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PROTECTION AND CONTROL: MIDDLE BRONZE AGE FORTIFIED SETTLEMENTS IN THE BENTA VALLEY, HUNGARY

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(Abstract)

Fortified settlements can be useful components in the exercise and protection of political power. They are not only important when defending against other societies, but also useful for asserting control within society. This paper explores the political economy and relationship between open and fortified settlements belonging to the Middle Bronze Age Vatya tell-culture in the Benta valley in Hungary with focus on local defensive needs, how defence was organised, and how military means and fortified settlements could be employed in strategies to control a political entity comprising of several settlements and a population in the low thousands.

Introduction: a political economy perspective

Fortified tell settlements and other defended sites are important elements of the Early and Middle Bronze Age in the Carpathian Basin[1]. Even though such settlements can have several functions; they are clearly associated with defence and military power. The nature of armed conflicts and the exercise of military power in a more broad sense are, however, influenced by several factors such as economy, technology and culture, and the social and political organisation of society[2]. Various societies may hence pursue different military objectives, and they can be partial to different tactics and strategies, although they often on some level concern economic matters such as control over land, resources and people[3]. To understand the roles of fortified settlements, it is therefore important to have a general understanding of society.

A political economy perspective provides a multicausal framework to examine the interplay of a multitude of factors without necessarily giving primacy to one or the other in the organisation of societies. Essentially, political economy describes how resources are mobilised and channelled to finance political activities. In this way political economy has a profound influence on the structure of political relationships and how the economy is employed to meet basic societal needs. This may seem to put a preeminent value on economy, but although finance in pure economic terms is clearly important, the concentration and control of resources is made possible within a network of elemental power sources, which besides economy also encompass military might and ideology. The sources of power are intertwined and can be articulated and combined by actors in several different opportunistic ways to further their interests in various historical situations.[4]

Intrinsically, power concerns relationships between people, but these relationships are also given tangible expressions that can be subjected to archaeological study. Patterns of consumption can reflect differential access to various goods and the ability to direct flows within the economy[5]. Material culture can be used in the expression and legitimisation of institutions of rule[6]. Fortifications and settlement systems can provide leaders with structural advantages in the control of people and

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1 Gogâltan 2002, Gogâltan 2008; Uhnér 2010

2 Uhnér 2010, 203–239; Keegan 2004, 3–12

3 Pinker 2011, 33; Earle 1997, 105–106, 141–142; Helbling 2015, 73–74; Childe 1951, 108–109.

4 Mann 1986; Earle 1997, 2002; Uhnér 2010.

5 Costin-Earle 1989.

6 Kristiansen-Larsson 2005; DeMarrais *et alii* 1996.

resources because of the character and strategic position of some sites in relation to others, and they may therefore express hierarchical political relations within a society[7].

Although a political economy perspective tends to emphasise unequal power relations, it should be noted that such relations are not necessarily present or pronounced in all societies[8]. Access to power is normally imperfect and fraught with problems,[9] which is an important reason why European Bronze Age societies seem to range from essentially egalitarian to large and well organised, stratified political entities.[10] The society in the Benta valley considered here appears to fall on the middle of the spectrum.

Middle Bronze Age settlements in the Benta valley

The Benta is a small tributary to the Danube in central Hungary. The lower part of the stream flows from Lake Bia in the northwest through a landscape framed with limestone ridges and rolling loess covered hills to the Danube in the southeast (figure 1). During the local Middle Bronze Age, circa 2000 – 1500 BC,[11] this 50 km^2 large microregion had eight or nine open nonfortified settlements on the lower slopes of the floodplain and four or five fortified settlements of which the majority was situated on higher ground.[12] A detailed palynological record show that the valley had a stable predominantly open landscape dominated by grassland, indicative of large scale animal husbandry and to lesser extent cereal cultivation.[13] Intensive animal husbandry is also supported by the large amount of domesticated animal bone assemblages found during the excavations of the tell-settlement Százhalombatta-Földvár.[14]

A systematic survey with shovel testing and small test excavations of the different sites in the valley has produced useful data regarding the duration and size of settlements, as well as assessments of occupation densities and population size.[15] The largest site in the valley was the 12.5-hectare settlement Tárnok (31/1)[16] which is situated on fertile soil along a gradual slope above

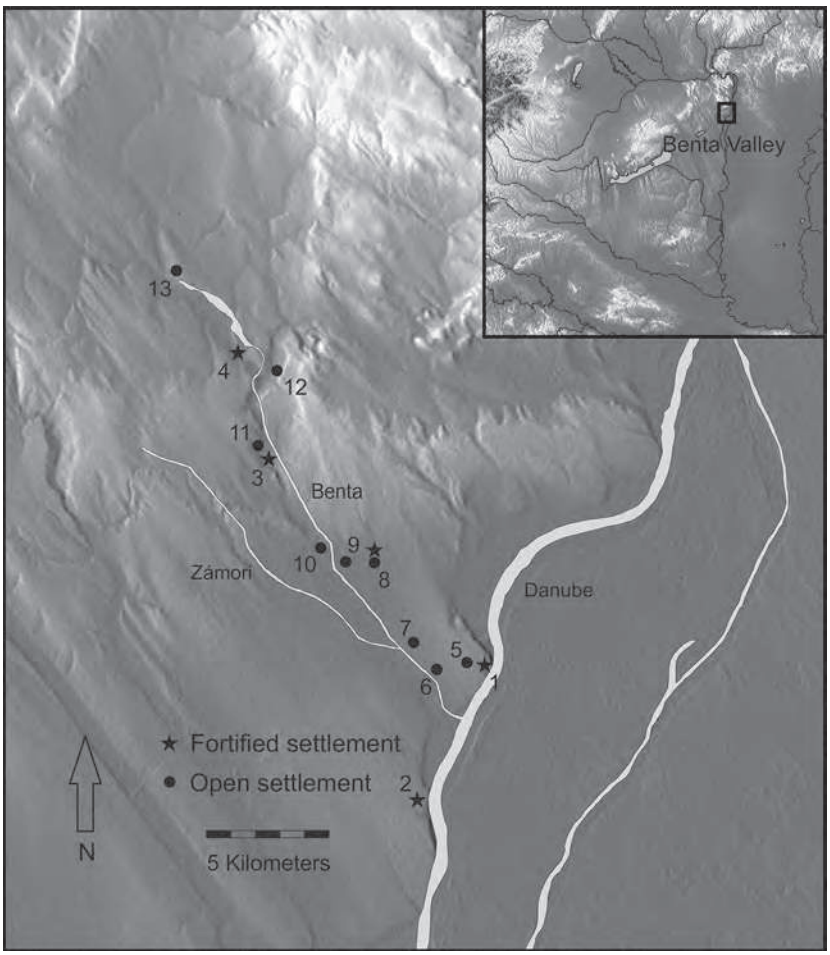

Figure 1. *Middle Bronze Age settlement pattern in the Benta valley. 1 Százhalombatta-Földvár 5,5 ha (27/2). 2 Százhalombatta-Dunafüred 2 ha (27/14). 3 Kálvária-Hegy 1 ha (26/11). 4 Pap-Réti-Dűlő 2,5 ha (1/26). 5 Százhalom 0,75 ha (27/1). 6 Külső Újföldek 2 ha (9/3). 7 Belsö Újföldek 2,75 ha (9/4). 8 Tárnok 12,75 ha (31/1). 9 Ötházpuszta 0,5 ha (31/3). 10 M 7-es Autópálya 3 ha (26/7). 11 Barátház 2,5 ha (26/4). 12 Öreg-Hegy 3 ha (1/4). 13 Üres Tarisznya 0,25 ha (1/6), Tárnok is displayed as both an open and fortified settlement adapted from Artursson 2010; Earle-Kolb 2010, Dinnyés et alii 1986; Szeverényi-Kulcsár 2012.*

[7] cf. Flannery 1976; Kristiansen 1998; Jockenhövel 1990.
[8] Boehm 1999.
[9] Earle 1997.
[10] Earle *et alii* 2015.
[11] Jaeger-Kulcsár 2013, 311–313; Uhnér 2010, 3, 347–352.
[12] Earle-Kolb 2010, 72–73; French 2010, 48.
[13] French 2010, 46–47, 55–56.
[14] Vretemark 2010, 164–167.
[15] Earle *et alii* 2012.
[16] The Tárnok settlement is also called Szőlő-Hegy in the national Hungarian survey of archaeological sites MRT. Numbers in parenthesis, e.g. (31/3) are MRT identity numbers (Dinnyés *et alii* 1986).

a small tributary of the Benta in the lower mid-valley. Based on the amount of ceramics belonging to different occupation phases found during test excavation it is estimated that it had medium density occupation with about eight houses per hectare and a total population of 550 people.[17] Tárnok was first thought to be an open settlement, but geomagnetic prospection at the site has shown a large curvilinear anomaly resembling a substantial ditch in the northwestern part of the survey area.[18] Judging from areal and satellite imagery the ditch appears to continue outside the survey area and form a circa 5 ha enclosure with what seems to be medium density occupation. Although the age and nature of the curvilinear anomaly are unclear, it is possible that Tárnok was fortified at one point during the Middle Bronze Age.

Five smaller open settlements (9/3, 9/4, 26/7, 26/4 and 1/4) with sizes of 2 to 3 hectares and populations ranging from 80 to 120 persons were fairly evenly distributed along the Benta stream with direct access to meadows for grazing and high quality arable land. Three additional small hamlets (27/1, 31/3 and 1/6) were also situated within the valley on good agricultural land.[19]

The 5.5 hectare tell-site Százhalombatta-Földvár (27/2) was the largest fortified tell-settlement in the microregion. Excavations have documented high occupation density that spans several hundred years[20] and it is estimated that the settlement had about 50 contemporary households and circa 300 residents.[21] The site is situated on a bluff with good natural defences on the Danube's west bank. Systematic core sampling shows that the northern side was fortified with a substantial ditch[22] that seems to connect a steep gulley that leads down to the Danube on the north-eastern side of the site with a ravine that demarcated the settlement's western and southern boundary.[23] The eastern side is delineated by the sharp eroded bank of the Danube. Analysis of the coring data also indicate that the northern part of the site was defended with a palisade.[24] As the western, southern and eastern sides were easily defended due to the steep local topography, connecting these natural features with a ditch and palisade was a cost-effective way to fortify the site. It is unclear if other parts of the tell were fortified with palisades, but it is likely that this was the case. The actual extent of the densely built up fortified area was approximately 2.5 hectares. However, based on the low to medium distribution of Middle Bronze Age ceramics in the area directly to the north of the fortification, another 3 hectares appear to have had contemporary scattered occupation. It thus seems that Százhalombatta-Földvár had a densely occupied fortified core, and a secondary, less dense and unfortified arrangement of houses.[25]

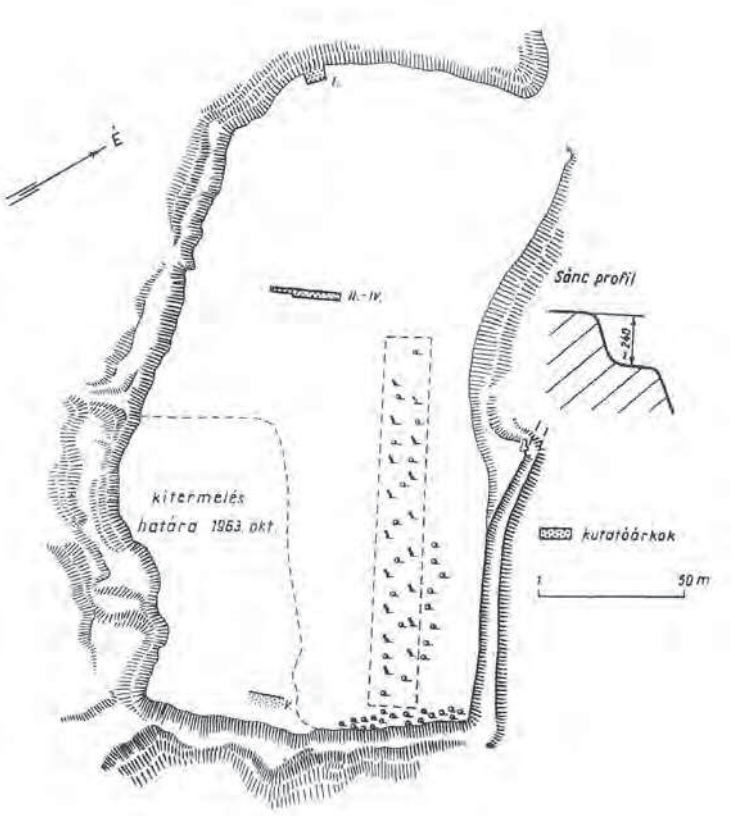

Figure 2. *Plan of the fortified tell settlement Százhalombatta-Földvár before the site was damaged by clay extraction (Kovács 1969, fig. 1, cf. Poroszlai 2000, fig. 2).*

[17] Earle-Kolb 2010, 70–71, 74; Artursson 2010, 108–109.
[18] Earle *et alii* 2014, 2, Fig. 3.
[19] Earle-Kolb 2010, 74.
[20] Poroszlai 1992, 2000; Sørensen 2010, 135–145; Vicze 2013.
[21] Artursson 2010, 107; Earle-Kolb 2010, 73.
[22] Varga 2000, 76, Fig. 2
[23] Kovács 1969, fig. 1. The southern part of the site has been destroyed by a modern brick factory, but the outline of the settlement was documented before work commenced. The topography of the site is also documented on Austrian military survey maps from the eighteenth and nineteenth centuries.
[24] Varga 2000, 76.
[25] Artursson 2010, 107.

The next tell-settlement in the Benta valley is Százhalombatta-Dunafüred (27/14), which is located on a ridge overlooking the Danube on the other side of the Benta floodplain 6 kilometres south of Százhalombatta-Földvár. It is unclear if the site had defensive installations,[26] but it occupies a strategic and for the most part naturally well defended location and can therefore be regarded as fortified. The settlement covers an area of 2 hectares. Based on the high density of ceramic finds it is estimated that the site housed 24 contemporary households and had circa 150 residents[27]. The Sóskút hillfort Kálvária-Hegy (26/11) lies in the upper part of the valley, some 12 kilometres from where the Benta stream meets the Danube. Kálvária-Hegy was fortified by a rampart and is situated on a hill occupying a strategic position mid-valley directly overlooking the contemporary 2.5 hectares large Baratház settlement (26/4) immediately to the north of the hillfort. With a size of one hectare and only low density shallow deposits it is thought that the hillfort had 9 houses and about 50 inhabitants.[28] The last defended settlement in the valley is the Bia hillfort Pap-Réti-Dűlő (1/26). It is situated south of Lake Bia at the top of the valley on a prominent hill that rises some 30 meters over the surrounding landscape. The settlement has a size of 2.5 hectares and appears to have been densely settled. It is estimated that the site had 17 contemporary houses and a population of about 100 persons. Aerial photographs show two wide rings surrounding the settlement, suggesting that it was fortified with a double ditch system, or perhaps a rampart and a ditch.[29]

Economy

Based on settlement size and density of occupation the Benta valley had a population of around 1700 persons in the Middle Bronze Age. Including Tárnok as an undefended settlement, about 74% lived on open settlements with direct access to quality meadows for grazing and arable land, which underline the importance of agriculture in the local economy.[30] The palynological record indicate a predominance of animal husbandry and a lesser degree of crop cultivation.[31] There is no evidence of large scale redistribution; storage pits at Százhalombatta-Földvár appear to have been integrated parts of separate houses.[32] This makes likely that subsistence production was decentralised and primarily carried out by individual, largely self-sufficient households. It should however be emphasised that this domestic mode of production was integrated in a larger whole of social and economic institutions that made possible production intensification and concentration of wealth.[33]

The dominant livestock in most Middle Bronze Age tell-societies in the Carpathian Basin were cattle, sheep/goat and pig, trailed by horse and dog. Hunting played a minor role, although it could be an important activity together with fishing.[34] At Százhalombatta-Földvár the most numerous animal was sheep, followed by cattle and pig.[35] The pattern of slaughter and the sheer amount of bones found during the excavations at Százhalombatta-Földvár is indicative of large-scale production and an advanced management of domestic animals. Cattle were generally kept until old age and used for milk production, traction and breeding. Pigs were kept for meat production. Equal numbers of sows and boars were held, and they were usually slaughtered when fully grown at about two years of age. The sheep age distribution and kill-off pattern show a prevalence of old animals used for wool production. Considering the large number of sheep it is probable that the Benta valley had a significant wool production that far exceeded the needs of the local population and that the surplus was meant for export.[36] This notion is further supported by aDNA studies that may indicate that foreign sheep were imported to improve specific productive traits.[37] It should however be noted that spindle whorls and loom weights are fairly rare at Százhalombatta-Földvár.[38] But textile tools can be made of organic materials and manufacturing techniques can rely on hands alone, which together with the comparably small excavated areas in the centre of the tell could explain the contrast between the osteological material and actual evidence of textile production.

26 Szeverényi-Kulcsár 2012, 298.
27 Vicze 2000, tab. 1; Artursson 2010, 108.
28 Artursson 2010, 108, Vicze *et alii* 2005, 245; Szeverényi-Kulcsár 2012, 297, fig. 3.
29 Earle-Kolb 2010, 73; Vicze *et alii* 2005, 243; Artursson 2010, 108; Vicze *et alii* 2005, 252, fig. 1; Szeverényi-Kulcsár 2012, fig. 4a.
30 Artursson 2010, 108; Earle-Kolb 2010, 72, 74.
31 French 2010, 46–47.
32 Vicze 2013, 764–765.
33 Uhnér 2010, 143; cf. Sahlins 1972, 101–102.
34 Bökönyi 1992; Jaeger 2011, 150–151.
35 Vretemark 2010; Vretemark-Sten 2005.
36 Vretemark 2010, 164–169; Vretemark-Sten 2005, 162–164; Uhnér 2012, 356.
37 Sabatini *et alii* 2019.
38 Sofaer 2010, 196.

At most Middle Bronze Age tell settlements, the dominant crops were einkorn or emmer together with barley, and to a lesser degree bread wheat, spelt, rye and various legumes. Százhalombatta-Földvár follows this general trend. On this site the principal cultivated plant was einkorn, followed by barley, lentils, and peas.[39] It is likely that the other sites in the Benta valley cultivated the same crops in similar relative quantities. Given the long-term permanence of the settlements in the Benta valley it seems that fairly advanced agricultural methods were used, as the production could be sustained in the same microregion over several hundred years. Weed species found at Százhalombatta-Földvár suggest that a productive pattern of two-season cropping was employed,[40] which may have been supplemented by manuring and possibly a system of crop rotation with grain and legumes to renew soil fertility.[41] Such a regime could have produced net cereal yield ratios in excess of 4:1 based on medieval data and modern long-term agricultural experiments.[42] If this was the case, the plant economy was certainly sufficient to produce a surplus. Coupled with the settlement system discussed in the next section, and in view of the specialised production of yarns and textiles, it seems safe to assume that the social mechanisms to generate a surplus and employ this in the political economy was firmly in place.[43]

The Bronze Age was a period of increasing regional and interregional trade.[44] The adoption of bronze for everyday tools, prestige objects and ritual paraphernalia made metal important in both economic production and social reproduction. Because copper ores are unevenly distributed in Europe and as tin deposits are rare,[45] it was crucial for societies to engage in trade. The flow of metal facilitated and made necessary the exchange of other goods, which linked societies and distant regions together, making trade a key feature on both interregional and local levels. Rivers were important transportation routes for traded goods, of which the Danube formed an important east – west axis between the Black Sea and Central Europe.[46] The clustering of fortified sites along the Danube and other strategic routes in the Carpathian Basin[47] is a strong indication of the importance for local communities to have access and assert a level of control over transportation and trade.[48]

Settlement system in the Benta valley

Fortified tell settlements in the Carpathian Basin have long been seen as centres of power.[49] The situation in the Benta valley, where the non-tell settlement Tárnok appears to have had the largest population by far, calls into question if this interpretation is universally correct.[50] It seems, however, apparent that the dominant sites were Tárnok and Százhalombatta-Földvár given the first settlement's dominant size and the strategic position of latter. As the valley constitute a well-demarcated territory defended by fortified sites, and with settlements located in fairly close proximity to each other, it also seems evident that the microregion was a geographically bounded political unit.[51] This notion is further supported by the situation in the Váli-víz valley, directly south of the Benta micro-region, which appears to house a similar polity.[52]

Tárnok and Százhalombatta-Földvár had different advantages and shortcomings. The sizable population at Tárnok, coupled with the settlement's location with direct access to high quality agricultural land would have made it possible to assemble a significant surplus of staple products that could be employed to finance various political activities, leaders and institutions. Since almost a third of the estimated population in the valley lived in Tárnok, the occupants could potentially mobilise larger armed forces than neighbouring settlements. This was an advantageous situation for actors aspiring for power positions. With approximately 300 residents Százhalombatta-Földvár had just about half

39 Gyulai 1993, 22–28; 2010, 100–103; Vretemark 2010, 170–172.

40 Vretemark 2010, 172–173.

41 Uhnér 2015, 266–267.

42 Barker 1985, 50; Reynolds 1990, 63–71.

43 cf. Carneiro 1970, 733–734.

44 Earle *et alii* 2015.

45 Pare 2000, 2; Nessel *et alii* 2015, 2.

46 Earle-Kristiansen 2010, 24–25; Earle *et alii* 2015, 641–642.

47 Bader 1982, 51, fig. 1; Kovács 1982, fig. 1; Sz. Máthé 1988, fig. 1; Szeverényi-Kulcsár 2012, 293, fig. 1

48 . It should be mentioned that the locations of fortified tell settlements also were influenced by other factors such as local geography. In the flat and marshy landscape that surrounded the rivers in the eastern part of the Great Hungarian Plain, the most suitable places for permanent habitation were on elevated positions that offered protection against flooding (Dani 2012, 29; Kovács 1998, 482). But this circumstance does not detract from the strategic positions of these sites in regard to transportation and trade as they normally are situated close to rivers and streams.

49 Another research paradigm has called this general interpretation into question, usually within a framework of local, less hierarchical tribal or segmentary political interaction (Duffy 2015; Kienlin 2012, 2015; O'Shea 1996).

50 Artursson 2010, 108–109; Earle-Kolb 2010, 74–75.

51 Uhnér 2015, 268.

52 Szeverényi-Kulcsár 2012, 298–300.

the population of Tárnok and the location of the tell on the bank of the Danube restricted the site's agricultural catchment area and output.[53] But the strategic location at the river provided good opportunities to partake and perhaps extract tributes from transportation and trade.

Within this local geopolitical situation, the location of Tárnok removed from the Danube severely constrained the ability of actors based there to directly engage and take advantage of river-bound trade; while actors based at Százhalombatta-Földvár could benefit from participating in both interregional and local spheres of exchange. This situation makes it probable that the settlements in the polity were integrated in a local exchange system, where settlements inland from the Danube supplied staple products in return for high value imported goods such as metal from the fortified tell. Such a system had the potential to make the best of diverse local circumstances within the valley, and would to some degree have promoted specialisation where different settlements and actors concentrated on various economic activities.[54] This relationship is emphasised by the large amount of old sheep bones that has been found at Százhalombatta-Földvár. As the river truncated the usable farmland around the settlement it is unlikely that all these animals belonged to the population on the tell. Instead it is probable that both the animals and the wool they supplied at least in part came from open settlements in the valley.[55] Ceramics recovered from Százhalombatta-Földvár and the non-fortified sites in the Benta valley provide a similar picture. The amount of Middle Bronze Age storage vessels found at non-fortified sites is nearly double that from the central tell settlement, which suggests that the population at the tell was less involved in agricultural production and may have received staples from outlying settlements.[56]

This local exchange may in principle have been beneficial for all partaking settlements. Százhalombatta-Földvár could acquire local products such as textiles and wool that could be exchanged for commodities from regions further afield, while Tárnok and other sites that concentrated on agricultural production were able to obtain goods that could not be produced in the immediate region. This exchange appears to have been rather selective and should not be understood as a market-like system because other goods such as ceramics, which are well suited for large-scale production and micro regional exchange, for the most part were manufactured and used locally at individual sites.[57]

Nevertheless, residents at Százhalombatta-Földvár had a significant strategic political advantage because they could act as intermediaries between local and long distance trade.[58] This would have made it possible to maintain a degree of control over the distribution of imported goods, which together with staples and commodities produced at Százhalombatta-Földvár and brought in from surrounding settlements, could be employed in the political economy. This combination of networking and corporate strategies[59] where trade was used to leverage access to agricultural produce would have been a very effective route to power because it increased the foundation of the political economy beyond the local settlement. It seems unlikely that similar strategies could be employed as effectively in Tárnok, although the settlement had advantages in population size and agricultural production output as it was not located at a bottleneck for transportation and trade. The importance of Százhalombatta-Földvár is further emphasised by the fortifications at the site. As described in the next section, Százhalombatta-Földvár and the other fortified sites in the valley did not only have strictly defensive roles; they were also linked to property rights and could be used to establish and maintain a level of military backed dominance over the microregion. All told, this situation makes it likely that Százhalombatta-Földvár was the political centre in the valley during the Middle Bronze Age.

Fortifications: conflicts, protection, property and control

The fortifications in the Benta valley appear to have filled several functions. The most apparent is of course defence. Common for the fortified sites apart from Tárnok is that they are found on locations with good natural defensive features. Although little detail is known about the construction of the defensive works, the substantial ditch and palisade on the northern side of

[53] The land on the opposing side of the river from Százhalombatta-Földvár is low and was before modern river regulation easily flooded. It was therefore not appropriate for crops and nor was it well suited as pasture because of difficulties transporting animals back and forth over the river.

[54] cf. Earle *et alii* 2015.

[55] Uhnér 2015, 268; Vretemark 2010, 167–169.

[56] Earle et alii 2011, 426–427.

[57] Earle *et alii* 2011, 434–436.

[58] Uhnér 2015, 268.

[59] Blanton *et alii* 1996; Feinman 2000.

Százhalombatta-Földvár, Kálvária-Hegy's rampart and the double fortification system around the Bia hillfort suggest that they were well protected and able to withstand attacks from large enemy forces. Against the background that the level of threat was high enough to warrant the construction of strong defensive structures on four sites, and that the material culture in the Carpathian Basin includes several types of specialised bronze weapons and protective gear, it seems that armed conflicts were frequent.[60]

It must have been difficult or impossible for the population in the Benta valley to use mobile defensive strategies because of the intensified subsistence economy organised around permanent settlements. To flee from an aggressor was neither a desirable nor a viable option as this would mean to abandon built up land, property and subsistence, and it appears to have been limited new land to settle on the rather densely occupied west bank of the Danube. The polity and its population were circumscribed[61] and in case of an attack they had to make a stand. It is likely that the fortified settlements were a response to this situation, and their locations in the central part and at opposite ends of the valley meant that they were well-positioned to act as a combined defensive system for the microregion.

Given the advanced political economy and proximity to other polities along the Danube, there were both incentives and possibilities for political actors to expand the economic base and assert greater control over trade by invading and incorporations neighbouring societies. That said, it is likely that the main threat was raids for plunder or retaliation in a cycle of intergroup armed conflict.[62] Most assaults were presumably directed against open settlements because these were easier to handle, but even these undertakings must have been associated with several difficulties for the attackers. Considering the threat level, and if we accept that the Benta valley constituted a political entity, it seems likely that military specialists were stationed on the fortified sites and that these forces in case of war could be augmented with less well-equipped and trained men. In the event of an attack against one settlement, defending forces could then be mobilised from other parts of the valley to mount counter attacks, and provided that there was a forewarning of enemy activities, the population on open settlements could seek refuge on the fortified sites together with their most valuable belongings. What an attacker hence could capture in terms of plunder from open settlements was bulky goods that were difficult to transport out of the valley.

Assaults on fortified settlements could be more rewarding. To capture an established political centre such as Százhalombatta-Földvár gave the attacking side access to the strategic advantages outlined above and would have been an important steppingstone for taking over the whole area controlled by the settlement. But it must have been difficult to achieve this because it was hard to overcome the defences surrounding the site. Although none of the fortified sites in the valley had access to indefinite supplies of water it would have been hard to bring them to surrender by laying siege because of logistical difficulties for the attaching force to support itself in enemy territory, and because the beleaguered settlement could be relieved by forces mustered form other part of the valley, provided that the attackers were not significantly greater in number.[63]

It was essential to maintain strong social bonds within the valley in order for such defensive strategies to work, and probably by having loyal local leaders on all sites with vested interests in preserving the current political order and integrity of the polity. Unless settlements could support each other and provide protection in case of war, the ability to withstand enemy assaults would have been limited. Judging by the largely uniform Vatya culture burial practice with cremations in urns at communal cemeteries, oftentimes with graves placed in oval groups according to kinship or family groups,[64] the burial practice seems to express an ideology underlining the importance of both kinship and close knit ties to the larger community.[65] If this indeed was the case, the four or five fortified sites may have been more than adequate in defending the valley.

The second overall function of the fortified settlements seems to be linked with property and control over resources and objects of value. The long settlement history in the Benta valley make evident a close association between the population and the region, which would have established strong aspects of ownership over arable lands and fields for grazing. Much of this derived from

[60] Childe 1941, 126; Uhnér 2012, 362; 2010, 241–273; Kristiansen 2002, 326; Ettel 2015, 301; Falkenstein 2007, 36–39.

[61] Carneiro 1970, 734–735; Gilman 1981, 7–8.

[62] Uhnér 2010, 284.

[63] Uhnér 2012, 363–364.

[64] Vicze 2011, 36–46; Bóna 1975, 41–44, 52, 59–60.

[65] Uhnér 2012, 359–360.

everyday labour investments and entanglement of people in the local environment, for instance by tilling and using the land, but also through military capacity because ownership in societies without institutionalised legal systems also rest on the ability to defend and capture valuable objects and means, as well as using military means for political expansion and control.[66] Built up defences had not only a practical value when defending population and property, the fortifications were also strong symbolic expressions of ownership and exploitation rights. The locations of the fortified sites on highly visible strategic positions, as opposed to purely defensive and hidden locations removed from routes of communication,[67] were expressions of military confidence and a willingness to defend the polity and the resources within its territory. These strategic locations also offered opportunities to control transportation and movement. On the grounds that the fortified sites occupied bottlenecks for transportation and trade at opposite ends of the valley, it was not only possible to access and control trade along the Danube, but also transports heading to and from the inland of Transdanubia west of the Bia hillfort. This condition, combined with the size of the fortified sites (with the exception of the small hillfort Kálvária-Hegy) and close association with agricultural lands, suggests that they can be characterised as military strongholds which both commanded and had a symbiotic relationship with their surroundings.[68]

Besides defence against potentially aggressive outsiders, the fortified settlements and military specialists could also be employed to impose socio-political control over the population in the valley. Military power has a strong collective element in that large armed forces have greater military capacity compared to smaller troops of similar quality. But for armed forces to effectively carry out tactical and strategical military operations they need command structure, which concentrate decision making and leadership to a few persons. Such command structures may be more or less well-developed,[69] but they provide leaders with an hierarchical organisational advantage that enables them to use the collective strength of a military organisation to promote their own agendas.[70] An important part of such agendas within a polity as the one in the Benta valley would be to impose control and establish rights to surplus production and labour from the population.[71] However, the use of military power to enforce control is problematic, not only can forces turn against their leaders,[72] habitual and aggressive behaviour tends to feed discontent which can lead to breakup of societies. But armed forces had not only an active value in clamping down on dissidents and coercing the population in a polity to comply, the implicit threat that military means could be employed if necessary to bring people and rival factions in line was probably more important to provide social and political stability.[73]

Although it is likely that active military power was at least periodically employed in controlling and defending the Benta valley polity during the Middle Bronze Age, it seems that the mere passive presence of fortified settlements and armed forces were equally important. This is not to say that military power alone established and maintained the Benta polity over several hundred years, but because they appear to have been well integrated in the local political economy it seems evident that the fortified settlements and other military instruments played several significant roles in this undertaking.

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66 Earle 2017, 5–9; Flannery-Marcus 2012, 206.
67 cf. Rowlands 1972, 455.
68 cf. Keegan 2004, 139–140.
69 Helbling 2006, 51–52, 346–365.
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