutions and scholars, perhaps also in part due to the currently unstable political situation in the Middle East.

Located at the periphery of both the Near East and the nomadic world of the Eurasian steppe lands, Transcaucasia has developed unique features during its history, which are mainly the results of a long-term local development, since it has barely been influenced by the aforementioned cultural zones. Similar features may also be encountered in neighboring areas such as the Lake Van basin, Eastern Anatolia, and the Lake Urmia basin in northern Iran, which were however more strongly influenced by and connected with the Near East than Caucasia itself.

Archaeological research in the Caucasus has brought to light a huge amount of evidence, although reports are often written in Russian, Armenian, Azeri and Georgian and are thus largely unavailable to Western scholars. The particular abundance of specific literature from the southern Caucasus is due to long-term archaeological work, which has always continued (apart from brief breaks during the two world wars) since the end of the 19th century, whereas in Eastern Anatolia and Iran, apart from a few investigations, such research began after World War II and was not so intense as in Armenia or Georgia. Moreover, in Iran there has been a long interruption following the Islamic Revolution in 1979 and in Eastern Turkey the Kurdish revolt has constituted a further obstacle to field research for a number of years.

Despite this abundance, several problems still remain with regard to a satisfactory periodization, especially with regard to the different cultural phases between the Late Bronze Age and the Hellenistic period. This lack is mainly due to a substantial absence of complete stratigraphic sequences from excavated sites; this is especially true for the southern Caucasus and the eastern part of the Anatolian plateau, while more data are available regarding the nearby area of the Lake Urmia basin, in northern Iran.

Moreover, it must be stressed that the chronological subdivisions developed for Transcaucasia, northern Iran and Eastern Anatolia are slightly different from each other, employing different terms and dating systems. The problem of dating and the need to unify terminology have already been widely discussed elsewhere.[2]

The archaeology of Transcaucasia is essentially an archaeology of burials, in which the study of inhabited sites has taken second place, except for some

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Badalyan *et alii* 2009, 9-20; Sagona 2010), which bridge the gap between the early studies, now outdated (Piotrovskiĭ 1949, 3-8; Piotrovskij 1966, 3-30), and the current state of field research.

2 Marro & Hauptmann 2000; Rubinson & Sagona 2008.

well-known cases (such as, for example, the Urartian and Hellenistic sites in Armenia and Georgia). It must be noted, however, that inhabited settlements containing lengthy stratigraphic sequences are almost totally absent, since most sites were subject to short-term occupation, often not encompassing more than a few centuries. The scarcity or the total lack of settlements with a population density and of a duration sufficient to create *tepes* covers all of eastern Anatolia and the southern Caucasus, while the northern part of the Iranian plateau has more of them, especially in the fertile lands around Lake Urmia.

Moreover, amelioration projects carried out in Soviet times eventually destroyed many sites located on the plains, while others have been severely and heavily damaged and covered by the expansion of modern settlements.

Information regarding absolute chronology might be obtained from radiocarbon dates, but very few are available and refer especially to the Bronze Age,[3] while the corpus of inscribed objects consists only of Urartian metalwork found within settlements,[4] thus from the 8th century BC onwards.

A Historical Overview

Before going into detail about the main topic of this research, it is necessary to offer a quick survey of the historical and archaeological development of Transcaucasia starting from the Early Bronze Age, in order to better provide a short but complete summary of the archaeological evidence that forms the basis to the Late Bronze-Early Iron Age developments on which this study is focused.

The first signs of social differentiation may be seen already in the Early Bronze Age (*ca.* 3500-2400 BC) with the emergence of the Early Transcaucasian or Kura Araxes culture. Settlements are known with a hierarchy of sizes and early defensive structures.[5] The same settlement pattern seems to be attested

3 Kushnareva 1997, 83; Badalyan *et alii* 2009.

4 For Urartian inscribed objects see *CTU* IV. Only one inscribed object was found beyond the limit of the Urartian domination in Transcaucasia; it is a bronze helmet bearing an inscription of Argishti I and a "lightning symbol" found during illicit digging in the necropolis of Rutschi-Tig (Verkhnyaya Rutkha), in Northern Ossetia (Nagel 1959-1960; *CTU* IV: B 8-13; Castelluccia & Dan 2013, fig. 17). Uninscribed Urartian metalwork is, on the contrary, more commonly found outside its borders (Castelluccia 2014).

5 Kushnareva 1997, 55, 74, 75, 225, 227-228.

also in neighboring eastern Anatolia and northern Iran,[6] where settlements with defensive constructions appear already in the Chalcolithic period.[7]

Burial evidence shows the first signs of the concentration of wealth and the probable emergence of an elite, represented by a few metal objects and the first weapons buried with the dead.

In the Middle Bronze age, *ca*. 2400-1500 BC, various characteristics emerge. The uniqueness of the Kura Araxes culture is replaced by different emerging cultures marked by distinctive pottery, such as the cultures of Trialeti and, later on, those of Kizilvank, Karmir Berd/Tazakend and Sevan-Uzerlik. Their chronology and diffusion is still discussed since they often overlap each other, making it difficult to clearly identify their chronological and geographical boundaries.[8] For example Kushnareva, one of the most important scholars of the subject, includes all of eastern Anatolia within the limits of the Trialeti culture.[9] The most characteristic evidence of the period is the spread of the *kurgan*, often of very large size. Settlements are still rare,[10] although more frequent in Iran. Various settlements possess fortifications.[11]

Mounds thus represent the most important source of information for the period, thanks also to the rich repertory of objects found within them. The kurgans of Trialeti and Tsnori in Georgia, Kirovakan, Vanadzor, Lori Berd and Karashamb in Armenia and Uç Tepe in Azerbaijan were complex structures of huge dimensions and have yielded an astonishing amount of finds, among which wooden chariots and bronze, gold and silver objects. Human sacrifices were also conducted.

This evidence clearly shows the presence of small elites of warriors with a marked capacity to accumulate wealth and detain power. Several kurgans, such as those of Uç Tepe and Trialeti, are up to 15-20 m high, with diameters of 140 m and grave-chambers covering up to 175 m^2. In her detailed study of the prehistory of the Caucasus, Kushnareva calculated the effort devoted to the

6 Marro & Özfırat 2003; 2004; 2005; Özfırat 2006; 2007; Biscione 2009, 128.

7 Özfırat 2006, 177, 182; 2007, 114; Biscione & Khatib-Shahidi 2007, 28-29; Biscione 2009, 127-128.

8 Khanzadian 1995, 29-37; Kushnareva 1997, 81-149; Devedzhyan 2006, 351-362; Badalyan *et alii* 2009, 34, fig. 2, 52-68.

9 Kushnareva 1997, 108. The Culture of Trialeti (Middle Bronze II) is dated between 2200/2100-1700 BC (Badalyan *et alii* 2009, 34 fig. 2; Smith 2009a, 28). It is earlier than the Cultures of Kizilvank, Karmir Berd/Tazakend and Sevan-Uzerlik (Middle Bronze III), dated between 1700-1500 BC.

10 Smith 2009a, 27-28.

11 Kushnareva 1997, 124, 143, 145; Özfırat 2005, 148; 2006, 186; Biscione 2009, 129-131.

building of such kurgans, basing the analysis on the detailed records of construction work described in Old Babylonian texts. Considering, for example, that the largest kurgan was composed of about 80,000 cubic meters of earth, she estimated that to make such a mound of earth would require about 48,000 man-days of toil.[12]

At the end of the Middle Bronze Age the wealth and complexity of burials may be seen to decrease considerably, progressively evolving towards the structures of the following period.

The Late Bronze Age in the southern Caucasus is generally dated between 1500 and 1200 BC, but there is no clearly identifiable gap between the Late Bronze and Early Iron Age. In northern Iran the same period roughly corresponds to Iron Age I.

Recently detailed studies based on pottery analysis have given rise to a proposed division of the Late Bronze-Early Iron Age of the Armenian highland into six different phases, called "Lchashen-Metsamor horizon, I-VI".[13] This analysis was based on the important sites of Lchashen,[14] on the northwestern shores of Lake Sevan, and Metsamor[15] on the River Aras, where both fortresses and cemetery have been investigated but not, unfortunately, fully published.

In eastern Anatolia and northern Iran the two periods are often treated together because of the strong continuity, although in these two areas less data are available than in the Caucasus.[16]

The Late Bronze Age is essentially a well-documented period. Many sites and burial grounds have been investigated and furthermore some C-14 dates are available from the well-documented necropolis of Artik, in northern Armenia,[17] as well as from the recent investigation of the American-Armenian team around Mt. Aragats, in central Armenia.[18]

The most distinctive feature of the period is the marked evolution in settlement structure. The population of the southern part of Transcaucasia shifted from nomadic or semi-nomadic pastoralism toward a more structured and proto-urban society with a readily discernible militaristic character. The Late Bronze Age is thus marked by the widespread appearance of highly fortified

12 Kushnareva 1997, 230.

13 Badalyan *et alii* 2009, 34, fig. 2, 68, 73-83; Smith 2009a, 29-30.

14 Mnatsakanyan 1957; 1960; 1961; Biscione & Parmegiani 2004.

15 Khanzadyan *et alii* 1973; Khanzadian 1995.

16 Biscione 2003, 170-171; Marro & Özfırat 2003, 393; Özfırat 2006, 186-194.

17 Khachatryan 1963; 1975; 1979.

18 Badalyan *et alii* 2009, 39-41.

sites, usually called "cyclopean fortresses", which can be considered the result of a development of indigenous social and architectural structures that had their roots in the previous period.[19] Fortresses constitute the main settlement pattern of Transcaucasia and the neighboring mountainous regions and several important studies have been devoted to them.[20] They were also a predominant feature of the Iron Age and the later Urartian kingdom, partially losing their importance only during the Achaemenid period.[21]

During this epoch it is also possible to observe first long-range contacts with the cultures of Mesopotamia, represented by some Kassite and Mitanni objects and seals found in various burial grounds, mostly south of the River Kura.[22] Hurrite and Hittites sources of the period make reference to some political entities in eastern Anatolia,[23] but no detailed information is given regarding the lands further east, *i.e.* those belonging to present-day Armenia and Georgia.

The Early Iron Age in the South Caucasus is dated to between 1200/1100 and 800 BC, but in Iran the very same period is considered Iron II. Recently a new system of dating for Iron Age Transcaucasia has been proposed,[24] in which the Iron Age I coincides roughly with the Early Iron Age; it is followed by the Iron Age II, marked by the advent of the Kingdom of Urartu in the south; Iron Age III begins with the fall of the Urartian kingdom and lasts until the Hellenistic period.

The Early Iron Age shows considerable continuity with the previous period; archaeologically speaking it is not possible to observe a clear gap despite considerable differences.

Neighboring areas, such as the northern Iranian plateau and eastern Anatolia, seem to exhibit patterns and structures already established in Transcaucasia. Research carried out in the last decade has revealed the presence of fortresses with cyclopean walls similar to Transcaucasian structures in the Lake Van basin and throughout Eastern Anatolia.[25]

There is a sort of homogenization of social and political structures covering all of the mountainous area at the northern and eastern periphery of Mesopotamia in which, however, cultural distinction is not present.

19 Badalyan *et alii* 2003, 165.

20 Smith & Kafadaryan 1996; Smith 1999; Sanamyan 2002; Biscione 2009; Smith 2012.

21 Castelluccia 2015.

22 Khanzadian & Piotrovskii 1992; Khanzadian *et alii* 1992; Pogrebova 2000; 2011.

23 Diakonoff 1984, 45-57; Yakar 2000, 431; Klengel 1976-1980.

24 Badalyan *et alii* 2009, 40-41.

25 Belli & Konyar 2003; Marro & Özfırat 2003; 2004; 2005; Sevin 2003; Özfırat 2006; 2007.

The changes of the Iron Age are more pronounced in Transcaucasia. Several important local cultures emerge, the most important of which are those of "Koban", "Colchis", "Chodzhali-Kedabeg",[26] "Samtavro", "Lchashen-Metsamor" and "Talish", whose limits, distribution and characteristics are not sufficiently clear – since in certain areas these cultures overlap, disappear or interact with each other.

It is also possible to observe a progressive increase in the exchange of features and objects (perhaps even populations) between the two slopes of the Caucasus, and this is particularly evident in the spread of what is known as the "Koban culture", which spread over almost the entire northern slope of the Caucasus and part of its southern side.[27] There are also well attested interactions between the Caucasus and northern Iran, especially with regard to the key role played by the region of Talish,[28] between Iran and Azerbaijan, whereas contacts with Mesopotamia were slight.

The main feature of the Iron Age, however, is a marked growth in metallurgy, a development partly favored by the wealth in raw materials of the whole Caucasus.[29]

In the 8th century BC the southern part of Transcaucasia was annexed by the expanding Urartian kingdom, which ruled these lands till the fall of its dominion at the end of the 7th century BC. The time and causes of the Urartian downfall are still a matter of debate,[30] but it is generally presumed that invasions of nomadic people played an important role. In the same period, in fact, all Transcaucasia is thought to have been affected by penetration, from their area in the northern Caucasus,[31] of nomadic peoples such as the well-known Scythians and the Cimmerians,[32] resulting in the fall of the Urartian state. Most of the Urartian settlements were destroyed and several Scythian-type objects became widespread throughout Transcaucasia.[33] The subsequent phases are more difficult to bring into sharp focus. After a period of uncertainly, with a probable brief period of Median rule, all of Transcaucasia was finally incorporated into the Achaemenid empire.[34]

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26 This culture is also known as "Ganja-Karabach".

27 Kozenkova 1996, fig. 26.

28 Piller 2013; Castelluccia 2017b.

29 Chernykh 1992.

30 Hellwag 2012.

31 Kozenkova *et alii* 2007.

32 Ivantchik 2001.

33 Tekhov 1980b; Esayan & Pogrebova 1985; Mehnert 2008.

34 Ter-Martirosov 2000; Bill 2003; 2010; Kroll 2003; Knauss 2005; 2006.

The present study concentrates on the period from the last stage of the Bronze Age to the first centuries of the Iron Age with the main goal of highlighting evidence linked with the development of military features within the Transcaucasian populations and landscape. Several aspects of militarization are considered; their main features are presented below.

Militarization of the Landscape

The militarization of the landscape is the placement and development of weaponry and military technology in a given environment. Various levels of militarization can be observed in antiquity. The most distinctive examples are probably the well-known defensive structures established by the Roman Empire, such as the *limes* and the many *castra*, as well as the Chinese Empire with its Great Wall; such visible elements are meant to mark the surrounding space with the tangible presence of the ruling authority. They were not only intended as defensive structures, but also served as ideological barriers between the "civilized" world (represented by themselves) and the "uncivilized" others (everyone outside), thus acting also as symbolic forms of territorial and cultural demarcation.

Establishing a network of well-organized military outposts and structures (not only bases, but also roads, warehouses, signaling towers *etc*.) is often essential for a political authority to control and organize a conquered territory and strengthen the political annexation of frontier zones.

What all these have in common is the fact that the display of military power is necessary for the effective ruling of a land. Such a notion is in fact the premise of militarization. Displaying a visible military presence is of primary importance in establishing and strengthening power in an alien society.

The creation and organization of the human landscape is obviously closely determined by the political system of the authority ruling it. In well-organized entities with unified sovereignty, such as empires and kingdoms, it follows a clear hierarchical structure and the whole territory is subjected to the same authority and organized according to its strategic needs.

Transcaucasia in the first half of 1st millennium BC does not show signs of the presence of any major power able to control extensive areas; on the contrary, it is divided into several small local independent polities, which might be defined as chiefdoms. It thus lacked a unified authority controlling the organization of the land.

Archaeologically speaking, the reconstruction of this ancient landscape must be based on the visible remains present, since written sources are

practically absent until the advent of the Urartian kingdom with its abundant corpus of inscriptions on stones, carved rocks and bronze objects scattered throughout the mountainous highlands of eastern Turkey, Armenia and northern Iran.[35]

Several surface surveys have been conducted since the late 19th century. Apart from some early studies carried out during the Tsarist and Soviet eras,[36] several new expeditions have visited Transcaucasia during the last two decades, after the fall of the Soviet empire.[37] The advent of new technologies and methods has greatly improved our earlier knowledge of the ancient landscape of Transcaucasia. These studies can be compared to the wide corpus available concerning the northern part of the Iranian plateau, which has been the target of detailed long-term research, carried out especially by the German expedition led by W. Kleiss and S. Kroll,[38] as well as other western teams.[39] Moreover, in the last decade research surveys have also been directed toward the study of the most eastern part of the Anatolian highland.[40] Less information is currently available about Georgia and Azerbaijan, but the situation is expected to improve soon. To date, however, we must rely especially on data coming from the lands of the historical Armenian highland.

The archaeological evidence shows the presence of a large number of fortified settlements, which may be divided into several types according to their size, but they mostly share common features.

They are built on high ground – rocky outcrops, hills and mountain tops – and not in open plain areas. As Biscione has pointed out[41] the term "cyclopean", which conventionally means fortification built with irregular and very large stones, is too imprecise to be useful and should be avoided. The term 'hill-fort' is preferable, since it is a general term, used to indicate forts, fortresses and fortified settlements built on hilltops or promontories. These became the most typical form of settlement on the mountainous highlands. Hill-forts were not associated with *tepes*, either undefended or with mudbrick walls. Undefended sites did exist, but they seem to be scatters of pottery or sites with a very shallow

35 *CTU* I, IV.

36 Ivanovskiĭ 1911; Mikaelyan 1968; Esayan 1969; 1976.

37 Biscione *et alii* 2002; Kroll 2006; Smith *et alii* 2009; Parker *et alii* 2011; Castelluccia *et alii* 2012; Petrosyan *et alii* 2015.

38 The reports of the long-term German activities are too numerous to be cited here; for a complete list see Biscione 2009.

39 Gropp & Najmabadi 1970; Swiny 1975; Pecorella & Salvini 1984; Biscione & Khatib-Shahidi 2006; 2007.

40 Marro & Özfırat 2003; 2004; 2005; Özfırat 2006; 2007.

41 Biscione 2009, 123.

archaeological deposit, evidence of settlements which were short-lived and/or with structures scattered over a wide surface area; there is, however, also clear evidence of dwellings around fortresses.[42]

Fortresses and forts are military sites with large protective walls, located in naturally well-defended positions, the only difference between the two being one of size.[43] A fortress might be defined as a strongly defended settlement. They are built with very large, irregularly-shaped stones. Other types of defensive constructions of the same periods are known, especially all over the territory of present-day Iran, but they consist mostly of mudbrick structures, generally in or around *tepes*, therefore located on plains or valley floors. These two classes of fortifications are conceptually and culturally very different.

The hierarchical level accorded to a settlement is usually based on the settled area, but this parameter is not well suited to fortification, since it would put on the same level two sites of equal size but differing degrees of fortification. A better measure would be the perimeter of a fortification, which represents the amount of labor put into its construction, and is thus an expression of its strategic and economic importance.[44]

Fortresses were seats of power, with administrative and religious functions, as well as storerooms, public and monumental buildings and religious structures. It is evident that the Urartian kingdom, the first state on the Armenian Plateau, adapted the administrative and organizational techniques of urban Mesopotamia to the local non-urban tradition based on fortresses.

The architectural and engineering features will be discussed below; here we will concentrate on typology. Forts can be classified according to their size but it is not possible to establish an empirical basis for analysis. Using a rather simple terminology they might be defined as fortress, fort, outpost or watchtower.

Such settlement types are scattered all over the southern part of Transcaucasia, northern Iran and Eastern Anatolia. Information from present-day Azerbaijan and Georgia shows a much reduced presence of these types of settlement; although some are known,[45] it must be noted that they have not been properly studied and the situation might in reality be different. Moreover, the southern wooded slopes of the Caucasus, despite the presence of numerous burial grounds, have virtually none of these settlements. The same situation is observable on the northern side in areas which have been well studied. The archaeological record shows wealthy communities in a densely settled

42 Badalyan *et alii* 2003, 159, fig. 7, *5*.

43 Biscione 2002, 352.

44 Biscione 2002, 353.

45 Shanshashvili & Narimanishvili 2013.

landscape, but settlements seldom exceeded 1-2 ha and no settlement hierarchy can be identified.[46]

Highly fortified settlements can therefore be considered a phenomenon that is confined to the Armenian highland. Furthermore, almost no hill-forts are reported from the lowland part of the Araxes basin, either in Iran or in Azerbaijan. It is therefore evident that this class of monument is connected with the highland.[47]

Although some of the earliest stone fortifications might date to the Early Bronze Age, the majority date to the Late Bronze – Early Iron Age. They do not share the same distribution, and therefore had different strategic functions, which may be considered "passive" and "active".

A passive role is that fulfilled by military structures built in isolated positions, on the top of mountains and rocky promontories, not directly connected with the control and exploitation of any economic resource located nearby. They may perhaps have been used as refuges in case of need, or merely for controlling only the surrounding pasturage. It is also possible that some hill-forts were for non-permanent use.

A second mode can be considered active. Such fortified sites were located in highly strategic positions, namely along the few roads connecting the various inhabited and cultivated areas, on mountain passes, in proximity to arable lands or important mines.

Despite the presence of a tight net of fortified settlements, it is not always possible to see an organized system in their distribution, with a "capital" controlling the surrounding area, assisted by smaller fortresses and outposts depending on these.

In some areas which have been intensively surveyed, such as around Mount Aragats and the Sevan basin, both located in Central Armenia, a spatial and social organization can however be discerned. In the Aragats area the human landscape is articulated into local political entities, represented by the simultaneous presence of cyclopean fortresses and settlements, burial grounds and small outposts for the control of the territory.[48]

This system has also been seen in the Lake Sevan area where the existence of at least five different polities was proposed, organized as follows. Three hierarchical levels of fortifications have been identified for each sovereignty

46 Reinhold 2003, 32.

47 Biscione 2009, 125.

48 Badalyan *et alii* 2003, 159-163; Smith 2009a, 30-31; 2009b, 396-397.

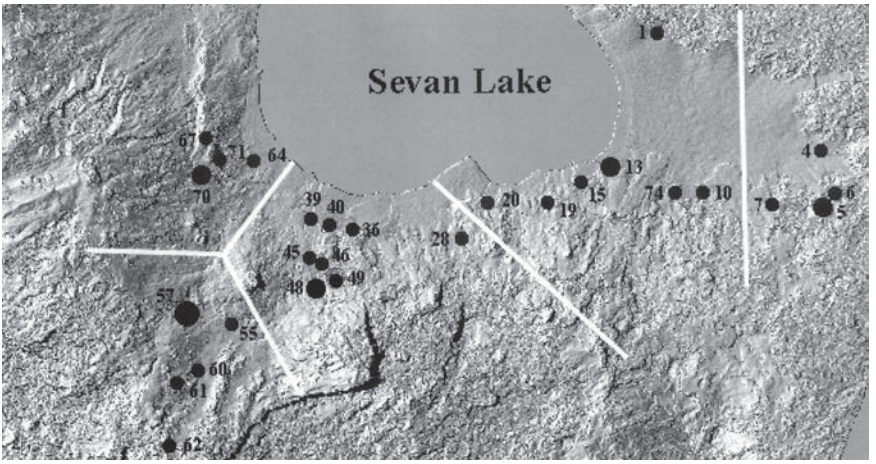

FIGURE 1 *Fortresses in the Lake Sevan area* (*after Biscione 2002, 335, fig. 1*).

to the south of the lake.[49] Each political entity is usually centered on a big fortress, with other smaller satellite hill-forts around it. The three hierarchical levels consist of one big fortress with a perimeter of up to 1420 m, four smaller fortresses with perimeters between 950 and 750 m, and 17 smaller forts with perimeters from 550 to 125 m (Fig. 1). On the map the size of the dots is proportional to the perimeter of the fortification. The white lines separate the theoretical areas of control of each large fortress.

Other areas lack the middle level, with just one big fortress and others that are very small. This is especially seen on the northern and western shores of the lake, where the main evidence is represented by the large site of Lchashen.

Defining their precise political role is difficult due to the almost total absence of written sources. One of the few comes from an Urartian inscription of king Sardrui II (*c.* 756-730 BC) left on the shore of Lake Sevan after his military conquest of the area.[50] He reports the existence of the "Land of Tulikhu and Udurietiuni", perhaps some sort of confederation, since he mentions "four kings of the land Udurietiuni" it must have been formed of at least four different independent policies, three of which are named: Arquqini, Kamani, Lueruhi.[51] Establishing the nature of these entities is problematic (chiefdoms?

49 Biscione 2002, 358.

50 *CTU* I: A 9-6.

51 Salvini 2002, 45-53.

early/primitive states?) because the differences between these models are hard to recognize properly.[52]

Militarization of Architecture

Despite their frequency, few fortresses have actually been excavated – mostly only test soundings have been dug, while others have not been properly published. It is thus not possible to have a precise picture of their inner organization. Their main feature is the presence of massive defensive walls, which may stand over 4-5 m high and be 2-4 m thick (Fig. 2).

Large stones, usually of basalt, are used for the sides, with smaller stones filling the interior (Fig. 3). Mudbricks are almost completely absent.

The outer walls are usually built following the surface of the crest on which they are erected, which explains the walls' irregular profile (Fig. 4). Towers and buttresses may be present, usually located along the less steep sides (Fig. 5), but in general these are rare. They became more common in the following centuries, especially in the military architecture of the Urartian kingdom (Fig. 6).

Due to the lack of mortar for binding the stones to one another and the effect of natural agents (and Transcaucasia is highly prone to earthquakes) such walls rarely stand nowadays to any great height; so that we do not know of the features of the upper parts of the walls. We do not know if there were any further defensive provisions such as merlons or additional wooden parts. Some information may be had from the later Urartian fortifications.[53] Both Urartian and Assyrian representations on reliefs and bronze belts show the presence of merlons and embrasures (Fig. 7), but it must be taken into account that they are a couple of centuries later in date and represent also the development of architectural features and skills.

Large fortresses may also possess walls that are complex in plan (Fig. 8). These often seem to have been laid out and built at different times, since the lack of any overall planning for the whole structure is clear. A citadel was also present in very few cases, especially within the main settlements.

Given the primitive techniques of siege at the time, the defensive features of these fortresses were quite elementary and remained unchanged for a long period. No further defenses of the walls were erected, such as barbicans or dead-end passages. We are also not aware of the presence of moats or picket fences.

52 Lamberg-Karlovsky 1994, 405; Arnold & Gibson 1995, 2-3; Marcus & Feinman 1998, 5-7.

53 Kleiss 1982.

FIGURE 2 *Teghenik fortress, Cyclopean walls* (*photos of the author*).

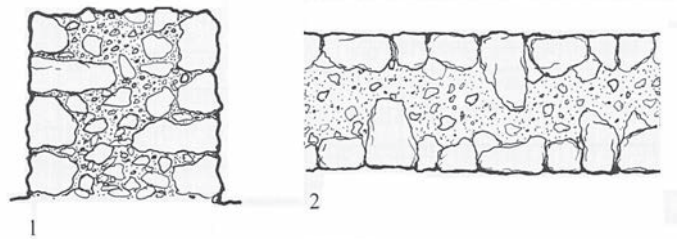

FIGURE 3 *Construction of fortification walls* (*after Sanamyan 2002, 349, fig. 9*).

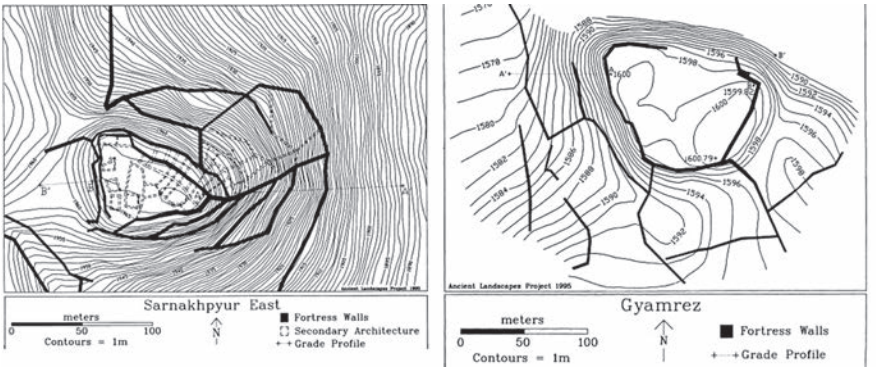

FIGURE 4 *Plans of fortresses of Sarnakhpyur and Gyamrez* (*after Smith & Kafadaryan 1996, figs. 2, 5*).

Unfortunately only few of these fortresses have been extensively excavated and thus the articulation of their interiors is not well documented. It is however clear that these sites were not only mere defensive structures, but were also the seats of local powers. They thus fulfilled all the functions performed

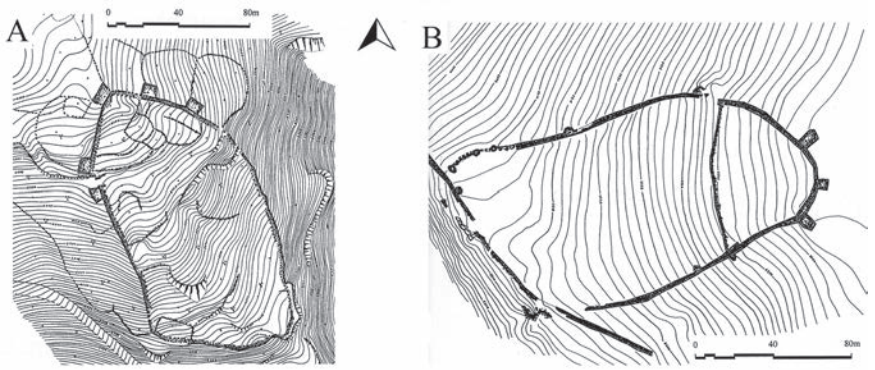

FIGURE 5 *Plans of fortresses* (*after Biscione* et alii *2002, 117*).

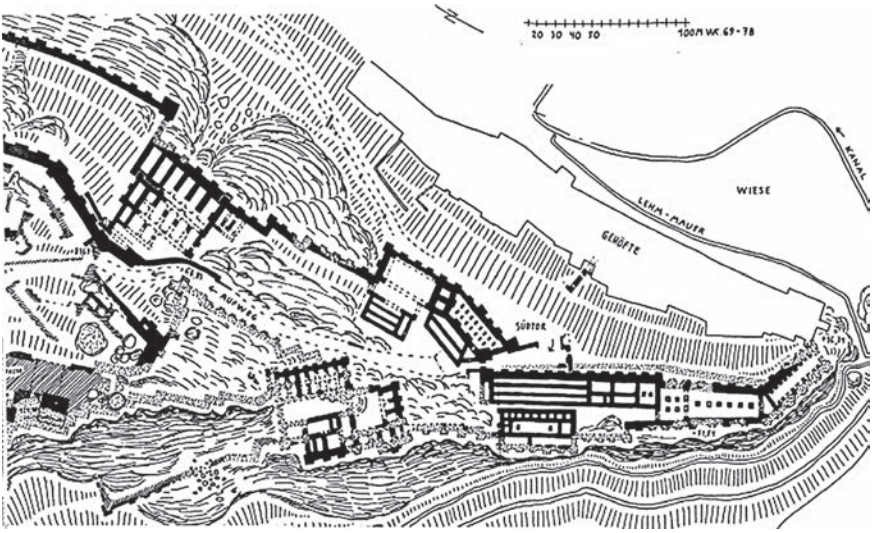

FIGURE 6 *Urartian Fortress of Bastam* (*after Kleiss 1988, 33*).

by cities in other parts of the Near East: they were the seats of administrative functions, in some of them ritual buildings have also been discovered, and they also contained workshops and storage rooms.[54]

54 Smith 1996, 186-188; 2009b, 397-398; Biscione 2002, 359; Gevorkyan 2002; Smith & Leon 2014.

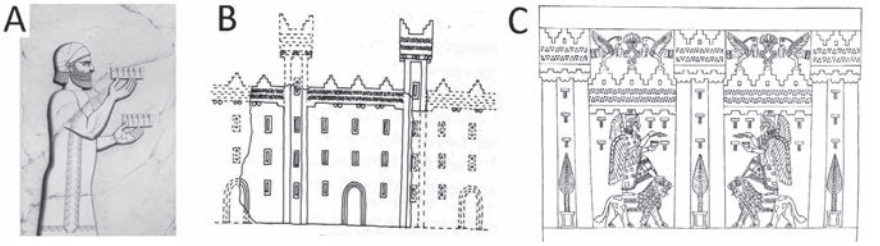

FIGURE 7 *Assyrian and Urartian representations of fortresses* (*after Botta & Flandin 1849, pl. 36; Kleiss 1982, fig. 8; Calmeyer 1979, fig. 4*).

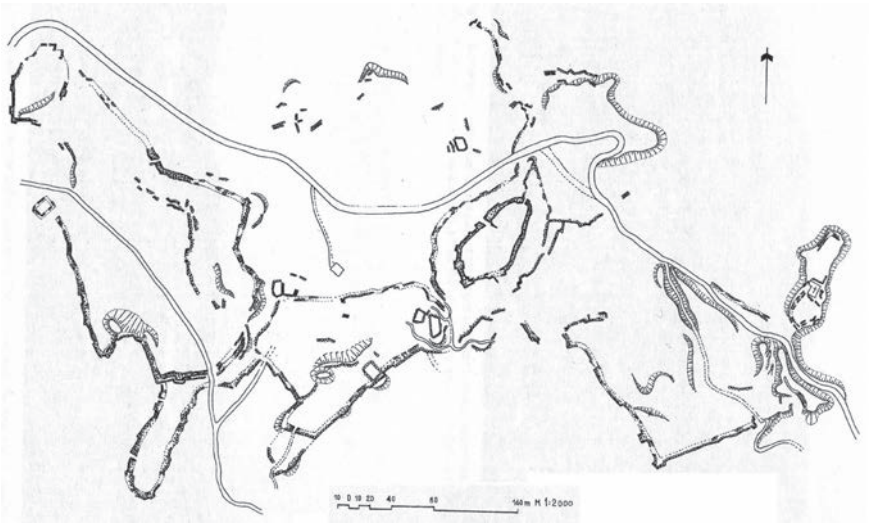

FIGURE 8 *Lchashen fortress* (*after Biscione 2004, fig. 1*).

Militarization of Art

The role and image of the military within a society is another aspect of militarization. Visual representation might have been used to strengthen the position of the military within the society through propagandist processes which could take various forms, according to the physical basis. Artistic representation can work on various levels; it might stress the power of the whole army, the display of weapons and weaponry, the defeat and punishment of the enemy. This whole system is well shown by the Assyrian reliefs, long and well studied, while other cases in the Near East are also attested without such a widespread use of detail.

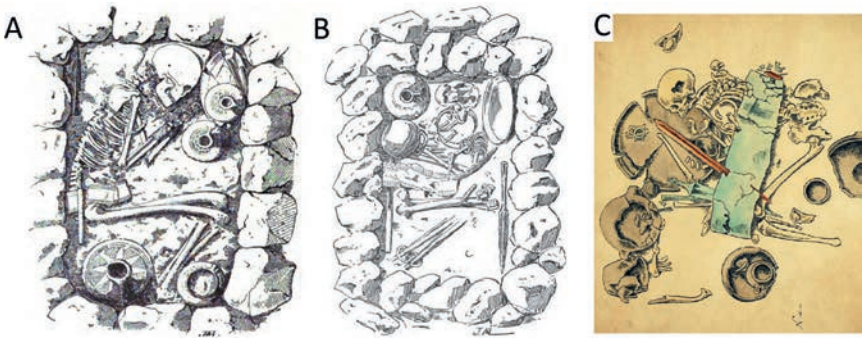

FIGURE 9 *Graves of the Late Bronze Age. A: Akhtala* (*after de Morgan 1889, 58, fig. 17*)*; B: Mouçi-yéri* (*after de Morgan 1889, 70, fig. 27*)*; C: Samtavro* (*after Sagona 2010, 327, fig. 3,* 1).

The illustration of military scenes on various materials, many of which were not intended to be displayed in public, but kept privately, might be a sign of an increasing role of the military within a society.

In the Caucasus a large number of metal objects, some made of precious metals, are known from the Middle and Late Bronze Age. Decoration consists especially of geometric designs or scenes related to cults, such as the Kirovakan and Karashamb silver goblets and those of Trialeti.[55] In the Late Bronze Age pottery and other materials were decorated but metal objects, especially of precious metal, were not widespread. It is at the final stage of the period, around the 14th century BC, that new tendencies again emerge, with a marked increase in metalwork production, in bronze and – a couple of centuries later – also in iron.

Several metal objects have incised decorations, whereas stone-working and painting was virtually absent. We might also suppose the large-scale presence of decorated perishable materials, given the pastoral lifestyle of this semi-nomadic population.

The largest category of objects with artistic representation is that of bronze belts, thin metal plaques usually around 100 cm long and 5 to 15 cm wide. They are found in graves, especially of males, but have been found also in females' and children's graves, and are often placed on the waist of the deceased (Fig. 9).

Bronze belts can portray highly complex scenes. To date about 350 belts, mostly fragmentary, are known.[56] Of these, about 70 are plain, about 160 have

55 Kuftin 1941, 89; Kushnareva 1997, 113, fig. 48; 215.

56 Castelluccia 2017a.

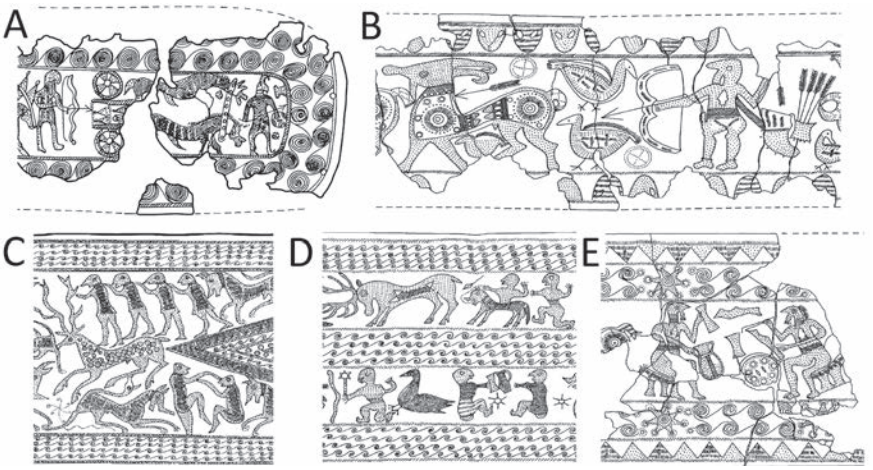

FIGURE 10 *Decorations on bronze belts* (*after A: Esayan 1984, pl. 14, n. 47; B: Tekhov 1980, pl. 56; C: Chidašeli 1986, pl. 14, No. 20; D: Chidašeli 1986, pl. 1, No. 1; E: Tekhov 1980, pl. 53*).

FIGURE 11 *Decorations on bronze belts* (*after A: Tekhov 1980, pl. 53; B: Chidašeli 1986, pl. 8, No. 13; C: Chidašeli 1986, pl. 12, No. 19*).

geometric designs of various types, and 120 bear figurative patterns, often featuring animals. About 40 also portray human figures.

Animal representations are especially common on figurative belts. Human figures often bear weapons, but their particular features seem to recall some sort of cultic role, since they are mostly shown in procession scenes, and cultic, daily-life and hunting activities (Fig. 10). A wide range of weapons is depicted: long and short swords, helmets, shields, bows and war chariots. The most frequent weapon is the bow, of which various types can be seen, along with quivers and the *goryt* (Fig. 11). It is interesting to note the presence of a large number of images of archers on horseback, always in hunting scenes, and of mounted knights (Fig. 12). Chariots too are attested, but it is not clear if they have just some sort of cultic role or a military function, as widely seen in Egypt, the Levant and Mesopotamia (Fig. 13).

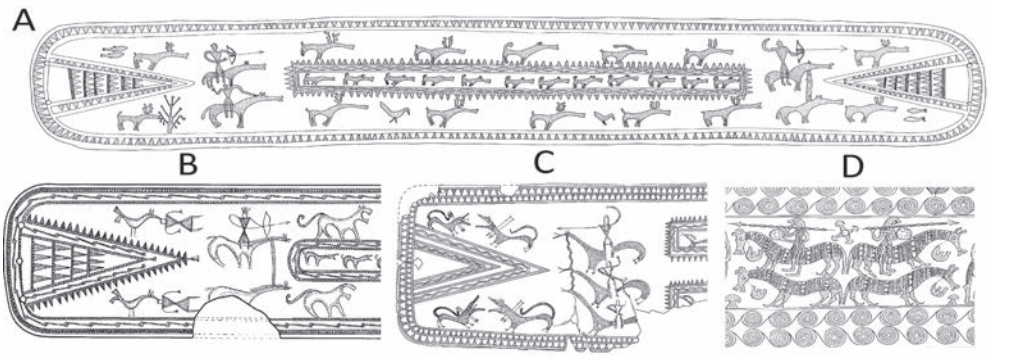

FIGURE 12 *Decorations on bronze belts* (*after A: Chidašeli 1986, pl. 4, No. 8; B: Esayan 1984, pl. 15, No. 49; C: Esayan 1984, pl. 12, No. 40; D: Esayan 1984, pl. 13, No. 42*).

FIGURE 13 *Decorations on bronze belts* (*after A: Esayan 1984, pl. 13, No. 42; B: Tekhov 2002, pl. 21; C: Esayan 1984, pl. 14, No. 48*).

FIGURE 14 *Bronze belt from Stepanavan* (*after Esayan 1984, pl. 12, No. 38*).

There is only one belt which shows an unambiguous battle scene. This was unfortunately a chance discovery made near the village of Stepanavan,[57] in northern Armenia, where a large Late Bronze – Iron Age necropolis is known. It shows a series of marching figures, armed with shields, spears and sword, along with some sort of war chariot (Fig. 14).

57 Esayan & Mnatsakanyan 1977.

Militarization of Death

The military also has a role in defining gender identities; death fixes the role of the deceased person, which must be shown. The burial of the dead is performed according to the religious and cultic beliefs of the community to which they belonged. Unfortunately we do not know much about the religion(s) of Transcaucasia. There are no written sources, and few temples or cult buildings have been excavated and published. Therefore most of the interpretations which suggest names and roles for the gods and other deities consist of little more than speculation. There are various "signs" of the existence of different cults on diverse levels, but in my opinion we lack enough pertinent data to propose a reliable interpretation of religious use for areas that merely encompass the discovery site of a "cult building".

Data discernible from graves allow, however, a partial reconstruction of burial customs and give some indications regarding religious belief.

Cemeteries are spread throughout the Caucasus, with graves arranged in a cluster, often located near a fortress or a settlement, but which may also be isolated.

Early Iron Age tombs show partial continuity with respect to those of the Late Bronze Age, in which on the other hand it is possible to identify a more pronounced change from the previous burial tradition. In the Middle Bronze Age (2200-1500 BC), as has been briefly described above, the most distinguished burial type consists of a large kurgan with a burial chamber inside, extremely rich grave goods, with gold and silver objects, horses and sometimes human sacrifice.

In the Late Bronze Age (1500-1200 BC) large mounds continued to be erected, usually marked with a cromlech, namely a circle of stones that enclosed the base of the mound,[58] but a more decisive shift may be seen toward structures that are substantially smaller and simpler.

The richest tombs of several burial grounds, for example Lchashen (where, among other remains, chariots have been found), Lori-Berd, Metsamor and Keti, still contain numerous bronze objects and precious materials, but the amount of work and wealth invested in the funeral ritual is considerably less than in the tombs of the Middle Bronze Age. It is not clear, however, if this decrease can be attributed to a reduced availability of resources or whether instead the elites did not need to legitimate themselves with such a display of

58 Tumanyan 2009.

wealth as in the previous period. Social differentiation did not decrease but, on the contrary, probably increased.[59]

Rather unusual for their construction type are the "catacomb" tombs of the necropolis of Artik, in north Armenia, that consisted of underground burial chambers with the access through a vertical shaft.[60]

In the subsequent Iron Age there was, however, a progressive simplification of tomb construction; most of the graves were simple cist-tombs. They seem to be a sign of a gradual expansion and homogenization of the power structure, developing toward a fully militarized society. A clear distinction on the basis of sex becomes evident; practically all male graves bear weapons. However, there are many variations that will be discussed in more detail below.

Several burial grounds of the Late Bronze and Early Iron Age were also used in the previous periods, for example the great cemeteries of Lchashen, Mtskheta-Samtavro, Lori-Berd and Metsamor, while many others show only faint traces of earlier occupation. Most of the cemeteries, however, seem to have been used only from the end of second millennium onwards.

The burial grounds of the Late Bronze-Iron Age were mostly formed in this period, while the existing ones expanded greatly. Several cemeteries are located near cyclopean fortresses, but there are also numerous "isolated" cemeteries that are not – as far as is known – located in proximity to a settlement.

The type of burial in these cemeteries is not uniform: it is possible to observe the coexistence of kurgans, dolmen, cist-graves and simple pit-tombs. However, the predominant type was the cist-graves, known in Soviet literature by the term "*kammenÿe yashchiki*".

A full study of the spatial distribution of large cemeteries has not yet been made; however, in the vicinity of Mount Aragats in an area of about 30 km^2 there are as many as 162 cemeteries, with an estimated total of about 4800 graves. Beyond the limits of this area, however, they are almost entirely absent.[61]

The vast majority of burials are inhumations; cremations are quite rare. The typical burial is a cist-grave, usually square or rectangular in shape, of modest size, containing a single inhumation, in the majority of cases. The interior walls are lined with large slabs of stone or, more rarely, with irregular stones. Sometimes there are slabs on the bottom and others covering the structure. The grave may be marked on the surface by small mounds and/or stone circles. Another type consists of a simple pit dug in the ground with fewer lining or covering stones; this variant is particularly widespread in northern Transcaucasia and on the European side of the Caucasus.

59 Badalyan *et alii* 2003, 163, 165; Smith 2009a, 30-31; 2009b, 397.

60 Khachatryan 1975, 138, pl. 2.

61 Badalyan *et alii* 2003, 162.

More complex structures are known, such as underground burial chambers which differ from the previous group more than anything else for their size. They may contain single or multiple burials, marked by mounds and cromlechs. They tend to have only three sides built with large stone blocks, while one side is left open and filled with smaller stones. The presence of kurgans, albeit smaller than those of the previous era, is still widely attested in the Early Iron Age, especially in Central Armenia and Western Azerbaijan.

While most burials are single, several cases of multiple burials are known, usually with more complex structures. These may be primary depositions, or "family tombs" in use for quite a long time, in which older occupants were moved to the edge of the grave in order to make room for new individuals. There are also cases in which skeletons lay one on top of another.

This type of burials continued for several centuries. Only during the Urartian domination were new funerary practices introduced into Transcaucasia, such as the wider use of cremation,[62] or large rock-cut chamber tombs.[63] Very large kurgans, comparable to those of the Middle Bronze Age, are rare in Transcaucasia but might be encountered in the north Caucasus, where they date to the early Scythian period.[64]

The high military status of the deceased may be expressed by the presence of horses placed in the grave. During the first centuries of the Iron Age these are rare and might indicate high-status military leaders. They are to be found especially in kurgans of the "Chodzhali-Kedabeg" culture, located in the mountainous area around Lake Sevan and Western Azerbaijan. Burials with horses became progressively more common from the 7th century BC onwards. This was probably, connected with the penetration of nomadic tribes from the European side, such as the Scythians. In some cases dogs were buried together with the deceased. Two interesting graves from Western Azerbaijan contained, along with the skeletons of a male and a female, the complete skeletons of horses and deer; these were probably connected with some religious belief.[65]

The dead person's importance may be further stressed by the presence of wooden chariots, as attested in graves from Lchashen[66] and Lori-Berd,[67] although they do not seem to be of military type.

62 Kuftin 1943; Barnett 1963; Biscione 1994; Esayan *et alii* 1995; Herles 2011.

63 Piliposyan & Mkrtchyan 2001.

64 Petrenko 2006.

65 Gummel 1992; Castelluccia 2017c.

66 Mnatsakanyan 1960; 1961.

67 Devedzhyan 1981, 80-81.

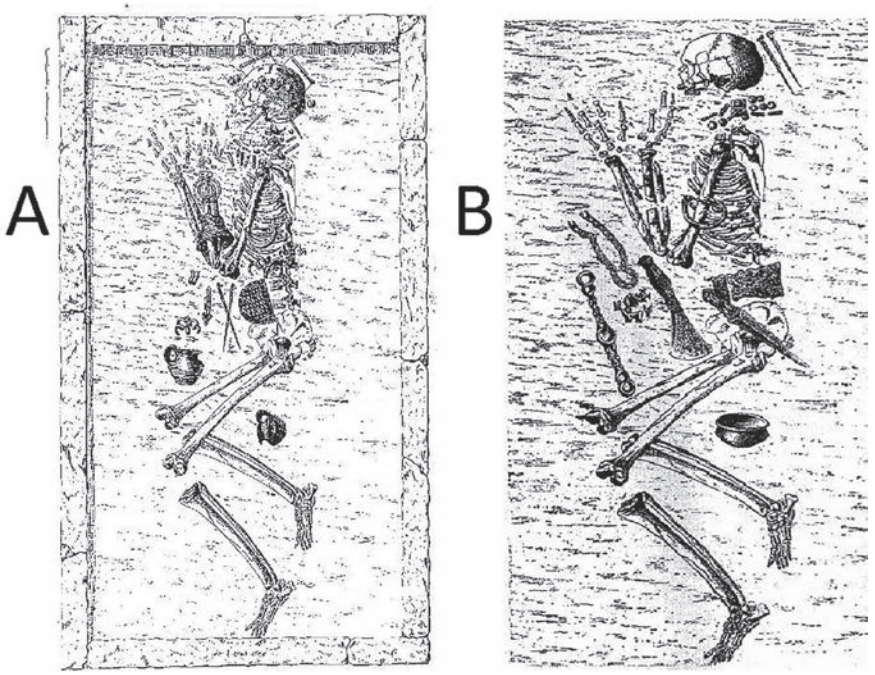

FIGURE 15 *Graves from Koban* (*after Chantre 1882, pl. 4 and fig. 3*).

Funerary objects are often in contact with the bones of the deceased, indicating that they were attached to the clothing at the time of burial. Ornamental brooches, buckles and buttons are found in large quantities among the bones, especially those of the chest. Other grave goods, such as vases and weapons, were placed next to the deceased. Daggers and short swords are sometimes found near the pelvis, indicating probably that they were originally attached to the side of the body. In rare cases arrowheads have been found below the bones; these were probably kept in a quiver made of perishable material and worn by the deceased. These objects are almost always intact, although in rare cases, primarily associated with the practice of cremation, they were deliberately bent or broken before being placed inside the tomb.

An important feature is the wish to indicate the sex of the deceased by means of the accompanying objects. Females have a rich repertoire of ornaments, such as buckles, buttons, pendants and necklaces. Males, on the other hand, have various weapons that emphasize their military activities (Fig. 15). Virtually all males have a dagger, and often an axe, while longswords and spears are rarer. Horse-bits are often also present, even in the absence of equine bones nearby.

An interesting anthropological study was conducted on the human remains from the cemetery of Horom, in Armenia. It was found that the grave goods of males aged 20-25 years consisted only of arrowheads, whereas those of the 40-45 year age bracket had a greater variety of weapons,[68] which led the author to wonder if younger individuals dedicated themselves only to archery. Unfortunately there are no other anthropological studies of this kind to corroborate or contest this finding, but we must note that in many other contexts arrowheads are not so widespread.

In the necropolis of Tli, one the richest and best published of the Caucasus,[69] which is located near Mt. Kazbek on the "Georgian Military Road", the weapons are almost all axes and short swords. Spears are rare, while arrowheads and horse-bits are virtually absent.

Militarization of Social and Political Life

Militarization makes its mark not only on political systems, but also on social behavior and leads to social change. A militarization process extends the range of the ruling elite by greatly increasing the number of its members who, in exchange for serving the main authority at arms, might receive or wish to acquire new rights and economic benefits.

The case of Transcaucasia, with its omnipresent fortified settlements and weapons as grave goods, clearly show how participation in military activity became widespread among the population.

During the Middle Bronze Age the rich kurgans were the distinctive tombs of the ruling elite. It was probably a small elite, in which military, administrative and probably even religious roles converged. The leaders must also have had authority over wide areas, given their capacity to mobilize a large number of people just to build their own monumental graves. The presence of precious metal is another indicator of their high status, with the right to exploit mineral and economic resources for their own needs.

During the early stage of the Late Bronze Age it is possible to observe a clear decrease in the power or status of this ruling elite. Kurgans are more numerous, but much smaller and with less objects within. Weapons are present but few in number. The legitimation of the elite is again shown by their capacity to mobilize the labor force rather than by any explicitly military characteristic.

68 Gevorkyan 2009, 48.

69 Tekhov 1980a; 1981; 1985; 2002.

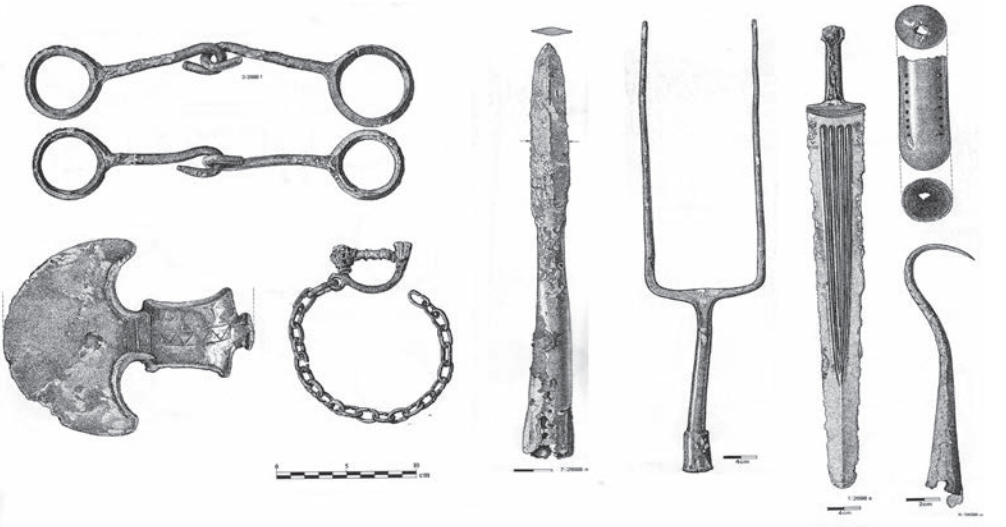

FIGURE 16 *Funerary set from Kalakent Paradiesfestung* (*after Nagel & Strommenger 1985, pls. 46-47*).

Between the Late Bronze and the Early Iron Age there is a marked increase in the presence of weaponry. First of all, with regard to the production of weapons, the types increase in number, now including all varieties of weaponry: graves have yielded long and short swords, daggers, spearheads, arrowheads, protective chest armor, axes, pikes and horse-bits. Male graves usually contain more than one weapon and in the richest ones all the kinds just mentioned may be present (Fig. 16).

In the largest cemeteries, such as those of Tli, Narekvavi, Kalakent, most male graves contain weapons, a clear sign that the society was strongly militarized. This marked increase was probably directed and controlled by some sovereignty which, however, cannot have been as powerful as the elites of the Bronze Age. It seems that the circle of power had been enlarged; groups of the population that earlier were probably excluded from decision-making were incorporated within the dominant power (which thus changed its political structure, giving up some of its former power).

Militarization of the Economy

Lacking written sources, it is hard to track how the new system and policies affected the economy. Creating a "war economy" is one of the most important

steps in the creation of a society ready for military activities. Mesopotamian written sources largely refer to new taxes, the resettlement of populations through programs of deportation, the improvement of economic resources, such as by building canals and new orchards, and the reorganization of local pastoral subsistence production as intensive cultivation, and the establishment of garrisons.

Transcaucasia completely lacks written sources and even the later Urartian inscriptions offer few points of comparison. Some royal Urartian inscriptions, however, talk about great construction works conducted by their king, such as the building of fortresses or canals, emphasizing that before these lands were "arid, wilderness, nothing was built here …",[70] thus implying that the areas were not greatly exploited.

We must thus rely only on the scarce archaeological evidence.

The widespread occurrence of warriors' graves clearly indicates a progressive militarization of the male population of the society. The economy of Transcaucasia is mainly based on agro-pastoral activities plus exploitation of the few agricultural areas, which however cannot sustain a large population. It would be interesting to know how the society was organized, since those employed in military activities probably could not take part in agricultural work. Or perhaps this militarization required that most able-bodied men were called to arms when necessary.

The presence of so many fortresses indicates that part of the population probably gathered within or nearby such sites. The few excavated sites show, moreover, that some sort of redistribution of provisions was undertaken. Storage rooms were found, although not of the size seen in the later Urartian period. Moreover, the presence of workshops indicates centralized metalwork production within the fortresses, strongly directed toward the production of weaponry and metal ornaments. Some sort of centralized production is also implied by the widespread occurrence of similar objects, such as the "Sevan-type" daggers, "Koban" axes, crescent-shaped axes, T-Shaped horse-bits and bronze forks (Fig. 17).

The political centers were also probably involved in controlling trade routes for supplying copper, while iron-ore deposits are abundant in the area. To the Late Bronze Age can also be dated the earliest system of irrigation, studied in Armenia in the Mt. Aragats area,[71] which was much developed by the Urartian kings in the following century.

70 *CTU* I: A 8-15, 16, 17*a-b*.

71 Kalantar 1994.

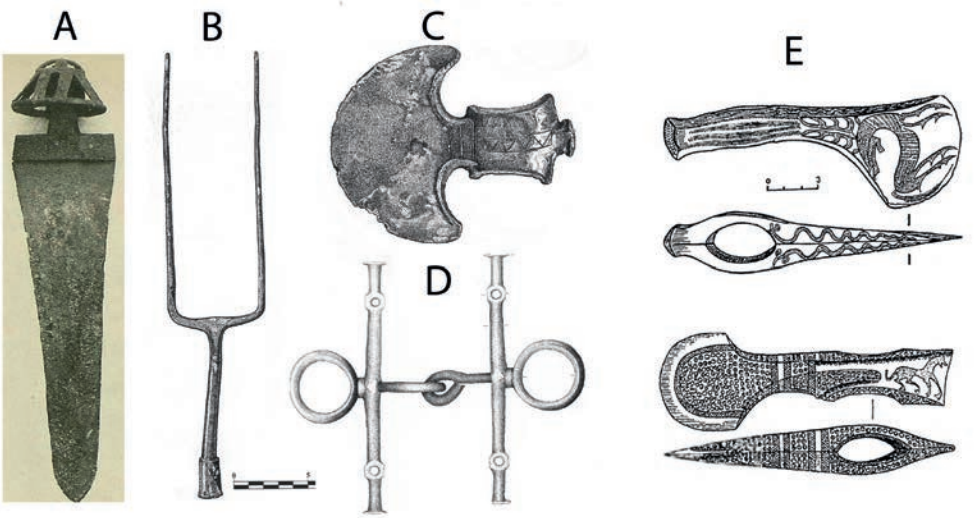

FIGURE 17 *Sets of typical weapons of the Late Bronze-Early Iron Age* (*after A: Ivanovskiĭ 1911, pl. 3, n. 3; B, C, D: Nagel & Strommenger 1985, pls. 46, 47, 23; E: Tekhov 2006, figs. 3,* 36).

Conclusion

The origins of this process of militarization are to be found in the local development of the preceding culture. The Russian scholar Masson has defined this process as *Kavkazskiĭ put' k tsivilizatsii*,[72] "the Caucasian way to civilization", which led to the emergence of societies with a high degree of internal complexity already at the end of the 3rd millennium BC. This model is characterized by non-urban, non-state societies with strong social differentiation and an extremely unequal distribution of wealth, ruled by military aristocracies with a great capacity for accumulating wealth and organizing labor and manpower (no less than that of Mesopotamia at the beginning of urbanization), with a hierarchy of large and smaller settlements.[73] This system characterized Transcaucasia during the Bronze Age but, as shown above, it progressed further during the Late Bronze – Early Iron Age toward a pre-state organization, characterized by a wider sharing of power and an increase in the size of the ruling elites.

72 Masson 1997.

73 Masson 1997, 127-132.

This process was characterized by an intensive movement toward a militarized society. This militarization had a direct link with internal and foreign policy. The question is simple: why the need for such militarization? Such an extensive building of fortresses and arming of the population required a huge amount of labor, energy and material. It might have been connected with a situation of political instability – if so, what were the causes of it? They might have been internal or external; lacking written sources, we can only speculate about them. They might have been the result of a prolonged state of war between the various political entities that were based in the fortresses, which fought each other for control of the economic resources – consisting of few arable lands, mines for metal ores and trade routes. Little archeobotanical data is available regarding a possible change in climate (which may have had a negative impact on the agricultural land of an already poor territory and forced people to move elsewhere).

They might also have been the result of external factors, such an invasion by neighboring forces. This seems less likely since the only force to the south capable of such an action would be the Urartian kingdom – which, however, emerged only from the late 9th century BC onwards; another possible axis of penetration was from the northern Caucasus, but from here no aggressive, large-scale intrusion is recorded before the 7th century BC.

Such a militarized structure characterized Transcaucasia, northern Iran and Eastern Anatolia also throughout the entire Iron Age. Fortresses kept on being built and the progressive introduction of iron weapons is seen; these became common only from the 8th century BC onwards.

The further, and final, development of the "Caucasian model" proposed by Masson can be seen in the foundation of the Urartian kingdom, at the beginning of the 9th century BC. Starting from its core area around Lake Van, in Eastern Turkey, it brought under its domination all the lands around Lake Urmia and Lake Sevan, controlling the whole Armenian highland and therefore covering much of the territory dealt with above.

The Urartian kingdom had many features acquired from its southern Mesopotamian neighbors, first of all the Assyrian empire: cuneiform writing, art, the structure of its state, political propaganda, *etc*. were all derived from Mesopotamian models. But the core and structure of the society is more deeply rooted in the "Caucasian model". The building of fortresses increased and was refined; graves continue to show clear distinction of sex and role, with male graves typically containing a large amount of weapons. The Urartian kingdom thus represents the last stage of development of the Caucasian model proposed by Masson.

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Abbreviations

AJA	*American Journal of Archaeology* (Boston).
AMIT	*Archäologische Mitteilungen aus Iran und Turan* (Berlin).
CTU I	Salvini, M. 2008: *Corpus dei testi urartei. Le iscrizioni su pietra e roccia.* Vol. I. (Roma).
CTU IV	Salvini, M. 2012: *Corpus dei testi urartei. Le iscrizioni su pietra e roccia. Iscrizioni su bronzi, argilla e altri supporti. Nuove iscrizioni su pietra. Paleografia generale.* Vol. IV (Roma).
IFZh	*Istoriko-Filologicheskiï Zhurnal* (Yerevan).
KSIA	*Kratkie Soobshcheniya Instituta Arkheologii Akademii Nauk SSSR* (Moscow).
SA	*Sovetskaya Arkheologiya* (Moscow).
SMEA	*Studi Micenei ed Egeo-Anatolici* (Rome).
TüBA-AR	Türkiye Bilimler Akademisi Arkeoloji dergisi (Ankara)
VDI	*Vestnik Drevneï Istorii* (Moscow)