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THE NOMADIC ART OF WAR. THE CASE OF THE AVARS

Abstract:

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After an introduction on the main features of the nomadic art of war, the paper presents the characteristics of the Avars, namely their weapons and their tactics. Apart from the information on them derived from written sources and archaeological finds, of special interest is also the issue of the Avar influences on the Byzantine art of war, mainly the armament of the heavy cavalry, as well as certain changes to the tactics.

Key words: nomads, Avars, art of war, weapons, tactics, siege engines

The flight of the Avars from the Turkish rule in ca. 555 added the first to the chain of the nomadic peoples who migrated from Central Asia to Europe and, simultaneously, made known their art of war to Byzantine authors. Testimonies on the Avar art of war occur mainly in the "Strategikon" of Maurice, Theophylactus Simocattes and the "Miracles of Saint Demetrius". The so-called "Strategikon" of Maurice (written likely in 592-602)[1], is the most important work for the examination of the early Byzantine army, treating the armament, the tactics and the structure of military units. The reforms that took place in the Byzantine army, as they appear in the "Strategikon" in the late 6th and early 7th c., seem to have remained for long time, as in the next important military treaty, the "Taktika" of Leo VI the Wise (early 10th c.) there are no indications of radical changes to the Byzantine army. Worth mentioned about the Avars in the "Strategikon" is the use of commonplace statements on the nomads' way of fighting, as the speed, the surprises and their great capacity to mounted archery, elements mentioned on the nomads since the era of Herodotus (Darkó 1935, 447; 1937, 141; Zástěrová 1971, 16-19, 23-27; Maenchen-Helfen 1978, 96-97; Bracher 1990, 139; Dagron 1993, 280; Καρδαράς 2007-2008, 151-152). Valuable testimonies on the Avars' armament are also offered by archaeological finds in their area of settlement, which include numerous specimens of weapons they used.

In Antiquity, and since the era of Herodotus[2], several authors showed interest in the nomadic art of war and emphasized as its key element the horseman and his ability to shoot with the bow while moving. Commonplace was also the note that the horse and the horseman consisted an inseparable unity. Elianos noted the identification of the horseman with the ethnonym "Scythians"[3], while Ammianus Marcellinus likened the Black Sea to the shape of the strained reflex bow of the nomads[4]. According to a myth that Pliny the Elder

1 The majority of the scholars accepts that the "Strategikon" was written in the era of Maurice by the Emperor himself or a higher military commander (see Zástěrová 1971, 5; Kolias 1988, 31; 1993, 39; Dagron 1993, 279; Shlosser 1994, 33-34; Nicolle 1996, 32; Kaegi 2003, 308). On previous views about the dating of the "Strategikon" in the era of Heraclius see Darkó (1937, 122-125) and Bréhier (1949, 342).

2 Herodotus (1971, IV, 46, 246/47): *For when men have no established cities or fortresses, but all are house-bearers and mounted archers, living not by tilling the soil but by cattle-rearing and carrying their dwellings on wagons, how should these not be invincible and unapproachable?* (Darkó 1935, 448-449; 1937, 141; Zástěrová 1971, 23-27).

3 Aelian (1969, 2, 13): *οἱ δὲ τῶν ἱππέων τόξοις χρώμενοι ἱπποτοξόται λέγονται, ὑπ' ἐνίων δὲ Σκύθαι* (Darkó 1935, 447).

4 Ammianus Marcellinus (1970-1975, XXII, 8.10, 22): […] *in speciem Scythici arcus nervo coagmentati geographiae totius assensione formatur* (Bracher 1990, 146).

records, a Scythian was killed in a duel and then his horse killed his opponent when the latter tried to rob the dead[5]. Further, the nomadic art of war became the subject of a military treatise, focused on the Alans (Arrian 1967, 69-79; Coulston 1986, 65). Vegetius also mentioned the importance of the use of the bow as well as that the Roman cavalry at the end of the 4th or early 5th c. followed the armament patterns of the Huns, the Alans and the Goths[6].

The Avars, a Mongolian/TurcoMongolian people, having been defeated by the Turks, fled from Central Asia and in 558 they appeared in the region north of the Caucasus, from where they sent their first delegation to Byzantium. In 568 they established their own khaganate in the Carpathian Basin, centred in the Hungarian plain, which survived until 796, when the Avars were subjugated to the Franks. Between 568 and 626, the Avars were the most important enemy of the Byzantines on the northern border of the empire and their attacks, combined with those of the Slavs, affected the entire Balkan region (see Pohl 1988, 18-152, 237-323; Καρδαράς 2010, 31-126).

As a nomadic people, the Avars based their military power on their cavalry, which plausibly was heavy armoured. Taking into account the polyethnic character, as well as the structure of the Avar khaganate, we could assume that the Avars formed the heavy cavalry, the subjugated nomads, as the Kutrigurs, the light cavalry, and the Slavs, the Gepids etc. infantry. Within this framework, the well known military treatise the "Strategikon" of Maurice focuses likely on the Avars, namely the warrior elite of the khaganate (Bóna 1988, 451; 2000, 166; Szentpéteri 1994, 232-234, 248-249; Hofer 1996, 353; Kory 2002, 613). In the 11th chapter of the "Strategikon", Maurice provides a detailed description of the Avar art of war. According to his information, the Avars know the ordered array, they are experienced at war, withstand the hardships and privations, deceive their enemies, etc. Regarding their armament, *they are armed with coats of mail* (*zaves*), *swords, bows and lances. In the battle most of them bear two weapons, having the lances over their shoulders and the bows in their hands, and use both of them as need requires. And bear armour not only they, but also the horses of the officials are covered in front with iron or thick felt* (*kentoukla*). *They give special attention to training in mounted archery* (Maurice 1981, XI, 2, 360-362; 1984, 116; see also László 1955, 144; Zástěrová 1971, 38; Pohl 1988, 170-171; Bracher 1990, 143; Szentpéteri 1993, 166; Nicolle 1996, 36; Καρδαράς 2007-2008, 153; 2010, 201-202).

The information of the "Strategikon" is quite enough attested by archaeological finds from Avar cemeteries, although graves with full military equipment are rare. In Avar cemeteries a great number of weapons or armour (which were also signs of their owner's social position), like helmets, lamellar and mail armour, swords, lances, bows, sabres, knives, and axes were found (László 1955, 145-150, 232-238; Garam 1987, 194-195; 1990, 253-254; Pohl 1988, 89, 173-174; Szentpéteri 1993, 165-246; 1994, 231-306; Świętosławski 1993, 282-284; Nagy 2005, 135-148; Quast 2012, 359-364). Except for weapon-finds, testimonies on the armament of the Avar cavalryman offer some depictions of warriors (even not fully accepted as related to the Avars). The most known among them is the so called "victorious ruler" in the Nagyszentmiklós' treasure. On Vessel 2 is depicted a heavy armoured horseman without a bow and stirrups, who bears a lance and a conical helmet with an aventail. The body of the horseman is protected by mail armour and splints for the arms and the legs (Russell-Robinson 1967, 56-57; Pohl 1988, 171; Καρδαράς 2007-2008, 154; Bálint 2010). In the Avar cemetery of Mödling (Austria), on the disc-shaped button from Grave 144, are depicted two kneeling archers in lamellar armour, while on a late Avar belt's strap from Klarafalva (Hungary) is depicted a mounted archer in lamellar armour in a hunting scene (Pohl 1988, 171; Daim 1996, 261, 300, Fig. 5.283; 2003, 499; Καρδαράς 2007-2008, 154). On a rock-relief at Suliek in Siberia, attributed to an Avar horseman, the conical helm with the cheek-guards, but without aventail, as well as a long lamellar cuirass with short sleeves can be distinguished (Russell-Robinson 1967, 57-58; Haldon 1975, 25). Furthermore, in the "Utrecht Psalter" (about 820) there are figures of pagan horsemen, considered as Avars, with stirrups, small composite bows and in scale armour (Mesterházy 1968, 245-248; Pohl 1988, 313; Καρδαράς 2007-2008, 154; 2010, 202-203).

The 11th chapter of the "Strategikon" provides valuable information for the war tactics of the Avars, having as point of reference the cavalry, but also a series of tricks to deceive the opponent:

[5] Plinius (1967, VIII, 64, 108-110): *Scythici quidem equitatus equorum gloria strepunt: occiso regulo ex provocatione dimicantem hostem, cum ad spoliandum venisset, ab equo eius ictibus morsuque confectum* […] (Bracher 1990, 139).

[6] Vegetius (2004, I, 15, 18-19 and I, 20.2, 22): *Sed in hac parte antiqua penitus consuetudo deleta est; nam licet, exemplo Gothorum et Alanorum Hunnorumque, equitum arma profecerint, pedites constat esse nudatos* (Darkó 1935, 463).

In the battle they do not form their array in three parts as the Byzantines and the Persians, but in separate between them "moires", placed in a manner equivalent to "drugos" (military unit of thousand men), *giving the image of a united disposition. Outside of their array they have an additional force, which they send either as an ambush against those who attack them in disorder, or as an aid to the part that suffers attack* [...] *they care for the depth of their disposition and they form direct and dense front* […] *they prefer also to fight from a distance, the use of ambushes, the encircling movements against the enemy, the feigned flight with inversion and the cunei-form array* […] *they persecute their enemy as far its total extermination* (Maurice 1981, XI, 2, 362-364; see also 1984; Zástěrová 1971, 41; Szadeczky-Kardoss 1981, 64; Pohl 1988, 157, 172; Καρδαράς 2010, 218-219). The "Strategikon" states too that the nomadic peoples are the ones who recover quickly after a defeat in battle[7].

On the organisation of the Avar array in "moires" a reference is also made in another fragment of the "Strategikon", along with a note of their internal sub-division into military units (droungoi, divisions, moires), a testimony that completes the information of Chapter 11 on the war tactic of the Avars (Maurice 1981, II, 1, 110-112; Hofer 1996, 353; Καρδαράς 2010, 219). An equivalent meaning to the "moires" in the "Strategikon", regarding the organisation of the Avar array, has rather the term "systems" to which Theophylactus Simocattes refers during the military operations of the Byzantine general Priscus against the Avars in the summer of 599[8]. From the descriptions of battles also arises that the Avars formed a united and a the tripartite array[9], a tactic that the "Strategikon" recommends to the Byzantine general to avoid at the battlefield (Maurice 1981, II, 1, 112). Also describing a method of training for the encirclement of the opponent (the so-called "Scythian drill"), the "Strategikon" mentions a united array as a main feature of the nomadic peoples[10].

From the above considerations we can assume that in their military organisation the Avars followed the so-called "decimal system" (formation of military units from 10, 100, 1,000 or 10,000 men, which, e.g., was followed before them by the Huns – see Zástěrová 1971, 41; Olbrycht 2003, 97). From the description of the "Strategikon" also stands out the deep knowledge of the author on the war methods of the nomadic peoples, which, however, is based on previous treatises and cannot be attributed unilaterally to the contacts of Byzantium with the Avars. Such methods, among others, were the trick of the feigned flight with inversion and the cunei-form array[11].

Concerning the feigned flight, which the "Strategikon" calls the "Scythian ambush", the attack of the front line was followed by a mock retreat, where the attacking party, having turned their backs, were keeping the enemy to a safe distance by arrows and were leading him to a well prepared ambush. When their opponents arrived there, they were attacked to their flanks and read by troops hidden in the ambush. The opponents not only ceased the attack but they were encircled and completely destroyed as the "persecuted" front line, making simultaneously an offensive inversion, was closing the circle round the enemy (Maurice 1981, IV, 2, 194; Darkó 1935, 450; Nicolle 1996, 32; Καρδαράς 2010, 219-220). Regarding the cunei-form (wedge) array, it concerns a nomadic tactic known since the Antiquity, which some authors of the "Tactics" (Asklepiodotus, Aelian and Arrian) attributed to the Scythians as well as the Thracians. It was later used by the Macedonian army of Philipp II. The cunei-form array had an angled front and penetrated easily in the enemy's lines, while at the same time it could execute rapid movements toward the edges or change its front[12].

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[7] *Nobody makes a habit of immediately retrieving a defeat, except the Scythians, and it is particular foreign to the Romans* (Maurice 1981, VII, B 11, 250; 1984, 72).

[8] *The Avars had equipped their disposition in fifteen companies; the Romans had arranged their disposition in a single conjunction, both from fear about the camp and so as to fight in square formation* (Simocattes 1887, VIII, 2.11, 286; 1986, 212). *The barbarian deployed for battle in twelve companies* (Simocattes 1887, VIII, 3.9, 288; 1986; Bóna 2000, 166; Καρδαράς 2010, 219).

[9] *And so Priscus mobilized his forces in three divisions again, whereas the barbarian moved against Priscus after forming a single division* (Simocattes 1887, VIII, 3.5, 287; 1986, 212).

[10] *The Scythian formation is one in which the tagmas are all formed in the same manner, as in former times, not with some of them arranged as assault troops and some as defenders* (Maurice 1981, VI, 1, 218; 1984, 61).

[11] See above, n. 17. and also: *If the fleeing enemy should turn upon the pursuers as the Scythians frequently do* (Maurice 1981, II, 1, 112; 1984, 24).

[12] See, Asclepiodotus (1962, VII, 3, 278/79): *It is said that the Scythians and Thracians invented the wedge formation, and that later the Macedonians used it, since they considered it more practical than the square formation; for the front of the wedge formation is narrow, as in the rhomboid, and only one-half as wide, and this made it easiest for them to break through, as well as brought the leaders in front of their rest, while wheeling was thus easier than in the square formation, since all have their eyes*

The armament's element that consisted an important innovation not only for the Byzantine army during the reign of Maurice but also to the art of war in the Early Middle Ages, despite the fact that is not referred to in the "Strategikon" as a "model of the Avars", was the use of iron stirrups. Their introduction to Europe is ascribed to the Avars (Zástěrová 1971, 40; Szadeczky-Kardoss 1981, 66-69; Bóna 1988, 444; 2000, 166; Bálint 1989, 168; Świętosławski 1993, 284; Daim 2003, 468). The earliest iron stirrups found in Europe are coming from Avar graves in Hungary, dated to the 2nd half of the 6th and the beginning of the 7th c. (Aiken-Littauer 1981, 103-105; Garam 1990, 253; Müller 1996, 411). Stirrups, adapted to both sides of the saddle, offered better support to the horseman, especially the heavy armoured one, and allowed him to ride and fight having more comfort and stability (Maenchen-Helfen 1978, 158; Kolias 1988, 204; Pohl 1988, 171)[13].

In Byzantine sources, stirrups occurs for first time in Maurice's "Strategikon" under the Latin name "scala" (scale) (Maurice 1981, I, 2, 80; II, 9, 128; *Souidae Lexicon* 1928-1938, I, A 1811, 162; White 1963, 20; Καρδαράς 2010, 215), a name that led to the assumption of an earlier acceptance of stirrups by the Roman and Byzantine army, possibly via the Huns (Kolias 1993, 41). However, on its use by the Huns there are neither testimonies of sources nor relevant finds in Hunnic graves (White 1963, 14; Maenchen-Helfen 1978, 158; Aiken-Littauer 1981, 104; Tomka 1996, 128). The area of the provenance of metal stirrups is also unclear. It is located either in the Altai Mountains and south Siberia (Bivar 1955, 61-65; Coulston 1986, 61) or in China. The earliest reference to stirrups can be found in Chinese sources about 477 (Aiken-Littauer 1981, 105; Keightley 1983, 285-286; Świętosławski 1993, 284). Another possible region is Korea during the 2nd half of the 4th c. AD (Świętosławski 1990, 25; see also Dien 1986, 33-56). The Byzantines where first to adapt their use during their conflicts with the Avars in the 2nd half of the 6th c. (Bivar 1955, 62-63; White 1963, 21; Haldon 1975, 22; Kolias 1988, 206; Pohl 1988, 171; on this issue see also Świętosławski 2001, 75-85; Curta 2008, 297-326). Stirrups appeared later in the Muslim world (in the late 7th c.) and in the 8th c. they started to be used in the West (White 1963, 19, 24; Cahen 1975, 114; Nicolle 1996, 38; see also Καρδαράς 2007-2008, 162-164). As regards naval operations, the Avars used the "monoxyla" of subordinate Slavic tribes either to cross rivers or in sieges, as e.g., at Constantinople in 626 (Živković 2007, 53-54).

Further, in the "Strategikon" are given some practical pieces of advice for the confrontation with the nomads, i.e., if the enemy is superior in cavalry, his forage must be destroyed, if the opponent is a nomadic ("Scythian") people, the attack against him should be held in February or March, when their horses are still exhausted from winter illnesses (Maurice 1981, VII, A, 228-230; 1984, 64-65). If the enemy prevails in the number of archers, a battle should take place when the weather is wet, which is not favourable for the bows (Maurice 1981, VIII, 2.48, 288; 1984, 87). Also, in case of retreat, and if the pursuers are Persians or nomadic peoples, the Byzantine general should disregard additional (or slow) horses as well as superfluous property and form an array with infantry and a small part of horsemen. This array will be formed in two phalanges or in a square shape, with the horses and the baggage in the middle, having archers at the outer side of each phalanx (Maurice 1981, VII, B 11, 252-254; 1984, 73). Finally, it is noted that neither the conflict in a flat field, deprived of natural obstacles, nor close-quater fighting are favourable for the Avars. One thus must confront them with well-organised infantry or compact cavalry units. The proposed tactical formation to deal with them is the so-called "epikampios opisthia" array, where the infantry outnumbers the cavalry. On the other hand, if the Byzantine general has only horsemen, he should follow the array related to the cavalry and rely on on the strengthening of the extremes[14]. Regarding surprise attacks of the Avars, sources provide some testimonies, as the occupation of Singedon (today Belgrade) in 584, the night attack against the Byzantines to Heraclea in 592, and the ambush against Emperor Heraclius in 623, who managed to escape and arrived in Constantinople (see, Καρδαράς 2010, 71, 80, 118-121). As part of the Avar war tactics we could also consider the transfer of Byzantine populations to *Avaria*, especially during the period from 610 to 623 (ibid., 176-179).

Byzantine sources provide too many testimonies on the use and construction of siege

fixed on the single squadron-commander, as is the case also in the flight of cranes (see also Aelian 1969, 18, 4; Arrian 1967, 24, 26; Darkó 1935, 463-464; Καρδαράς 2010, 220-221).

[13] On the typology and the techniques of the stirrup's construction, see Kovrig (1955, 163-164, 180-183), Garam (1987, 194), Kovacs (1986, 195-225), Bálint (1989, 155-161) and Kardaras (2010, 214-215).

[14] *If the whole force is mounted, and it is to fought against other mounted troops, divide the cavalry into three lines* (Maurice 1981, XI, 2, 364-366 II, 2, 116; 1984, 25).

engines by the Avars, equivalent to those of the Byzantines. The "Miracles of Saint Demetrius", describing the siege of Thessalonica in September of 586, offer a clear picture of stone-hurling machines of the Avars: *They were square with wide base and they ended to narrower tops, where existed fat cylinders covered by iron to their extremities. On the cylinders were attached great wooden beams with slings, which raised great stones and darted them. The throwings of these machines could destroy every building or object they could hit. The Avars covered with planks the three sides of the square stone hurling machines to be safe from the archers of the walls* (*Miracles* 1 /151/, 154; Vryonis 1981, 384; Pohl 1988, 104; Dennis 1998, 102)[15]. The source mentions that more than 50 of such engines were constructed against the eastern part of Thessalonica's walls (*Miracles* I /154/, 155; Vryonis 1981, 384; Pohl 1988, 104). Instead of stone-hurling machines, the Avars used also "helepoleis", iron battering rams and "tortoises", covered by drained fleece. Another way of covering siege engines to avoid their destruction by fire or hot pitch were fresh fleeces of oxen or camels (*Miracles* I /139/, 148-149 /146-147/, 152-153; Waldmüller 1976, 176-177; Vryonis 1981, 383-384; Pohl 1988, 104).

In 617/18 the Avars, along with Slav and Bulgar troops, conducted a second siege of Thessalonica. The "Miracles" make reference to stone-hurling engines, tortoises, battering rams for the gates of the fortress, as well as wooden turrets ("xylopyrgoi") *higher than the walls of the city* with young warriors deployed on them (*Miracles* I /195-215/, 184-189, esp. /203/, 186; Pohl 1988, 242-243; Καρδαράς 2010, 112, 224). Their usefulness in the art of siege is also attested by refuges from other cities, which fell to the Avars in ca. 615, such as Naissus and Serdica (*Miracles* I /200/, 186; Popović 1975, 490-493; Fine 1983, 42; Pohl 1988, 242; Kaegi 2003, 95). References to the use of siege engines by the Avars are also made by Simocattes, namely at the siege of Drizipera in 592 and the attack to Dalmatia in 595 (Simocattes 1887, VI, 5.4, 228 and VII, 12.1, 265; Pohl 1988, 134, 146; Καρδαράς 2010, 80, 87).

During the siege of Constantinople in 626, Byzantine sources mention again war engines of the Avars, in this case even more sophisticated and equivalent to those of the Byzantines. According to the "Chronicon Paschale", an almost contemporary source, the besiegers set up *engines, tortoises and stone-throwers*, which they covered with hides, and they constructed up to twelve big wooden towers ("pyrgocastellous") *as high as the ramparts*, covered by skins, too. Similar information is given also by Georgios Pisides (tortoises, flying stones – rather for stone-hurling machines – and mock turrets, namely helepoleis), while Patriarch Nikephoros refers to *wallfighting machines* (wooden turrets and tortoises). Many terms refering to Avar siege engines also occur in the account of Theodoros Synkellos, such as helepoleis, tortoises, caltrops and wooden towers. On the other hand, Theophanes refers only to *many engines* (see Kardaras 2005, 57; Καρδαράς 2010, 224-225 – with relevant fragments of the sources).

A very important chapter of the Byzantine-Avar relations is the issue of mutual influences on the art of war, namely the armament, especially of the heavy armoured horseman, the tactics, and the use of siege engines. Regarding the first problem, the analogies that appear in the "Strategikon" concerning the armament of the Byzantine and the Avar cavalry, combined with many references of Maurice to the "model of the Avars", led many scholars to the conclusion that the author of the "Strategikon" had the Avar cavalry as a pattern for the armament of the Byzantine horseman (Darkó 1937, 128; Bréhier 1949, 279; László 1955, 144; Haldon 1975, 22-23; Bracher 1990, 141; Dagron 1993, 280-281). Specifically, the references of Maurice concern types of the lance, the aventail, the armour of the horses, the clothing of the horseman and the tent (see also below) (Maurice 1981, I.b, 78-82; Darkó 1937, 129; Zástěrová 1971, 38-40; Haldon 1975, 21-22; Szadeczky-Kardoss 1981, 65, 69-70; Pohl 1988, 171; Kolias 1988, 79, 200-201; Nicolle 1996, 37-39; Καρδαράς 2007-2008, 152; 2010, 200-201). In the "Strategikon" there is no mention of the armament of light cavalry, and, according to J. Haldon, it was formed by foreign mercenaries and smaller units of Byzantine horsemen, as in the era of Justinian (Haldon 1975, 23).

The afore-mentioned elements of the armament of the Avar horseman could be comparable with the armament of equivalent Byzantine combatants, as it is depicted in in the relevant description of the "Strategikon". The Byzantine horseman used a long hooded coat of mail ("zava/lorikion") reaching to his ankles, and an iron helmet with a small plume on the top. His neck was covered by a round aventail made of textile, with fringes

[15] Chevedden (2001, 74), associates the *Miracles*' account with the stone-hurling engines known as "trebuchet", used widely in the Chinese art of siege.

outside and wool inside. The elite horsemen, the "Bucellarioi", also used iron gauntlets, while in some cases the shield completed the defensive armour. The Byzantine horseman also carried a sword and a lance. Furthermore, a bow was carried at the saddle or on a strap hanging from the waist of the horseman, along with a bow case and a quiver with thirty or forty arrows. His equipment also included spare bow strings, varied small tools, two stirrups, saddle bags and a tent, while his clothing should be broad and full, giving him a neat appearance. Complementary to them was a long coat made of thick textile, resistant to rain and arrows[16] (Maurice 1981, I, 2, 78-82; Darkó 1937, 128; Zástěrová 1971, 39-40; Haldon 1975, 21-22; Kolias 1988, 79, 200-201, 227-229; Καρδαράς 2007-2008, 154).

Despite the fact that Maurice makes five times a reference to the "model of the Avars", it is not clear whether this indicates a model unknown to the author of "Strategikon" until his era, or concerns some peculiarities of the Avars' armament. The name of the Avars could also be just an example, as the "Strategikon" was probably written during the struggle with the Avars between 592 and 602. The issue of the Avar influences and what constituted an innovation to the armament of the Byzantine horseman, owed exclusively to the Avars, presupposes a wider examination of influences from other peoples on the Byzantine army before the year 558, when the Byzantines came for first time in contact with the Avars. Previous influences on the Byzantine army from the steppe peoples and Sassanian Persia are very important for a distinction of possible Avar patterns.

The art of war of the steppe peoples became very familiar to the Byzantines by the disastrous raids of the Huns and the conflicts of the Byzantines with them during the reign of Attila. After the collapse of the Hunnic domination in Central Europe, the Huns often appear in Byzantine sources as mercenaries in the lines of the Byzantine army, especially as mounted archers. Their capacity to mounted archery and their crucial contribution to the outcome of conflicts is testified to in many cases, as during the reoccupation of North Africa and Italy by Justinian I (Darkó 1935, 465-469; Brehier 1949, 278; Teall 1965, 310-312; Dagron 1993, 282; Καρδαράς 2007-2008, 155). Among nomad mercenaries of the Byzantines before their conflicts with the Avars there were also Bulgar tribes (the Onogurs and the Kutrigurs), who were using similar methods of war (Moravcsik 1930, 69, 78; Teall 1965, 299-303, 309-310; Beševliev 1980, 21-26; Pohl 1988, 55, 228; Kolias 1988, 28; Καρδαράς 2010, 204-205). The first contact of the Bulgars as mercenaries with Byzantium is dated to the era of Emperor Zenon (474-491), who asked their help to fight the Goths in 481/82 (John of Antiocheia 1905, 95, 135; Καρδαράς 2007-2008, 155). The knowledge of the Bulgar tribes' armament is testified to in the "Strategikon" by the reference to "Bulgar sagia"[17] (coats), which Maurice did not recommend as clothing of the heavy armoured infantry.

The presence of the Huns and Bulgar mercenaries in the Byzantine army increased the importance of mounted archery and leaded gradually to the development of the "composite cavalryman", who carried the lance and the bow, an indication that the Byzantines could adapt their tactics and armament to the needs of war. Also the use of the Hunnic bow (the so-called composite bow) improved the effectiveness of the Byzantine cavalry and contributed to the military successes of Emperors Maurice and Heraclius against the Persians[18] (Darkó 1935, 467; Bréhier 1949, 278; Haldon 1975, 12; Kolias 1988, 214-215, 234; Dagron 1993, 281; Καρδαράς 2007-2008, 156; 2010, 205). The good use of the bow was considered as an advantage and was one of the most important techniques which the soldiers of the Byzantine army were taught. According to the "Strategikon", the native soldiers up to the age of forty should be able to use the bow and have bows and quivers in battle, as well as two lances (the second as a spare one) (Maurice 1981, I, 2, 78; Darkó 1937, 129; Zástěrová 1971, 38; Haldon 1975, 22; Kolias 1988, 231-233; Dagron 1993, 281; Nicolle 1996, 31; Καρδαράς 2007-2008, 156; 2010, 205). The fact that the Byzantines used nomadic composite bows (which were more difficult to manual exercise) and not lighter Persian ones arises from the testimony of Maurice on the need for acquaintance with archery (Maurice 1981, I, 1, 74-76), which many soldiers were not able to practice. There are also notes of Procopius on the

[16] For the "zava" (mail coat, rather of Persian origin) and its identification with the "lorikion" see *Souidae Lexicon* (1928-1938, II, Z 1, 499: *Ζαβαρεῖον: ἐν ᾧ αἱ ζάβαι, αἵ εἰσιν ὅπλα πολεμικά, ἀπόκεινται. ζάβα γὰρ τὸ λωρίκιον*; Bivar 1972, 288; Haldon 1975, 24, 34; Kolias 1980, 27-35, esp. 27-31; 1988, 37-44; 1993, 41; Nicolle 1996, 38).

[17] *Their mantles should be simple, not like the Bulgarian cloaks* (Maurice 1981, XII.B, a, 420, 8; 1984, 138; Καρδαράς 2007-2008, 155-156).

[18] On the features of the reflex bow, see also Maenchen-Helfen (1978, 166-167), Bracher (1990, 137), Ricz (1983, 2-10), Hofer (1996, 351) and Daim (2003, 465, 478).

differences between the Persian and the "Byzantine" bow (Procopius 1962-1963, I, 18.32-34, 96; Christensen 1944, 368; Nicolle 1996, 36; Καρδαράς 2007-2008, 156). Consequently, the acceptance of the reflex bow by the Byzantines is not due to the Avars but rather to the Huns who served earlier as mercenaries in the Byzantine army.

About half a century before the writing of the "Strategikon", influences from the steppe peoples can be distinguished in the description of Procopius of the armament of the Byzantine cavalry, which was formed mostly by Huns and Bulgar mercenaries. According to Procopius, the Byzantine heavy armoured horseman was equipped with a cuirass, greaves, a bow, a quiver, a sword and a lance. A small circular shield with no grip was hanging at his left shoulder, in order to cover his face and neck (Procopius 1962-1963, I, 1.12-13, 6-7; Darkó 1935, 466; Haldon 1975, 18; Dagron 1993, 281; Bracher 1990, 143; Καρδαράς 2007-2008, 156). The use of the small shield (not carried in the hand but strapped to the upper part of the warrior's arm) by the horsemen, both according to Procopius and Maurice, is considered as the outcome of the use of the lance with both hands. This way of fighting spread from the nomads to Byzantium and Persia[19] (Coulston 1986, 67; Καρδαράς 2007-2008, 157; 2010, 206).

In the "Strategikon" the shield is recommended for the horsemen who had a lance[20], contrary to the Avar horseman, who rather used no shield, as the latter occur very scarcely in archaeological finds (Szentpéteri 1993, 194, 206; Hofer 1996, 352; Rosner 1999, 96, Taf. 50:760-2). Furthermore, the existence of a small unit of mounted archers with shields in the "Strategikon" is considered by A. Bracher as a proof of survival of the horseman's armament that Procopius relates to Justinian's era[21]. Procopius also describes the abilities of the mounted archer and the way he was shooting while moving *so powerfully, that no shield or cuirass could stop such an arrow with so great speed* (Procopius 1962-1963, I, 1.1, 7; Darkó 1935, 466-467; Bivar 1972, 286; Haldon 1975, 19; Kolias 1988, 234; Καρδαράς 2007-2008, 197; 2010, 207). The military influences from the steppe peoples on Byzantium during the 1st half of the 6th c. can also be seen in the work "On Strategy" of Anonymous Byzantius, who devotes four chapters to the use of bow, the techniques of the bowstring's draw and the training of mounted archery (Anonymous Byzantius 1985, 44-47, 128-134; Kolias 1988, 229-237; Καρδαράς 2007-2008, 157; 2010, 207)[22].

Except for the steppe peoples, important influences from the Sassanian Kingdom on the Byzantine cavalry are also evident. Their beginning is dated to the mid-3rd c. AD, when the Romans created mounted military units based on the heavy armament of the Sassanian cavalry (the "cataphracti" and "clibanarii"). Although the difference between them is not very clear in the sources, the *clibanarii* were probably armed with bows and lances, while the "cataphracti" with lances and shields and they used masks[23]. The name "clibanarius" comes rather from the word "clivanion", a lamellar or scale cuirass with short sleeves and a waist-length, which the soldiers wore as additional armour on the mail coat (Haldon 1975, 27; Kolias 1988, 44-49; Καρδαράς, 2007-2008, 158).

Before the Sassanians (227-651), the Parthians were first to introduce a new model for the heavy armoured "cataphractus/clibanarius", which consisted in a combination of the Hellenistic era's cataphract, the Persian horseman of the Ahaimainidic era as well as the armament of the Parthians themselves. The Parthians were also using armour of metal, leather or felt for the horses, which was covering their entire bodies (Russell-Robinson 1967, 19-22; Gamber 1968, 7-14, 23-26, 31; Bivar 1972, 275-276; Haldon 1975, 20; Diethart, Dintsis 1984, 72, 77-79; Coulston 1986, 62; Kolias 1988, 182-184; Gall 1990, 74; Καρδαράς 2007-2008, 158, 160)[24]. After the collapse of the Parthian rule in the Iranian Plateau and the establishment of the

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[19] Persian patterns on the use of this shield by the Byzantines are identified by T. Kolias (1988, 112, 122), as the same shield is also carried by Chosroes II on the carved relief of Taq-i-Bustan (see below).

[20] *The unskilled with the bow young «barbarians» should have lances and shields* (Maurice 1981, I, 2, 78; 1984, 12; Kolias 1988, 112; Bracher 1990, 143; Καρδαράς 2007-2008, 157).

[21] *Fourth in file, rear guard with bow and shield* (Maurice 1981, III, 1, 146; 1984, 35; Bracher 1990, 143).

[22] According to A. D. H. Bivar (1972, 284), the technique to draw the string with the thumb (the so-called "Mongolian draw"), as it described to "Anonymous", became known to the Byzantines from the Huns.

[23] *Vita Severi Alexandri* (1980, 56.5, 290-292): [...] *centum et viginti milia equitum eorum fudimus, cataphractarios, quos illi clibanarios vocant…*, Ammianus Marcellinus (1970-1975, XVI, 10.8, 176): *… sparsique cataphracti equites, quos clibanarios dictitant* ... (see Speidel 1984, 153-154; Diethart, Dintsis 1984, 68-70, 77; Coulston 1986, 67; Kolias 1988, 109, 205; Gall 1990, 74-75; Καρδαράς 2007-2008, 158).

[24] For the depiction of a – rather – Parthian "cataphractus"/ "clibanarius" in a graffito in Dura-Europos (mid-3rd c. AD), as well as for equivalent armour in the arch of Galerius in Thessalonica see Gamber (1968, 18-19, 30, Fig. 43; Russell-Robinson (1967, 20, Fig. 8), Speidel (1984, 155), Coulston (1986, 62) and Haldon (1975, 25).

neo-Persian Sassanian dynasty, the Parthian type of "cataphractus/clibanarius" was adopted by the Sassanians. According to Heliodorus' "Aithiopics", the heavy armoured Persian horseman was equipped with a helmet with mask, a lance, a curved sword, a knee-length scale armour and greaves (Heliodorus 1960, III, 9.15, 57; Gamber 1968, 27-28; Diethart, Dintsis 1984, 73-74; Kolias 1988, 203-204; Καρδαράς 2007-2008, 158). During the 3rd and 4th c. this type of armament constituted a pattern for the development of the "cataphractus/clibanarius" in the Roman and Byzantine cavalry, which had close similarities to the Persian one (Gamber 1968, 15-23, 28-29; Bivar 1972, 279; Diethart, Dintsis 1984, 70-71, 74-78; Speidel 1984, 151; Kolias 1988, 40, 69; Gall 1990, 77-78; Καρδαράς 2007-2008, 159). Since the 4th c., a more flexible coat of mail was the main type of armour to the Romans and the Sassanians, since it could be combined with other types, especially lamellar ones. The mail armour could be also added to the helmet in order to cover the face and the neck of the horseman (Russell, Robinson 1967, 23-24; Gamber 1968, 26, 29, Fig. 41-42; Bivar 1972, 275, Diethart, Dintsis 1984, 73; Kolias 1988, 40-41).

The armament of the Persian cavalry during the 6th century appears to be of particular interest for investigation of influences on the armament of the Byzantine horseman under the reign of Justinian and, mostly, Maurice. According to the "Strategikon", the Persians *use mail armour, bows and swords and they are more practiced in rapid archery, although not so powerful, than all other warlike nations*… (Maurice 1981, XI, 1, 354; 1984, 114; Καρδαράς 2007-2008, 159). Apart from Maurice, an Arabic source, Al-Tabari, provides information on the armament of the Persian horseman during the era of Chosroes I (531-579). The horseman wore mail armour reinforced with breastplates, a helmet, a belt, metal plates at the arms and legs. He was armed with a lance, a shield, a sword, a mace, an axe, a quiver for thirty arrows, a bow case containing two bows and two spare bow strings. Also his horse was protected with mail armour (Al-Tabari 1999, ch. 964, 262-263; Christensen 1944, 368; Bivar 1972, 276; Kolias 1988, 122, n. 179; Καρδαράς 2007-2008, 159).

The sources' testimonies on the armament can be completed with the depictions of Sassanian kings or warriors. In his depiction as a "cataphractus/clibanarius" on the carved relief of Taq-i-Bustan, Chosroes II (591-628) carries a small shield, a lance, a quiver, a knee-length mail coat, a helmet with a small plume, a mail aventail and cover for the face, attached to helmet, leaving only the eyes uncovered (Russell-Robinson 1967, 24-25; Haldon 1975, 24; Diethart, Dintsis 1984, 73-74; Vanden Berghe 1984, 147; Coulston 1986, 64, Fig. 6:1; Ferrier 1989, 76-78; Gall 1990, 78; Καρδαράς 2007-2008, 159)[26]. Furthermore, in depictions on later silver Sassanian disks one can see a combination of mail with lamellar armour as well as mail or lamellar aventails (Russell, Robinson 1967, 23-24, 57; Haldon 1975, 24-25; Καρδαράς 2007-2008, 159). Regarding the description of al-Tabari, it is possible that the additional breastplates are equivalent to "peristithidia" (breastplates) mentioned by Anonymous Byzantius[27]. They were worn under the cuirass and offered a greater protection to soldiers against the enemies' blows. Except for the heavy armament of the horseman, the pattern of "cataphractus/clibanarius" also concerns the armour of the horse. During the era of the early Sassanians, the "Aithiopics" of Heliodorus and the depictions of kings show Persian horses wearing armour similar to that of the Parthians, namely covering their entire bodies (Heliodorus 1960, III, 9. 15, 57-58; Russell-Robinson 1967, 21, Fig. 9:A-B; Gall 1990, 78; Καρδαράς 2007-2008, 160). On the contrary, on latter depictions, as the relief of Chosroes II in Taq-i-Bustan, there is no armour protecting the entire body of the horse but only its head, breast and neck (Russell-Robinson 1967, 23, Fig. 11; Καρδαράς 2007-2008, 160). An equivalent armour was worn by Byzantine horses both according to the "Strategikon"[28] and to Anonymous' treaty[29].

In the equipment of the heavy armoured Persian horseman during the 6th c. there are many similarities to the Byzantine one as depicted in the

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25 On the archaeological finds that confirm the afore-mentioned Sassanian equipment, see Kollautz (1985, 130).

26 The carved relief of Taq-i-Bustan is also considered by some scholars as a depiction of King Perozes (459-484) (see Gamber 1968, 30; Gall 1990, 38, 44-46). In any case, his equipment is lighter than of earlier "cataphracti/clibanarii" of the 3rd and 4th c.

27 *The rest of the troops may be provided with coats of mail, breastplates, and head coverings fashioned of felt or leather. So that the rough material does not chafe the skin, they should wear padded garments (peristithidia) under them, as we recommended for iron breastplates and other items* (Anonymous Byzantius 1985, 16, 54/55-56/57; Kolias 1988, 50-51; Καρδαράς 2007-2008, 159).

28 See also below. On the "kentoukla" (felt as armour), mentioned in the "Strategikon", see *Souidae Lexicon* (1928-1938, IV, Π 1597, 131) and Kolias (1988, 54-61).

29 *The horses of the soldiers in the front line should not be too young or unused to noise and confusion. They should be equipped with iron armour for their heads, breasts, and necks* (Anonymous Byzantius 1985, 17, 56/57).

"Strategikon". Both wore a mail coat ("zava/lorikion"), a helmet with a small plume, an aventail, a small round shield, a sword, a lance, a bow, a bow case, a quiver with a cover for 30-40 arrows and a long mantle. The horse also wore armour of iron or felt for the breast and the neck and an iron shaffron. From the comparative investigation of the armament's elements, we could assume that the main model for the heavy armoured Byzantine horseman during the reign of Maurice was not the Avar horseman but Sassanian types of the 5th and 6th c., which are earlier than the contacts of the Empire with the Avars or contemporary to the Byzantine-Avar conflicts. These "cataphracti/clibanarii" (namely the horseman of al-Tabari or Chosroes II) as well as the heavy armoured horseman of Maurice, differ from their predecessors from the 3rd and 4th c., who were more "stiff", since they used mainly the scale armour. They also often combined two different cuirasses, they had a mask instead of mail cover for the face and they covered the entire bodies of their horses. Furthermore, comparing the horseman of Procopius and Anonymous with that of Maurice, the latter one seems to have more complete armament by the addition of a hood to the mail coat, aventail and gauntlets. On the other hand, he used no greaves (Καρδαράς 2007-2008, 160-161).

As it is pointed out, regarding the armament of the Byzantine horseman, the references of the "Strategikon" in five cases to the "model of the Avars" are considered as a proof for the adoption of Avar patterns by the Byzantines during the reign of Maurice. On the other hand, the scrutiny of the influences on the heavy armoured Byzantine cavalry from the steppe peoples and the Sassanian realm in the period until the late 6th c., brings to light many elements that were introduced to the armament of the Byzantines before or during their contacts with the Avars. Having as basis the afore-mentioned influences from the nomads and the Sassanians, the main question is what could be considered as an innovation in the Byzantine art of war which was owed exclusively to the Avars. Taking into account all the afore-mentioned elements, we could formulate the following remarks on the five points of the military equipment that was characterised as the "model of the Avars":

a) The cavalry lance with a leather thong in the middle of the shaft and with a pennon under the head. The use of the lance with a thong in the middle is neither testified in any other source before the "Strategikon", nor in Byzantine depictions (Kolias 1988, 200-201). Its use by the Avars is – rather – testified to the relief of Suliek, where a horseman with an equivalent lance is depicted. A difference between the Byzantine and the Avar horseman can be seen in attaching pennons to lances. The small pennon under the head that prevented the deep penetration of the lance was a nomadic innovation, possibly introduced in the West by the Avars (Coulston 1986, 66). It seems that the latter maintained the pennon during the battle, as it arises from the depictions from Suliek and Nagyszentmiklós (if we consider them definitely as Avar horsemen). On the contrary, in three cases the "Strategikon" mentions that during the battle the lances of the horsemen should not have pennons, which must rest in their cases. This is because pennons provoke problems to tactical movements and to shooting done by lance throwers and archers[30].

b) The round textile aventail, made with linen fringes outside and wool inside. The use of the aventail by the Byzantines as element of the defensive armament does not constitute any innovation. It seems rather as adoption of an aventail which was very popular among the Avars. It was different from the mail one that the Sassanians used for the protection of the neck and the nape.

c) Iron shaffrons (headguards) and armour of iron or felt, which covered the breast and the neck of the horse. At this point the reference to the "model of the Avars" seems to be problematic, since the horse armour was a very old practice. Maybe it can be interpreted as a peculiarity in the type of the armour (lamellar), if we accept the assumption that the Avars introduced the lamellar horse armour instead of that of scale, felt etc. (Haldon 1975, 22, n. 56).

d) The broad and well-matched clothing of the horsemen, made of linen, of goat's hair, or thick textile, covering him up to the knees and giving him a neat appearance. This type resembles older Parthian patterns in the clothing of "cataphractus/clibanarius". The peculiarity in the "Strategikon" consists in the "cut according to the Avar model", which rather concerns a different form or "fashion" of the horseman's clothes.

e) The use of a tent, equivalent to the Avar one. Because the text gives no more information,

[30] *We do not recommend carrying pennons on the lances during battle. For they are as useless in combat as they are valuable for presenting a fine appearance at inspections, sieges, or parades. ... The pennons may be flown until the enemy is about a mile away, then they should be furled and put back into their cases* (Maurice 1981, II, 10, 130; VII.B 16, 260; VII.B, 17, 264; 1984, 30; Kolias 1988, 210).

it is assumed that Maurice makes a reference to the round tent of the nomads, known as "yurt", which was more resistant to the wind than the traditional square tent of the Romans and it was easy to set up, dismantle and transfer (Szadeczky-Kardoss 1981, 70-71; Pohl 1988, 171). If it indeed concerns the typical nomadic "yurt", it could be difficult to accept its use for first time during the reign of Maurice. The same type of tent was in use by all nomadic peoples and its introduction to the Byzantine army must be attributed to earlier nomad mercenaries. Consequently, this reference to the "model of the Avars" has in fact a wider meaning and concerns the nomadic type of tent.

The afore-mentioned remarks lead to the conclusion that at least the reference to the nomadic tent is not related to any "Avar model", while the other four elements should be seen as innovations and peculiarities, as compared with the armament of the Byzantine horseman. An innovation consisted in the use of the thong and the small pennon on the lance, while as Avar peculiarities one should consider the use of textile aventail, as well as the armour of the horse and the clothing of the horseman, both ascribed to the Avars. Consequently, these elements, considered as "strong influences" from the Avars on the heavy armoured Byzantine horseman in the "Strategikon", are in fact very limited to some details that Maurice refers to as the "model of the Avars". These elements consisted of additions or differentiations to earlier patterns that the Byzantines had adopted from nomad mercenaries and the Sassanians. We could also assume that the use of the Avars' name has a "conventional" character for the nomadic armament, as during the era of Maurice the Avars were the steppe people that the Byzantines had to affront in the battlefield (see Καρδαράς 2007-2008, 161-162; 2010, 212-214).

On the other hand, in the area of the Avar khaganate objects were found that should be considered as Byzantine influences on the Avars' armament. In some graves occur conical helmets (the Spangenhelm type), composed of four or six attached parts, with nasals and, in certain cases, with cheek-guards, which was already in use by the Late Roman army (Russell-Robinson 1967, 55-56; Gamber 1968, 22; Hofer 1996, 352; Nicolle 1996, 37). More specifically, elements of such helmets came to light in Szeged-Öthalom 623, Bécsi út in Budapest 92, Band/Mezőbánd 10, Sînpetru German/Németszentpéter 569 and Selenča/Bácsújfalu 657 (Szentpéteri 1993, 206). Furthermore, a possibly Byzantine provenance is proposed for some double-edged swords of the Early Avar Period, with bronze guards and pommels above the grips (Kiss 1987, 194-195; Quast 2012, 359-361). These finds in the Avar khaganate could be linked with the testimony of Menander the Quardsman on the purchase of weapons by the Avars at Constantinople in 562 (Menander 1985, fr. 5.4, 52; Pohl 1988, 45, 195; Καρδαράς 2010, 42). This may have also happened in other cases, and there are indication on the use of a Byzantine sword type by the Avars. Finally, in the graves of rulers or higher officials of the Early Avar Period certain swords with fittings of gold or silver sheets on grips and scabbards. Such swords may have been gifts from Byzantine delegations (Kovrig 1955, 175; Garam 1987, 194-195; 1990, 254; Kolias 1988, 134; Szentpéteri 1993, 176, 181).

Similarly to the issues of the armament, several scholars share the view that the "Strategikon" depicts an overall change in the war tactics of the Byzantines, which is partially or entirely due to the influences of the Avars (Darkó 1937, 143; Bréhier 1949, 272, 277; Haldon 1975, 12; Nicolle 1996, 20). For the approach of the issue, we could follow the same method, which first consisted in a comparative investigation of the Byzantines' and the Avars' tactics and, on the other hand, in underlining some influences linked to the war tactic of the steppe peoples, which could be observed in the Byzantine army before conflicts with the Avars.

The main feature of the Byzantine military disposition in the "Strategikon", which usually was adapted according to the opponent, was the separation of the available troops into three parts, distinct from each other. The tripartite array of the Byzantines is evident in the instructions of the "Strategikon" (Maurice 1981, I, 4, 88; II, 2, 116; III, 5, 160) as well as in the descriptions of battles during the 6th c. (Simocattes 1887, I, 9.7, 56; II, 3.1, 73; VIII, 2.10, 286; Καρδαράς 2010, 217). Of special importance in the "Strategikon" is the array of the cavalry, on which, as with the armament of the horseman, is focused the question of Avar influences. The array of the Byzantine cavalry was divided into three parts (three battle lines) with a distance of 400 meters from each other. The first battle line, known as the "defender" ("promahos"), formed by the two thirds of the total strength, had three equal units (brigades), and each one of them three "moires" (regiments). The units of the first line should have "koursores" and "defensores" (light and heavy armoured men respectively). The "koursores" consisted of one third of each unit (one regiment), mainly archers, placed at the outer part of the array, while the two inner regiments consisted of "defensores". To the

left of the first line there were flank guards (defensive role) and to the right archers as outflankers (offensive role).

The second battle line (the so-called assistant), included one third of the total array. It was divided into four equal parts and could provide all-round defense, swinging round. Its units had three empty spaces between them – with the presence of only one "vandon" (squadron) there – where the first line would take refuge if it was forced to retreat. Each part was surrounded by archers. If all the military force numbered from five to ten or twelve thousand men, then the second battle line should not comprise four parts but two. If again the force was less than 5,000 men, the second battle line should comprise only one part.

At both sides of the array ambushes should be placed, consisting of three or four squadrons, in order to prevent ambushes of the opponent and, on the other hand, to prepare ambushes against him. It is also proposed for the array to attack, if possible, not in the front but in the sides and the rear of the opponent. In brief, all the "mounted squadrons" were divided into first and second battle lines and organised as "defensores", "koursores", flank guards, outflankers, ambushers, assistants and the rear-guard. Each squadron should have a depth of four horsemen, but in some cases it could be of eight or even ten, depending on the quality of the troops. Regarding the armament, the first two and the last file of the first battle line should consist of lancers while all the rest, from the third to the seventh or the ninth file, of mounted archers without shields. As the rear-guard existed a third battle line behind the second one with a small and unknown number of soldiers. Behind the whole array the ambush had its place, divided in two smaller parts, with 3-4 hundred men in each one (Maurice 1981, II, 1-6, 110-126; III, 8-10, 168-178; Darkó 1937, 131-132; Bréhier 1949, 278-279; Bivar 1972, 288-290; Nicolle 1996, 30-32). The formation of different battle lines in the "Strategikon" differs from the previous tactics of the Romans and the Persians, where the cavalry lined up in a united and compact formation. The main aim was an effective defense against powerful cavalry which attacked the opponent not only in front but also in the sides and the rear fast and unexpectedly, as well as a possibility of counterattack with the same methods (Darkó 1937, 130, 133; Bréhier 1949, 279; see also Καρδαράς 2010, 218). On the other hand, as mentioned above, the Avars followed the united and not the tripartite array.

Regarding certain peculiar nomadic tactics, the trick of feigned flight was not adopted by the Byzantine strategy during the second half of the 6th c. but became probably known from the Huns, as it is mentioned in sources earlier than the "Strategikon". Such an example is the victory of General Narses against the Franks in northern Italy, which was achieved through the implementation of this particular trick[31]. Concerning the feigned flight, the "Strategikon" does not use an incident with the Avars as an example, but the victory of the Hephthalites Huns against the Persian King Peroz in 484 (Maurice 1981, IV, 3, 196; Bivar 1972, 288). During the Byzantine-Avar conflicts, the Byzantines applied successfully the feigned flight against the Avars at Adrianople in 586 (Simocattes 1887, II, 17.11, 104; Curta 2006, 67; Καρδαράς 2010, 220). According to the "Notitia Dignitatum" (probably early 5th c.), in the Byzantine army served units of horsemen under the name "cuneus" (wedge)[32]. Consequently, also in the case of the cunei-form array, Maurice does not record any tactical innovation of the Avars, but a known ancient Scythian formation for the cavalry. Gradual influences of the nomadic peoples also led to the formation of a "Scythian model" in the tactics of the Byzantine army during the reign of Justinian and Maurice, as it arises from military treatises and other narrative sources (Coulston 1986, 60; Dagron 1993, 281-282). Although these influences are reflected intensely in the "Strategikon" of Maurice, as a whole they do not constitute innovations that emerged from the conflicts of Byzantium with the Avars, but they were the outcome of the assimilation of tactical formations and tricks introduced to the Byzantine army mainly from nomad mercenaries, as the Huns and the Bulgars.

The influences of the steppe peoples that can be seen in the tactics (as well as in the armament) of the Byzantines during the 6th c. are due mainly to the nomad mercenaries posed in the service of the Byzantine army, especially the Huns. Before contacts with the Huns, the Byzantine army (as the late Roman one) consisted mostly of heavy armoured infantry, while the cavalry had a supporting role, covering the flanks of the infantry, or was conducting

[31] *Narses resorted to a barbarian strategem which is practised more commonly by the Huns* (Agathias 1967, A, 22, 38; 1975, 30; see also Zástěrová 1971, 25; Bracher 1990, 141; Nicolle 1996, 30; Καρδαράς 2010, 220).

[32] *Cuneus equitum promotorum, Flauiana. Cuneus equitum sagittariorum, Tricornio* (*Notitia Dignitatum* 1876, 41, 93, 13-14; Darkó 1935, 463). On the cunei-form array to the Huns, see Ammianus Marcellinus (1970-1975, XXXI, 2.8, 244): *Et pugnant nonnumquam lacessitis, sed ineuntes proelia cuneatim, uariis uocibus sonantibus toruum* (Maenchen-Helfen 1978, 155-156; Καρδαράς 2010, 221).

reconnaissance and surprise raids. In the 4th, but mostly in the 5th and 6th c., the need to confront the nomadic peoples increased the importance of cavalry and limited the infantry to supporting role (Coulston 1986, 60, 70-71; Dagron 1993, 280). Within the framework of these changes, the emphasis was given on the main features of the nomadic tactics, such as the combination of the horseman and the bow, the ability of the horseman to shoot with it in motion, the speed and the surprise. In the cavalry separate units of mounted horsemen and spearmen were formed, while archers formed a very important part in the Byzantine infantry, too (Darkó 1935, 466; Haldon 1975, 13, 41; Καρδαράς 2010, 221). The Romans and the Byzantines also experienced from the nomad mercenaries several methods of guerrilla. Avoiding the massive attack, they harassed the enemy by attacks of small parts and manoeuvres in order to break the enemy's lines, to cause confusion in communication and to cut off the supply and the reserves of the opponent (Darkó 1935, 449-450, 469; Bréhier 1949, 279; Καρδαράς 2010, 221-222).

Eventually, with regard to siege engines, from the afore-mentioned testimonies it follows that the Avars had at their disposal necessary technical means in order to capture fortified Byzantine cities, but it remains unclear when they learnt how to use them. In a minute study on the problem, S. Vryonis raised this question[33], and he believed that a solution can be found in a passage of Simocattes on the capture of Appiareia by the Avars in 586/87. According to the Byzantine historian, during the siege of the city, the Avars captured a Byzantine soldier[34], named Bousas. The Avars led Bousas outside the walls and threatened him with death if the inhabitants did not pay for him. Despite of his calls, Bousas did not gain his freedom, as nobody accepted to pay the ransom. In order to cast vengeance on the residents and the garrison, Bousas promised the Avars to help them capture the city and taught them how to construct a siege engine, a "helepolis"[35]. Using this engine, the Avars occupied Appiareia. Of great importance is the note of the author that the Avars ignored the use of siege engines till that time.

In the case of Bousas, some scholars pointed out the possibility of a so-called "common place" ("koinos topos"), according to which the Avars could not know the art of siege unless by means of that treason (Pohl 1988, 88; Curta 2001, 97)[36]. On the contrary, regarding the testimony of Simocattes about the capture of Appiareia as credible, S. Vryonis concluded that the year 587 must be considered as the time when the Avars learnt the use of siege engines. Furthermore, as in his opinion this event took place in 587, he suggested that the first great siege of Thessalonica by the Avars and the Slavs must be dated to 597, since the Avars had no siege engines in 586 (Vryonis 1981, 384, n. 23, 387-389)[37].

Regardless whether Simocattes' testimony could be considered as a "common place" or not, the up to now approach of the issue has not taken another factor into consideration, which challenges the acquaintance of the art of siege by the Avars during the siege of Appiareia. This factor is the use of war engines by nomadic peoples during their conflicts with sedentary populations who lived in fortified cities. Taking this fact into account, we have to focus our attention to the interior of the Avar khaganate and to tribes who lived within it under the Avar rule in order to find out whether the knowledge of construction and use of siege engines by the Avars is related to the tribal composition of the Avar khaganate and the development of the art of siege by some of these tribes.

After the imposition of the Avar supremacy on the Middle Danube area in 568, the Avar khaganate was in reality a multi-ethnic confederation which included Slavs, Gepids, Bulgars, etc. The nomadic peoples (or tribes) of this "confederation" were subjugated to the Avars before the arrival of the latter in Central Europe, while their cultural elements influenced the material culture and the armament of the Avars (Kovrig 1955, 178-184; Bálint 1980-1981, 132, 136-137; Pohl 1988, 90; Szentpéteri 1994, 233, n. 18-20; Καρδαράς 2010, 51).

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[33] *When did the Avaro-Slavs acquire the poliorcetic technology necessary for military success against the fortified Byzantine cities?* (Vryonis 1981, 384). A similar question was also posed by P. E. Chevedden (2001, 75), regarding, however, only one specific stone-throwing engine.

[34] Although Simocattes (1887, II, 16, 101) names Bousas as a "soldier", Theophanes (1883, 258; 1997, 381) refers to him as "the city's engineer".

[35] Theophanes (1883, 259) mentions that Bousas constructed a battering ram. G. T. Dennis (1998, 103 ff.) and P. E. Chevedden (2001, 75), identify "helepolis" as stone-throwing. For other interpretations, see Chevedden (*ibidem*, 78 ff). On the fall of Appiareia and the episode of Bousas, see Simocattes (1887, II, 15.13-16, 101-103), Theophanes (1883, 258-259), Vryonis (1981, 388), Pohl (1988, 87-88, 173), Dennis (1998, 101) and Bóna (2000, 169). On the dating of the siege and Bousas, see Pohl (1988, 363, ch. 3. 7, n. 2 and 15). According to Procopius (1964, IV, 4.11, 148: Appiara), Justinian I had walled the city.

[36] On the "koinos topos" in Byzantine sources, see Zástěrová (1971, 8 ff) and Garzya (1976, 301-319).

[37] On the reconsideration of this view, see Kardaras (2005, 53-65).

During the victorious march of Khagan Bajan through the southern Russian steppes, Menander the Quardsman mentions that the Onogurs and the Hunnic tribes of Zaloi and Savirs were defeated by the Avars between 558 and 561/62. In this period, or shortly after that, the Kutrigurs were also subjugated. They, are mentioned in sources for last time in 568, when they attacked Dalmatia as a separate contingent of the Avar army (see Pohl 1988, 39, 60; Καρδαράς 2010, 50-51)[38]. The supremacy of the Avars over the Kutrigurs and the Utigurs is testified by the Avars themselves, as it arises from their demands to Justin II during the delegations of 568 and 569 (Pohl 1988, 61-63, 207; Καρδαράς 2010, 51-52, 59-60). The nomadic peoples who were subjugated to the Avars had attempted earlier to capture fortified cities using war engines, no matter whether they constructed these engines themselves or they used captives and deserters of their enemies for this purpose.

Going back to the testimony of sources on the use of war engines by the nomads during the 5th and 6th c., a conclusion can be drawn that many of them were familiar with the art of siege. In the description of Priscus on the siege of Naissus by the Huns in 442 it is reported that they used engines (beams mounted on wheels, rams and ladders), which helped the Huns approach and destroy the wall (Priscus 1983, 6.2, 230-232; Maenchen-Helfen 1978, 86). According to Jordanes, the Huns also used siege engines to capture Aquileia in 452[39]. In the description of Agathias on the siege of the Thracian fort of Cherronese by the Kutrigurs of Zavergan in 558/59, instead of the ladders, the use of "helepoleis" (siege engines) is mentioned[40]. On the other hand, despite the fact that Agathias' report offers a clear evidence of the spread of the art of siege among nomadic peoples, S. Vryonis considered the Kutrigurs as "temporary interlopers", adding that *the technology does not seem to have been passed on from them to the Avaro-Slavs* (Vryonis 1981, 387, n. 31). Of special attention is also the testimony of Procopius, which says that during the third Persian War (549-557) the Savirs Huns, allies of the Byzantines, were constructing three battering rams, covered by hides, in order to capture the city of Petra in 551, using techniques unknown both to the Byzantines and the Persians (Procopius, 1962-1963, VIII, 11. 29-32, 539-540).

Although we have no specific information on the use of siege engines by the Avars themselves before the siege of Appiareia, the outcome of their invasions to the Balkan provinces allows for such an assumption. As W. Pohl points out for the Avar operations in the autumn of 585, when the cities of Ratiareia, Bononia, Akys, Dorostolon, Zaldapa, Pannasa, Marcianoupolis and Tropaeum Traiani fell into their hands, *in no other case did the Avars capture so many fortifications in such short time* (Pohl 1988, 85; Καρδαράς 2010, 71). Taking into account that almost all these cities were walled by Justinian I (Procopius 1964, IV, 6-7, 128-129, 132 – Bononia, Novus, Acues, Ratiara, Saltupyrgus, Dorostolus, Sycidaba; IV, 11, 148-149 – Marcianopolis, Zaldapa) and, on the other hand, Simocattes' testimony that their fall to the Avars did not take place without resistance[41], the use of siege engines against these fortified cities seems plausible. Moreover, in the summer of 584 the Avars captured in short time very strong Byzantine fortresses in the northwestern Balkans such as Singedon, Viminacium and Augusta (Pohl 1988, 77-78; Καρδαράς 2010, 71), which were walled by Justinian I, too (Procopius 1964, IV, 5-6, 125-126, 130). According to our view, the art of siege did not pass to the Avars by a Byzantine captive during the siege of Appiareia and is more plausible that the Avars learnt the way to construct and use siege engines from nomadic peoples who were already subordinated to them and were living under the Avar rule in Central Europe.

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[38] Regardless of various assumptions, the submission of the Kutrigurs to the Avars took place some two decades before the fall of Appiareia in 586/87.

[39] […] *animos suorum rursus ad oppugnandam Aquileiam inflammat. qui machinis constructis omniaque genera tormentorum adhibita, nec mora et invadunt civitatem, spoliant, dividunt vastantque crudeliter, ita ut vix eius vestigia ut appareat reliquerunt* (Jordanes 1882, XLII 221-222, 114; Maenchen-Helfen 1978, 102, 155).

[40] *Meanwhile the other detachment of barbarians which was besieging the Cherronese attacked the wall repeatedly, bringing up ladders and siege-engines, but was beaten off each time by the resolute resistance of the Romans defending it* (Agathias 1967, E 21.1, 190; 1975, 157).

[41] […] *for he did not reduce these cities without sweat and trouble* […] (Simocattes 1887, I, 8.11, 55; 1986, 31).

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SZTUKA WOJENNA KOCZOWNIKÓW. PRZYPADEK AWARÓW

Streszczenie

Od czasów Herodota w źródłach pisanych odnotowywane są szczegółowe informacje dotyczące sposobów walki ludów stepowych, takie jak np. niespodziewany, szybki atak czy używanie konnych łuczników. Te „scytyjskie" elementy występują też w sztuce wojennej Awarów, o których również zachowało się wiele przekazów, mówiących zarówno o uzbrojeniu, jak i taktyce czy sztuce oblężniczej. W związku ze wzrostem potęgi wojskowej Kaganatu Awarskiego w końcu VI i początkach VII w. niektórzy badacze przyjmują funkcjonowanie tzw. „modelu awarskiego", którego głównym elementem był ciężkozbrojny jeździec uzbrojony w długą włócznię ze skórzanymi uchwytami pośrodku drzewca, hełm z tekstylnym czepcem wypełnionym wełną i zakończonym frędzlami, dosiadający opancerzonego konia, ubrany w odpowiedni strój do jazdy i używający namiotu w typie jurty. Określenie to zostało użyte w „Strategikonie" cesarza Maurycego, dla elementów, które Bizantyńczycy zapożyczyli od Awarów dla swej ciężkozbrojnej jazdy.

Wcześniej, w V i VI w., największy wpływ na uzbrojenie ciężkiej jazdy bizantyńskiej miały inne ludy stepowe, Hunowie i Kutigurowie, a także kawaleria

sasanidzka. Kontakty z nimi doprowadziły do przejęcia przez Bizantyńczyków pewnych elementów taktyki koczowników, ale analiza porównawcza wojennych sposobów prowadzenia wojny przez Awarów i Bizantyńczyków wykazuje, że obie strony miały inną organizację szyków.

Odrzucane jest natomiast, jako *topos*, świadectwo Teofilakta Symokatty, który twierdził, że Awarowie nauczyli się konstruować machiny oblężnicze dzięki – schwytanemu w trakcie oblężenia Appiarei na przełomie 586 i 587 r. – Bizantyńczykowi Bousasowi. Nabyli oni tę umiejętność dzięki wpływom podbitych plemion koczowniczych, będących pod zwierzchnictwem Kaganatu.

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