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Kaveh Farrokh
Langara College
e-mail: manuvera@aol.com
https://orcid.org/0000-0001-5732-2447

An Examination of Sassanian Siege Warfare (3rd to 7th centuries CE)

Summary: This article examines Sassanian siege warfare and technology in the domains of ballistae, 'scorpions', catapults, and battering rams. Sassanian siege warfare necessitated the use of protection/shielding for personnel (combat troops, engineers, laborers), mounds, mining, scaling of walls, as well as the digging of ditches and trenches. Archery barrages played a seminal role in support of siege operations. The *arteshtārān* (lit. warriors; mainly *paighan* infantry, archers, and *savārān* cavalry) and *pil-savār* (elephant warriors/riders) would undertake combat operations with manual labour provided by peasant recruits. Battle elephants could also be used in siege operations (for example at Nisibis, 350 CE). The environmental element of water was utilised (for example during the sieges of Nisibis, 337 or 338 CE and 350 CE). Incendiary factors could also be weaponised in siege operations. In summary, Sassanian siege warfare capabilities appear to have achieved proficiency levels equivalent to contemporary Roman armies.

Keywords: *spāh*, siege warfare, Sasanian empire, Rome empire, Roman siege warfare

The Parthians never developed siegecraft for the capture of enemy cities and fortresses,[1] in contrast to the Sassanians who were highly proficient in siege warfare.[2] It is generally agreed that Sassanian siege technology was largely borrowed from the Romans,[3] an academic perspective shared with mainstream Iranian military

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1 Tacitus 1876, XV, 4; Justin 1853, XXXXI, 2.7.
2 Maurice 1984, XI.1; see also analyses by: Lukonin V.G. 1993 (1372), 94 and Pazoki N. 1995 (1374), 42–55.
3 Diakonov I.M. 1967 (1346), 424.

historians.[4] Nevertheless, the Romans were apparently caught by surprise when Shapur I successfully besieged Dura-Europos in c. 256 CE. Evidence for the Sassanian siegecraft at Dura-Europos is provided by the discovery of wooden and iron-head projectiles that would have been fired by powerful ballistae, as well as mining and counter-mining operations.[5] It is not unlikely that Shapur's forces would have also used other heavy equipment such as siege towers. The Sassanians not only utilised captured Roman equipment but also succeeded in indigenously manufacturing their own siege machinery. Information on Sassanian-built siege machinery is available in the *Ayin-Nameh*[6] with portions of this translated from Middle Persian to Arabic by Ibn Qutayba Dinawari (828–885 CE) after the fall of the Sassanians as well as Ammianus Marcellinus[7] and Procopius[8] from the Classical era written at the time of the Sassanians. Sassanian siege technology had progressed so significantly by the late 3rd and 4th centuries CE, that according to Oates and Oates, the Romans had been forced to construct: '[...] more elaborate systems of fortification [...] [Roman – K.F.] fortress cities began to play a more dominant role in frontier strategy.'[9]

The sophistication of Sassanian siege warfare against the Romans by the 4th century CE was to be seen in their sieges against Roman-held cities such as Nisibis (350 CE),[10] Amida (359 CE)[11] and Singara (360 CE).[12] Sassanian siege technology may be categorised into the following categories: (1) ballistae, (2) 'scorpions,' (3) catapults, (4) mobile towers, and (5) battering rams. The Sassanians also utilised a sophisticated system of mounds, mining, and scaling of walls, as well as the construction of trenches and ditches for capturing cities and fortresses, with field troops provided with protection shielding during siege operations. The *arteshtārān* (lit. warriors; mainly composed of *paighan* infantry, archers, and *savārān* cavalry) and *pil-savār* (also: *pil-bān*; elephant warrior/ riders) corps were tactically integrated into the *spāh*'s siege operations, with their operations coordinated in tandem with the functions of siege artillery and engineering works (e.g. tunnelling, mounds, etc.). The Sassanians had also developed methods of utilising waterways and incendiary weapons for prosecuting their sieges. Non-combat methods such as espionage, subterfuge, and the dispatch of envoys or messengers were also utilised in the context of siege warfare. This article examines the various

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4 See for example: Jalali I. 2004 (1383), 83.

5 Farrokh K. 2017, 256–257.

6 As cited by Inostrancev C.A. 1926, 16.

7 Ammianus Marcellinus 1986, XIX, XX, XXIII, XXIV.

8 Procopius of Caesarea 1914, I.17, II.17, 26, 27.

9 Oates D., Oates J. 1959, 208.

10 Farrokh K. 2017, 259–260.

11 Farrokh K. et al. 2018, 103–114.

12 Farrokh K. 2017, 261–262.

domains of Sassanian siege warfare with respect to the array of Sassanian siege machinery, engineering works, the role of combat units, protection systems, and the use of water and incendiary systems, as well as non-combat strategies.

Ballistae

A key siege engine utilised by the *spāh* was the *kashkančir* (Middle Persian: ballistic weapons) which could vary in size and power. The *kashkančir* would be used to launch ballistae which would be of the 'arrow' or 'missile' type with shafts of wood construction.[13] *Kashkančir*-launched ballistae were directed against enemy walls, gates, and towers, as well as besieged enemy troops.[14] There was also another ballistic weapon known as the *čarx* which was essentially a very large bow (or crossbow?) used for launching very large arrows (or missiles) the size of big spears into enemy cities and fortresses, and which could also be used on the battlefield against enemy troops.[15] The *čarx* and its effects appear to be reported by Ammianus Marcellinus in his account of Shapur II's siege of Amida in 359 CE:

> They [Shapur II's besieging army – K.F.] shot out heavy wooden javelins with great rapidity, sometimes transfixing two of our men at one blow, so that many of them fell to the ground severely wounded, and some jumped down in haste from fear of the creaking engines, and being terribly lacerated by the fall, died.[16]

Although Ammianus describes the power and effectiveness of the above weapon, he unfortunately provides no details as to the actual sizes and weights of the ballistae and how these were launched. In general, classical sources fail to provide any statistical data on the engineering, capabilities, and operations of Sassanian siege weaponry. As per the *Lexicon of Arms and Armor from Iran,* the string of the weapon was drawn by means of a wheel operated by two personnel.[17] Iranian military historiography also makes note of a multi-arrow weapon, which consisted of very large bows of metal construction installed upon a carriage-type vehicle.[18] In front of the bows was a metal sheet with holes for arrows. This weapon was designed for all of the arrows to be fired simultaneously. In a sense, this design is similar to the future design of the Renaissance-era 12-barrelled gun of Leonardo Da Vinci (1452–1519). What remains unclear is if this multi-arrow weapon was operated against the Romans and,

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13 Jalali I. 2004 (1383), 51, 85.

14 Matufi A. 1999 (1378), 221.

15 Khorasani M.M. 2010, 137.

16 Ammianus Marcellinus 1986, XIX, V, 6.

17 Khorasani M.M. 2010, 137.

18 Matufi A. 1999 (1378), 444.

if so, when such a system was developed. Such systems were tactically well suited against the large numbers of invaders from Central Asia who would appear in force from the 4th century CE, as it could be used to fire into the ranks of large numbers of Central Asian horse archers and lancers. However, this multi-arrow weapon could also support the barrages of other siege weapons during sieges against the Romans. Notably, Iranian engineers continued to develop ballistae after the fall of the Sassanian empire to the Arab Muslims in the 7th century CE.[19]

Catapults

The *Shahname* epic, composed approximately three centuries (late 10th to early 11th century) after the fall of the Sassanian empire to the Arab Muslim invasions, describes (in new Persian terminology) two types of catapults: the *aradeh* and the *manjeniq*.[20] The *Lexicon of Arms and Armor from Iran* describes the *aradeh* as: 'a small catapult that throws stones and is smaller than a *manjeniq*.'[21]

The *Shahname* describes the *aradeh* as being placed over walls,[22] raising the possibility that Sassanian engineers constructed some type of wall, barrier, or platform to station these weapons upon, to then fire their ordinance against the enemy during a siege. The New Persian and Arabic term *aghrab*[23] (lit. scorpion) appears to be about Iranian *aradeh*-type weapons. These are described as built-in various power capabilities and sizes, for launching stones (most likely shaped like cannonballs) against enemy gates, walls, towers, and defending personnel during sieges.[24] Despite their names having the same meaning, the *aghrab* was a different weapon than the Roman *scorpio. The scorpio* was a ballistic system for launching missiles, more suited for targeted sniping than for the heavy destruction of enemy fortifications during sieges. Nevertheless, the militarily ingenious Romans were certainly capable of making applications of their *scorpio* for sieges as well. Further complexity is provided by Ammianus Marcellinus himself, who describes the Roman *scorpio* of the 4th century CE as being virtually the same weapon system as its Sassanian counterpart: '[operating – K.F.] with their iron slings, hurling huge round stones.'[25]

In this regard, the Sassanian weapon appears to have been borrowed from Roman technology; however, what Marcellinus describes was most likely a different weapon

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19 Bradbury J. 1998, 255–256; Matufi A. 1999 (1378), 221.

20 Matufi A. 1999 (1378), 215.

21 Khorasani M.M. 2010, 101.

22 Matufi A. 1999 (1378), 215.

23 Jalali I. 2004 (1383), 51.

24 Jalali I. 2004 (1383), 51.

25 Ammianus Marcellinus 1986, XIX, VII, 7.

than the Roman *scorpio* missile launcher. The *manjeniq* is defined by the *Lexicon of Arms and Armor from Iran* as a: '[…] catapult; instead of shooting an arrow, these machines threw giant stones by flinging them using a wheel.'[26]

The ordinance propulsion systems of the *manjeniq* and *aradeh* were different. As noted above, the *manjeniq* used a wheel (like the *čarx*) and the *aradeh* used slings (somewhat like the *aghrab)*. It would appear that the *manjeniq* and *aradeh* were used in combination[27] for launching rocks of various sizes for different objectives during a siege. One possibility is that the *manjeniq* was used for launching heavier rocks against enemy gates, towers, walls, and other structures, and the *aradeh* was used for propelling smaller rocks against enemy troops.[28]

Battering Rams

The Sassanians made remarkable use of battering rams in their sieges of Roman-held cities and fortresses.[29] Sassanian battering rams were built in various sizes, possibly calibrated concerning the hardiness of different structures (e.g., walls, gates, towers, etc.) encountered during sieges.[30] The effectiveness of Sassanian battering rams can be seen, for example, during the siege of Bezabde in 360 CE. Having unsuccessfully attempted to shatter Bezabde's walls with their standard rams, the Sassanians are described by Ammianus Marcellinus as having deployed their on-site 'superweapon':

> One battering-ram was higher than the rest […] it led the way in the attacks on the wall with mighty blows, and with its terrible point, it dug into the joints of the stones till it overthrew the tower. The tower fell with a mighty crash […] then, a safer entrance having been thus found, the multitude of the enemy poured in with their arms.[31]

Ammianus Marcellinus' description of the battering ram's 'terrible point' would indicate that the Sassanians had achieved a high level of metallurgical engineering. Interestingly Ammianus Marcellinus also reports of an older Sassanian-built battering ram left by the Sassanians at Antioch which is described as having had a '[…] projecting iron head, which in shape was like that of a ram.'[32] While this does not imply that all Sassanian battering rams were of this particular design, the ram's head would have

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26 Khorasani M.M. 2010, 225.

27 As cited by Matufi A. 1999 (1378), 215.

28 Farrokh K. 2017, 247.

29 Yildirim E. 2012, 462.

30 Farrokh K. et al. 2018, 54.

31 Ammianus Marcellinus 1986, XX, VII, 13.

32 Ammianus Marcellinus 1986, XX, XI, 15.

had to be designed in a manner consistent with a projectile or missile-head type design in order to achieve more effective penetration against enemy structures.[33] Notably, the *Ayin-Nameh* manual instructs the users of the Sassanian battering ram to target their blows at the weakest identified areas of an enemy wall, gate, etc.[34]

In the later Sassanian era, Procopius describes Sassanian 'battering towers'[35] not unlike those of the ancient Assyrians. Sassanian archers aboard the vehicle could direct their fire against besiegers seeking to disable the ram by means such as pouring hot substances, firing flammable missiles at the ram and/or vehicle, etc. Roman defenders, however, would prove especially resilient, as evidenced in reports of Roman defenders having broken off the heads of rams by dropping timbers during the Sassanian siege of Amida in 502 CE.[36]

Mobile Towers

The tradition of mobile towers for use in siege warfare dates to very ancient times in the Near East, long before the Sassanians. Mobile towers (with battering rams as well as ports for archers) were used by the Assyrians as early as the late 9th century BCE (Fig. 1, 2).[37] A testimony to the high level of Assyrian military engineering, the top level of Assyrian mobile tower-battering rams also had a gate that could be lowered onto the enemy's parapet.[38] This would allow combat troops in the tower to cross it and engage defending enemy fighters ensconced in the fortress walls.

Like the ancient Assyrians before them, Sassanian engineers constructed highly effective mobile towers.[39] Specifically constructed to match the height of the enemy's defensive walls, these platforms would greatly enhance the efficacy of archers firing from ports within the mobile tower against the enemy sheltering in their compounds.[40] While Sassanian mobile towers were reportedly constructed of metal,[41] it is unknown whether the metal acted as armour protection for a wooden base or chassis.

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33 Farrokh K. 2017, 250.

34 As cited by Inostracev C.A. 1926, 16.

35 Procopius of Caesarea 1914, I, 7.

36 Procopius of Caesarea 1914, I, 7.

37 See, for example, the late Assyrian relief (dated to c. 865–860 BCE) depicting a mobile tower with archers onboard and a battering ram assaulting an enemy city during a siege (Source: British Museum, Northwest Palace of Nimrud, Room B, Panel 18. Museum no. 124536). Another example is seen in the Lachish reliefs depicting King Sennacherib's (r. 705–681 BCE) siege of the Judean city of Lachish (c. 701 BCE) (British Museum, Lachish Reliefs, Object 21 (Nineveh. South-West Palace. Room XXXVI, panel 7. Museum no. 124906).

38 Ransford S. 1975, 16, 19.

39 Jalali I. 2004 (1383), 84.

40 Imam-Shushtari S.M.A. 1971 (1350), 87.

41 Ammianus Marcellinus 1986, XIX, VII, 2; XX, V, 1.

Fig. 1.
Tower with archers onboard and a battering ram assaulting an enemy city during a siege. British Museum, Northwest Palace of Nimrud, Room B, Panel 18. Museum no. 124536 (Source: https://pl.wikipedia.org/wiki/Armia_asyryjska#/media/Plik:Assyrian_Attack_on_a_Town.jpg)

Fig. 2.
Siege of the Judean city of Lachish, c. 701 BCE. British Museum. Lachish Reliefs. Object 21. Nineveh, South-West Palace, Room XXXVI, panel 7. Museum no. 124906 (Source: https://fr.wikipedia.org/wiki/Siège_de_Lakish#/media/Fichier:Capture_of_Lachish_-_ramps_and_battle_engines.jpg)

The use of metal for the construction of the entire machine (frame and chassis) was most likely not the case given the excess weight this would impose for transportation as well as propulsion power required during sieges. Metal armour applied over a wooden chassis would certainly have enhanced the protection of personnel within the vehicle being subjected to enemy fire. Sassanian battle towers could also be placed next to mounds in order to enhance the latter's protection against the countermeasures of the besieged defenders.[42] Much like the Romans, the Sassanians also displayed military ingenuity with their siege engines. For example, they installed ballistae on their towers to direct the fire of their missiles from an elevated position towards enemy troops operating from a lower position.[43] Nevertheless, despite their formidable capabilities, Sassanian mobile towers were vulnerable to Roman counter-siege technology. This was demonstrated at Amida (359 CE) when the city's Roman defenders destroyed Sassanian mobile towers with heavy stones propelled by *scorpiones*.[44]

Reconnaissance and Siege Warfare

As Sassanian siege technology and tactics continued to evolve during the Sassanian era, reconnaissance strategies were also utilised and adapted to enhance military performance. More specifically, before engaging in the siege of a city or fortress, the Sassanians would engage in reconnaissance to assess the strengths and weaknesses of the enemy's military architecture. This helped to calibrate and maximise the effectiveness of siege machinery such as battering rams and ballistic platforms against enemy gates, walls, etc.[45] Reconnaissance could also reveal information on the enemy's blind spots such as weakly defended entranceways in their fortifications which could be infiltrated without detection by Sassanian warriors and siege engineers.[46]

The *Arteshtārān* in Siege Warfare

The Sassanian military doctrine with the *arteshtārān* during sieges was based on a three-phase strategy:[47] (1) encircling the enemy's city or fortress, (2) operationalising siege engines (catapults, battering rams, ballistae, etc.) against the enemy city or fortress, and (3) launching assaults by the *paighan* and *savārān*. The first and third phases, however, could also involve the elephant corps as discussed further below. The first phase (encirclement) bore two objectives: (1) the prevention of any means

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42 Jalali I. 2004 (1383), 83.

43 Ammianus Marcellinus 1986, XIX, VII, 5.

44 Ammianus Marcellinus 1986, XIX, VII, 7.

45 Inostrancev C.A. 1926, 16.

46 Pazoki N. 1995 (1374), 50.

47 Lukonin V.G. 1993 (1372), 94.

for the enemy to escape and (2) the prevention of supplies and/or relief forces from entering the compounds of the encircled enemy. With the completion of encirclement, the second phase would be implemented with the activation of siege engines, notably catapults, scorpions, ballistae, and battering rams. Simultaneously the local commanders could engage in the possible construction of engineering works (e.g., mounds, tunnelling, etc.) as well as the use of incendiary weapons (discussed further below). The objective would be to wreak destruction against the outer structures of the enemy's fortress or city, notably gates, walls, towers, etc., as well as to cause havoc in the interior compounds such as storage facilities, living quarters, etc. The third phase would be characterised by the *paighan* advancing with their large shields towards the enemy's gates and walls. This operation, especially in its initial phases, was also meant to provide additional intelligence for the field reconnaissance on the state of the enemy's fortifications conducted prior to the onset of operations. The objective was to again gather as much information as possible on potential weaknesses in the enemy's military architecture, notably any areas that could be exploited for collapse and/or ingress into the interior compounds. Once the *paighan* reached the enemy's walls, ladders would be leaned on these for scaling by support personnel (or other seconded *paighan* troops). While the Sassanians made prodigious use of ladders to scale walls during sieges,[48] it is less clear as to what the possible dimensions and types of ladders the Sassanians used with respect to the various types of fortification walls they would have encountered during sieges.[49] Once the ladders were secured upon the enemy's walls, the *arteshtārān* would then attempt to scale them to access the enemy's parapets to engage the besieged defenders. This was an exceptionally challenging and hazardous task given the exemplary close quarter combat skills of Roman troops as well as their array of techniques for repelling attackers with implements such as naphtha as well as archery. If the parapets could be infiltrated and secured, this would allow the *paighan* to establish assaults further into the interior of the enemy's compounds.

If the walls of the fortress or city could be shattered by the siege engines, the *arteshtārān* would certainly attack through this exposed sector to then fan out into the interior of the enemy compounds. Protection for the advance of the *paighan* (and dismounted *savārān*) corps toward the enemy's walls was entrusted to the foot archers responsible for delivering massive barrages to neutralise the besieged enemy's archers. The assaults of the *savārān* were also dependent on the support of the barrages of the archers.[50] The efficacy of the archers was enhanced when firing from mobile towers as well as mounds, being able to direct more accurate fire at closer

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48 Ammianus Marcellinus 1986, XIX, 5.6.

49 Farrokh K. 2017, 252.

50 Lukonin V.G. 1993 (1372), 94.

ranges from more elevated platforms. Archers could also be utilised in a 'commando fashion' as seen during the siege of Amida (359 CE) when a select team of seventy archers from the royal guard infiltrated (with the assistance of a Roman deserter) the city's southern walls.[51] These archers then fired until they ran out of ordnance, resulting in them being cut down by the Roman defenders.

Fig. 3. Cavalry forces engaged in the siege of the fortress. *Anikova Plate*. Russia. (The State Hermitage Museum, St. Petersburg. S-46. Photo: Wikipedia.org)

It is possible that the Sassanians coordinated the operations of their siege machinery with the assaults of their *arteshtārān* to maximise their chances of breaking through into the enemy's fortresses and cities. In this respect, cavalry played a major role in the *spāh*'s siege operations. An indication of this is provided by a Sassanian-style engraved *Soghdian* metalwork plate (dated from the 9th to the 10th century CE) depicting

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51 Ammianus Marcellinus 1986, XIX, 5.5–6.

cavalry forces engaged in the siege of an enemy fortress (Fig. 3).[52] Ammianus Marcellinus reports of the deployment of the *arteshtārān* and their allies at Amida (359 CE):

> [...] gleaming bands of horsemen filled all places which the eye could reach, and the ranks, advancing at a quiet pace, took the places assigned them by lot. The Persians beset the whole circuit of the walls. The part which faced the east fell to the lot of the Chionitae, the place where the youth so fatal to us was slain, whose shade was destined to be appeased by the destruction of the city. The Gelani [Gilani – K.F.] were assigned to the southern side, the Albani guarded the quarter to the north, and to the western gate were opposed the Segestani [Sakaistani – K.F.], the bravest warriors of all.[53]

King Shapur II himself led cavalry assaults against the enemy's gates.[54] He was most likely either positioned with his elite royal cavalry guard, possibly the *pushtighbān* (New Persian: *pushtibān)* to the north (in proximity to the Caucasian Albanian cavalry).[55] It is also possible that the king was positioned with the elite *savārān* corps to the south of the city, in proximity to the Gilan *paighan* corps.[56]

The war elephant corps, known as the *pil-savār* or *pil-bān* corps, had the advantage of having an elevated platform for archery in addition to the elephants' natural tough hides. During the siege of Nisibis in 350 CE, Sassanian war elephants are described as being armoured,[57] supporting attacks of the *savārān* and Sassanian combat infantry.[58] During that siege, the vulnerabilities of war elephants soon became apparent – the counterstrikes' of Roman missiles caused a number of the wounded beasts to sink into the muddy terrain and caused others to panic, stampeding the Sassanian ranks, which resulted in very heavy casualties.[59] The disaster at Nisibis (350 CE) led the *spāh* to implement the precautionary measure of having a dagger fastened to each elephant driver's right hand: the driver (or mahout) would slay the beast by severing its vertebrae in case it went out of control during siege operations.[60] Shapur II's siege of Amida in 359 CE describes lines of Sassanian war elephants 'loaded with armed men' facing the city's western gates[61] making them situated in proximity to the *Sakaistan* contingent.

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52 Hermitage Museum, St. Petersburg, S–46.

53 Ammianus Marcellinus 1986, XIX, 2.2–3.

54 Ammianus Marcellinus 1986, XIX, 1.5–6.

55 Farrokh K. et al. 2018, fig. 10.

56 Farrokh K. et al. 2018, 106.

57 CH 1832, 537, line 13.

58 Julian 1932a, 2.64b–2.65c.

59 Charles M.B. 2007, 315–316.

60 Ammianus Marcellinus 1986, XXV, 1.15.

61 Ammianus Marcellinus 1986, XIX, 2.3.

Shielding of Personnel during Siege Operations

The Sassanians made use of wicker screens which may have been based on the standard *paighan* field infantry wicker shield to protect their troops during siege operations.[62] Reportedly up to five rows of such shields could be placed around a city or fortress.[63] A key question is whether the Sassanians adopted the Roman testudo formation, as the Sassanians were quick to adopt their enemies' effective military methods and technologies. Had the testudo formation been adopted, a besieging Sassanian *paighan* infantry unit would have (in Roman fashion) locked their shields for mutual protection (front, sides, above their heads, and rear) as they deployed towards the enemy's walls and gates. Sassanian infantry engaged in sieges also used what has been described by Raspopova as: 'a siege shield made of slats.'[64]

The above type of shield was used for advancing closer to the enemy's gates or walls. The purpose of course could be for various objectives such as scaling the enemy's walls, or escorting military engineers tasked with digging mines or implementing other types of measures against the enemy's fortifications. Sandbags and sand-filled buckets were also useful for erecting shielding and even protective walls for besieging troops, engineers, and other support personnel.[65] Sandbag walls were also highly useful for masking (at least in part) the activities of engineers engaged in digging tunnels or mines into the enemy's inner compounds. Sandbags were highly effective in filling segments of water-filled moats protecting the enemy's fort or city.[66] This activity was dangerous as besieging troops could easily direct their archery fire against Sassanian personnel attempting to fill the moats with sandbags.

Another interesting category of shielding equipment involved mobile vehicles. Combat troops (*paighan*, *savārān*, etc.) moving toward the enemy's fortification gates and/or walls, as well as personnel operating mobile siege machinery such as battering rams, were protected by 'mobile cabs.'[67] It is not clear how these vehicles would be propelled. Most likely there were personnel dedicated to pushing the vehicle from the inside compartment. If pack animals were used, it is unclear how these would have been used to propel the vehicle as harnessing them in standard carriage-horse fashion would have exposed them to the enemy's archers.

While lack of information as to the actual dimensions and construction of these mobile vehicles poses challenges in their accurate reconstruction, it would be safe to assume that at the very least they were meant to protect against enemy archery.

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62 Ammianus Marcellinus 1986, XX, VII, 6.

63 Ammianus Marcellinus 1986, XX, VII, 2.2.

64 Raspopova V.I. 2006, 84.

65 Imam-Shushtari S.M.A. 1971 (1350), 87.

66 Imam-Shushtari S.M.A. 1971 (1350), 87.

67 Inostrancev C.A. 1926, 50.

Questions remain, however, as to how robust they would have been, especially against counter-siege methods such as the pouring down of heated liquids by enemy defenders as well as the latter's use of heavy stones and flammable devices. Islamic-era sources refer to two different Sassanian mobile vehicles, *dabbabat* and *darraga*.[68] The *dabbabat* is explained as a more powerful vehicle than the *darraga*, and made of wood construction with hide used for its covering. The *dabbabat* was the standard mobile vehicle for protecting besieging combat troops as well as mobile siege equipment such as battering rams. Mobile vehicles in general could of course be used to bring combat engineers towards the enemy's walls or gates.

Mounds

In addition to its use of siege engines, the *spāh* (like the Romans) utilised the building of mounds (or artificial hills) near the enemy's walls, engineering of mines, and scaling or climbing of walls. Mounds provided Sassanian siege armies major advantages in archery and the landing of troops into the enemy's fortress or city.[69] With respect to archery, mounds built at a higher elevation than the walls/parapets of the defenders would allow archers (like their counterparts in mobile towers) to fire their missiles with more accuracy and at closer distances against besieged personnel. The second advantage of mounds was their utility in their use as platforms for fighters to invade the enemy's walls or parapet positions. Mounds, however, were vulnerable to Roman countermeasures. An example of this occurred during Edessa's siege in 543 CE by Khosrow I when the city's defenders destroyed a large mound by fire that had been built by besieging Sassanian forces.[70]

Mining and Burrowing

The *spāh* was also highly effective at burrowing and tunnelling in its sieges.[71] This often involved digging underneath the enemy's walls to create a tunnel for Sassanian troops to break into the enemy's fortress or city.[72] In practice, the Sassanians would attempt to dig several tunnels to provide as many entrance routes into the enemy's fortress as possible. This would allow Sassanian warriors to emerge unexpectedly from several directions within the fortress to then overwhelm the enemy. Experts themselves at siege warfare, the Romans were often able to engage in countermeasures against

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68 Jahiz (-al) O. 1950 (1329); Inostrancev C.A. 1926, 50–52; Tafazzoli A. 1993, 194–195; Matufi A. 1999 (1378), 221; and Khorasani M.M. 2010, 101, 225.

69 Moghtader Gh. 1968 (1347), 35.

70 Greatrex G., Lieu S.N.C. 2002, 113.

71 Inostracev C.A. 1926, 16.

72 Jalali I. 2004 (1383), 83.

the Sassanians, such as rushing troops to block opened tunnels or even collapsing the tunnels. A key example of such a scenario occurred at Khosrow I's (r. 531–579 CE) siege of Dara in 540 CE when the Romans were able to block a Sassanian mining operation that had penetrated into the eastern side of the city.[73] Dara fell to Khosrow I's second siege in 572 CE as the Romano-Byzantines failed to repel Sassanian siege operations. More specifically, the Sassanians were able to burrow through a nearby hill in a successful endeavour to cut off the city's water supply.[74] It is ironic that the Sassanians also used Roman siege engines seized earlier at Nisibis to capture Dara in 572 CE.[75] The commander of the operation to capture Dara in 572 CE was Bahrām Čōbīn (Chobin), whose victory resulted in his elevation to the post of *ādurbādagān-spāhbed*[76] facing the empire's north and northwest (*Ādurbādagān*, Media Atropatene, corresponding with the historical Azerbaijan in Iran's northwest).[77] The Romano-Byzantine Emperor Justin II (r. 565–578 CE) reputedly went insane due to the shock of the news of Dara's fall to the Sassanians.[78]

Ditches and Trenches

Sassanian siege works often made very efficient use of ditches and trenches. One highly effective tactic was to dig a trench around the enemy fortress and then fill it with wood sprayed with incendiary materials.[79] The wood in the trench would then be set on fire, surrounding the enemy fortress in flames. There were four overall advantages afforded by flaming trenches:[80] (1) as fires rage, siege artillery (ballistae and catapults) would unleash their barrages of heavy missiles and large stones, (2) flames could provide excellent cover for Sassanian engineers working to dig tunnels and mines under the enemy's fortifications, providing an ingress into the enemy's fortress, (3) the fires around the fortress would make it difficult for the besieged enemy to launch counterattacks, and (4) the flames could assist in undermining the morale of the besieged enemy. Once a section of the fortifications had been breached, Sassanian engineers would put out that section of the fire in front of that breach. Then the heavy infantry and *savārān* would be massed to push through the breach and engage the enemy inside the fortress.

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73 Greatrex G., Lieu S.N.C. 2002, 106. Procopius notes that the Sassanians dug from one of their trenches at a much deeper level, which is why the Romano-Byzantine defenders failed to notice this at first (Procopius of Caesarea 1914, II, 13).

74 Whitby M. 2013, 446.

75 Howard-Johnston J. 2010, 54.

76 Gyselen has observed with respect to this post that the term abāxtar (north) was in general not used due to its perceived adverse implications, as the north was believed to be the domain of demonic entities (Gyselen R. 2005).

77 Shahbazi A.Sh. 1988, 514–522.

78 Whittow M. 1996, 86.

79 Saket S., Yahaqhi M.J. 2010 (1389), 26.

80 Farrokh K. et al. 2018, 58.

Sassanian ditches could be especially dangerous, as these were often filled with lethal iron traps.[81] This of course was highly effective at preventing besieged enemy troops from trying to launch surprise attacks against the Sassanian forces outside of the city or fortress. By the same token, Sassanian negligence in laying traps would be exploited by the Romans. A stark example of this occurred during Shapur II's siege of Amida in 359 CE, when a Gallic cavalry corps in Roman service launched a deadly raid outside of the city against the Sassanian camps.[82] Ditches or trenches surrounding a city or fortress could also be filled with water depending on tactics deemed necessary by local Sassanian commanders. Water was in fact used as a weapon of war during sieges as discussed in the following section.

Weaponisation of Water

The use of water as a weapon of war may be traced as far back as Achaemenid times.[83] The first recorded instance of the Sassanians' use of water as a military weapon is a reference to Shapur II's (r. 309–379 CE) first siege of the Roman-held city of Nisibis (Nusaybin, in modern-day Mardin province, Turkey) in 337 or 338 CE. In this engagement, Sassanian engineers harnessed the power of the Mygdonius River (modern-day Jaghjagh River, a tributary of the Khabur River in Syria and Turkey) with the construction of dykes or dams. Having then massed sufficient levels of water, the dykes would be opened in order to have this propelled against the fortification walls of Nisibis.[84] Sassanian military hydro-engineering is described in some detail by Theodoret:

> Shapur stopped up the course of the river which flowed past the city, and when as vast an amount as possible of the accumulating water had piled up behind the dam he [Shapur II] released it all at once against the walls, using it like a **tremendously powerful battering-ram**. [emphasis – K.F.] The wall could not withstand the force of the water, and indeed, badly shaken by the flood, the whole stretch of that side of the city collapsed.[85]

Sassanian engineers applied two physics principles: they harnessed the potential energy (PE) of the stored water and then released the power of that water (kinetic energy, KE) towards a specified target.[86] This principle of course was known in ancient times for agricultural purposes, such as the use of flowing water for wheel mills to

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81 Inostracev C.A. 1926, 50.

82 Ammianus Marcellinus 1986, XIX, VI, 4–5, 7–9, 11.

83 Pazoki N. 1995 (1374), 44.

84 Pazoki N. 1995 (1374), 44–47.

85 Theodoret 1977–1979, I, 11–12.

86 Farrokh K. 2023.

grind wheat into flour. Dodgeon and Lieu have observed that the water at Nisibis must have attained an 'enormous height' in order for it to achieve the necessary pressure (or potential energy) before its discharge (conversion to kinetic energy) as a battering ram.[87] The understanding of the mathematical relationships between potential and kinetic water pressure by also calculating velocity, elevation, ground friction, or resistance against the released water, etc., would indicate that, like their Roman counterparts, the Sassanian engineering corps were well versed in geological and mechanical physics principles. However, as Theodoret's descriptions lack statistical data (e.g., the height of the dam, amount of water stored, etc.), questions may be raised as to whether such operations would have been possible during the 4th century CE. In this regard, military operations weaponising waterways are reported five centuries prior to the Sassanian era in relation to Chinese emperor Qin Shi Huang's (259–210 BCE) campaigns in Northern China.[88] In addition, the Sassanians are reported as having again used the waters of the Mygdonius 12–13 years later in c. 350 CE as a military weapon in another siege of Nisibis. In this operation, the waters of the Mygdonius were channelled into a very large ditch that had already been dug around the city. This resulted in Nisibis becoming surrounded by a large water ditch, which certainly prevented the defenders from sending out raiding parties to attack the besieging Sassanian forces. The actual intent of the Sassanian *spāh* was to again utilise the water of the Mygdonius, albeit in an unexpected fashion, against Nisibis. As described by Julian:'[…] he [Shapur II – K.F.] besieged it by bringing up **ships with engines on board** [emphasis – K.F]. This was not the work of a day, but I believe of almost four months.'[89]

In this case, an environmental element – the waters of the Mygdonius – was again being used as a weapon of war in support of battleships equipped with siege artillery such as ballistae, catapults, and scorpions that would be used to attack the city. It is not clear how the ships had been transported by the Sassanians to the site. One possibility is that these had been brought forward in disassembled kits for ease of transport and were then reassembled and launched on the artificial water-ditch at Nisibis. The siege batteries themselves may also have been brought forward as components or kits and were then mounted upon the ships' decks. The ships themselves were probably not altogether large, as when the siege got underway Nisibis' defenders are reported by Julian as: 'from the wall they hauled up many of the ships.'[90]

From the above descriptions, it may be surmised that these vessels were most likely not altogether large, but given the lack of details as to the dimensions of the

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87 Dodgeon M.H., Lieu S.N.C. 1991, 384, footnote 6.

88 Evidence has surfaced of Iranian-Chinese contacts dated to the reign of Emperor Qin Shi Huang (see: Watts J. 2006). This raises the possibility that Iranian engineering may have known of Chinese hydro-engineering technology before the Sassanian era with the spāh then having weaponised this for its military campaigns.

89 Julian 1932b, 11–13.30.

90 Julian1932b, 11–13.30.

ships, it is not possible to arrive at more specific descriptions as to their sizes. Another possible source of information would be data with respect to the depth and width of the channels that had been dug around the city, as this would allow for estimates as to the sizes of the ships and their siege artillery; however, the available classical sources do not provide information in this domain either. What is clear is that the Roman defenders of Nisibis inflicted heavy casualties on the Sassanians' 'siege battleships.' The Romans' use of 'fire darts' and large stones hurled using their own defending catapults was especially effective.

Incendiary Weapons

The *spāh* often deployed incendiary weapons both in sieges and when besieged. An example of the latter is the case of besieged Sassanian troops at Petra (550–551 CE) reportedly having thrown pots of naphtha, pitch, and sulfur against the siege engines of Romano-Byzantine forces.[91] The Sassanian delivery of incendiary weapons during sieges may be broadly classified into two categories: (1) the use of ballistae for the delivery of flammable ordinance (e.g., naphtha) against the enemy city or stronghold's outer structures (gates, walls, towers) and (2) the use of archery for the delivery of incendiary arrows into the interior of the enemy's city or stronghold. The primary purpose of ballistae that delivered incendiary ordinance was for the flammable substances to degrade significantly the outer structures of the enemy's stronghold.[92] Ideally, the intensity of high-temperature fires could even result in the structural collapse of the enemy's walls, towers, gates, etc. In practice, the enemy's structures would be sufficiently degraded for the Sassanians to collapse them with their other siege weapons, such as ballistae, battering rams, etc.

Foot archers (on the ground or in mobile towers) could deliver arrows with flammable materials (e.g., naphtha). These incendiary arrows would be fired from composite bows at half-draw[93] to avoid 'flame out.' The primary role of archers firing incendiary arrows was to deliver these into the interior of the enemy city or fortress towards storage areas (e.g., food, fuel, supplies, etc.) and houses with the intent to set their roofs of straw or wood on fire.[94] A successful incendiary assault would force at least a portion of the defenders to put out the fires breaking out in their compounds, thus undermining and distracting them from their combat against the Sassanians.

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91 Elton H. 2018, 326.

92 Jalali I. 2004 (1383), 83.

93 Miller R., McEwan E., Bergman C. 1986, 191.

94 Farrokh K. 2017, 61.

The Sassanian general Bahrām Čōbīn reportedly deployed engines capable of delivering incendiary ordinance during his campaigns against the Turco-Hephthalite invasion of the Sassanian Empire's northeast marches in 588 CE.[95] These appear to have been new weapon systems – ballistae propelling large arrows or 'missiles' (possibly a large-bow or *čarx* system?) fitted with naphtha-filled projectiles.[96] There may have been smaller versions of this weapon, but the paucity of data precludes any definitive conclusions. One possible indication of such a weapon are reports of Bahrām Čōbīn's archers having used *napht-andazan* (lit. naphtha hurlers/throwers) weapons against the war elephants of the Turco-Hephtalities, who then ran amuck into the lines of their own ranks.[97] In practice, these were deployed in concert with regular arrows shot at the Turkish pachyderms.[98]

Concluding Notes

The Sassanians were highly adept at sieges,[99] and the *spah*'s proficiency and success in siege warfare was indicative of three proficiencies:
1. Command and organisation: Sassanian siege warfare entailed a sophisticated system integrating the operations of the *arteshtārān* with siege machinery and engineering works, as well as utilising water and incendiary systems as siege weapons.
2. Engineering systems: the *spāh* had developed a sophisticated system of engineering capable of (a) producing complex siege machinery, (b) field engineering works (i.e., tunnelling, mounds, trenches), and (c) the weaponisation of environmental elements (water) as well as incendiary systems for siege warfare. These three domains would indicate significant proficiencies in mechanical and civil engineering.
3. Logistics: the Sassanians were capable of efficiently transporting and deploying complex siege machinery systems to battle theatres. These may have entailed breaking larger systems into 'kits' or components to then be reassembled for deployment in the war theatre. This would have been consistent with the high levels of Sassanian proficiency in logistics and the transportation of supplies over long distances.[100]

In summary, the Sassanians appear to have matched the Romans in siege warfare capabilities. As noted by Syvänne: '[...] the Sasanians possessed expertise in siege warfare and were in some ways even more effective in that than the Romans.'[101]

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95 Safa Z. 1990 (1369), 16.

96 Tavajohi S. 2008 (1387), 9.

97 Mayor A. 2022, 259.

98 Reza E. 1995 (1374), 113.

99 Wilcox P. 1999, 33; Sauer E.W. et al. 2017. 2017, 241.

100 Farrokh K., Karamian Gh. 2016, 332–339.

101 Syvänne I. 2021, 7.

Siege warfare proved to be a major feature of Roman and Sassanian warfare along their frontier marches, with the *spāh* conducting such operations into the late Sassanian era (early 7th century CE) as seen with the sieges and captures of Dara (603 CE)[102] and Jerusalem (614 CE)[103] as well as the unsuccessful siege of Constantinople (626 CE).[104]

References

Iconographic source

British Museum. London

Mobile tower with archers on board during the siege of a town by Ashurnasirpal II's army (c. 865–860 BCE). British Museum. Northwest Palace of Nimrud. Room B. Panel 18. Museum no. 124536

Siege of the Lachish (c. 701 BCE), British Museum. Lachish Reliefs. Object 21 (Nineveh, South-West Palace), Room XXXVI. panel 7. Museum no. 124906

Hermitage Museum. St. Petersburg

Museum no. S-46

Published works

Ammianus Marcellinus 1986. *The later Roman Empire*. W. Hamilton (trans.), London.

Bradbury J. 1998. *The Medieval Siege*. Suffolk.

CH 1832. *Chronicum Paschale*. L. Dindorf, B. Niebuhr (eds), Bonn.

Charles M.B. 2007. *The rise of the Sassanian Elephant Corps: Elephants and the later Roman Empire*. "Iranica Antiqua" 42, 301–346.

Diakonov I.M. 1967 (1346). *Tarikhe Iran Bastan*. Tehran.

Dodgeon M.H., Lieu S.N.C. (eds), 1991. *The Roman Eastern Frontier and the Persian Wars (Ad 226–363). A Documentary History*. London–New York.

Elton H. 2018. *The Roman Empire in Late Antiquity: A Political and Military History*. Cambridge.

Farrokh K. 2017. *The Armies of Ancient Persia: The Sassanians*. Barnsley.

Farrokh K. 2023. *Observation of the Role of Climate and Geography in the War Planning of the Sasanian Spāh (Army)*. "Hunara: Journal of Ancient Iranian Arts and History" 1(1), 61–70, DOI: https://doi.org/10.22034/hunara.2023.170549.

Farrokh K., Karamian Gh. 2016. *The logistics and support system of the Sassanian army at war*. "Faslnameye Payam Baharistan" 26, 332–339.

Farrokh K., Khorasani M.M. 2020. *Die sassanidische Infanterie*. "Pallasch: Zeitschrift für Militärgeschichte. Organ der österreichischen Gesellschaft für Heereskunde" 71, 25–35.

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102 Greatrex G., Lieu S.N.C. 2002, 184.

103 Sebeos 1999, 115–116, 69.

104 Roberts J.M., Westad O.A. 2013, 329.

Farrokh K., Maksymiuk K., Sánchez-Gracia J. 2018. *The Siege of Amida (359 CE)*. Siedlce.

Greatrex G., Lieu S.N.C. 2002. *The Roman Eastern Frontier and the Persian Wars Part II (AD 363–630)*. London–New York.

Gyselen R. 2005. *Spāhbed*. In: *Encyclopedia Iranica*. https://www.iranicaonline.org/articles/spahbed. Available on-line: January 8, 2020.

Howard-Johnston J. 2010. *The Sassanian strategic dilemma*. In: H. Börm, J. Wiesehöfer, (eds), *Commutatio et contentio. Studies in the Late Roman, Sasanian, and Early Islamic Near East*. Düsseldorf, 37–70.

Imam-Shushtari S.M.A. 1971(1350). *Tarikhe Shahryari dar Shahanshahiye Iran*. Tehran.

Inostrancev C.A. 1926. *The Sassanian military theory*. "The Journal of the CAMA Oriental Institute" 7, 7–52.

Jahiz (-al) O. 1950(1329), *Taj*. H. Nowbakht (trans.), Tehran.

Jalali I. 2004 (1383). *Arteshe Iran dar Asre Sassanian*. Kerman.

Julian 1932a, *Orationes*. J. Bidez (ed.), Paris.

Julian 1932b, *L'Empereur Julien oeuvres Completes 1, 2e Partie Discours De Julien Cesar*. J. Bidez (ed.), Paris.

Justin 1853. *Epitome of the Philippic History of Pompeius Trogus*. J.S. Watson (trans.), London 1853.

Khorasani M.M. 2010. *Lexicon of Arms and Armor from Iran: A Study of Symbols and Terminology*. Tübingen.

Lukonin V.G. 1993 (1372). *Tamadone Iran-e Sassani*. E. Reza (trans.), Tehran.

Matufi A. 1999 (1378). *Tarikh-e-Chahar Hezar Sal-e Artesh-e Iran: Az Tamadon-e Elam ta 1320 Khorsheedi, Jang-e- Iran va Araqh*. Tehran.

Maurice 1984. *Strategikon*. G.T. Dennis (trans.), Pennsylvania.

Mayor A. 2022. *Greek Fire, Poison Arrows, and Scorpion Bombs*. New Jersey.

Miller R., McEwen E., Bergman C. 1986. *Experimental Approaches to Ancient Near Eastern Archery*. "World Archaeology" 18(2): *Weaponry and Warfare*, 178–195.

Moghtader Gh. 1968 (1347). *Pasdaran Shahanshahiye Iran dar Advare Mokhtalefe Tarikh*. Tabriz.

Oates D., Oates J. 1959. *Ain Sinu: A Roman Frontier Post in Northern Iraq*. "Iraq" 21(2), 207–242.

Pazoki N. 1995 (1374). *Shivehaye Qale-giri dar Nabardhaye Iranian*. "Markaze Tahghighate Kamputeriye Oloom e Eslami" 9, 42–55.

Procopius of Caesarea 1914. *History of the Wars Books I & II*. H.B. Dewing (trans.), Cambridge.

Ransford S. 1975. *War Machines Land: from the Primitive Weapons of Stone Age Man to Rocket-Assisted Grenades*. London.

Raspopova V.I. 2006. *Soghdian arms and armour in the period of the great migrations*. In: M. Mode, J. Tubach (eds), *Arms and Armour as Indicators of Cultural Transfer: The Steppes and the Ancient World from Hellenistic Times to the early Middle Ages*. Wiesbaden, 79–85.

Reza E. 1995 (1374). *Iran va Torkan dar Roozegare Sassanian*. Tehran.

Roberts J.M., Westad O.A. 2013. *The History of the World*. Oxford.

Safa Z. 1990 (1369). *Bahram Chobin az Tarjomeye Tabari*. Tehran.

Saket S., Yahaghi M.J. 2010 (1389). *Arayeshe Sepah va Fonoon e Razmi dar Doreye Sassani va baztabe aan dar Shahnameye Firdowsi.* "Faslnameye Elmi va Pazhoheshi Kavoshname" 20, 9–32.

Sauer E.W., Nokandeh J., Pitskhelauri K., Rekavandi H.O. 2017. *Innovation and stagnation: military infrastructure and the shifting balance of power between Rome and Persia.* In: E.W. Sauer (ed.), *Sasanian Persia: between Rome and the Steppes of Eurasia.* Edinburgh, 241–267.

Sebeos 1999. *The Armenian History Attributed to Sebeos.* R.W. Thomson (trans.), Liverpool.

Shahbazi A.Sh. 1988. *Bahrām VI Čōbīn.* In: *Encyclopaedia Iranica* 3. fasc. 5, 514–522.

Syvänne I. 2021. *Military History of Late Rome 457–518.* Yorkshire & Philadelphia.

Tacitus 1876. *The Annals.* A.J. Church, W.J. Brodribb (trans.), London.

Tafazzoli A. 1993. *A list of terms for weapons and armour in Western Middle Iranian.* "Silk Road Art and Archeology" 3, 187–198.

Tavajohi S. 2008 (1387). *Golulehaye atashin dar meydan-e jang.* "Nashriye Kargaran-e Sanat-e Naft-e Iran" 394, 9.

Theodoret 1977–1979. *Historia Religiosa I.* P. Canivet, A. Leroy-Molinghen (trans. and eds), Paris.

Watts J. 2006. *'Foreigner' helped build Terracotta Army.* "Guardian Newspaper". June 28. https://www.theguardian.com/world/2006/jun/28/china.jonathanwatts. Available on-line: November 8, 2024.

Whitby M. 2013. *Siege Warfare and Counter-Siege Tactics in Late Antiquity (ca. 250–640).* In: A. Sarantis, N. Christie (eds), *War and Warfare in Late Antiquity. Current Perspectives.* Leiden, 433–459.

Whittow M. 1996. *The Making of Byzantium: 600–1025.* Berkley.

Wilcox P. 1999. *Rome's Enemies* 3: *Parthians and Sassanid Persians.* Oxford.

Yildirim E. 2012. *Şapur'un 359 Yılındaki Amida Kenti Kuşatmasında Roma ve Parth Ordularının Kullandıkları Silahlar.* "Uluslararası Sosyal Araştırmalar Dergisi" 5(23), 455–475.

Viviana Capelli
University of Bari Aldo Moro
e-mail: viviana.capelli@uniba.it
https://orcid.org/0009-0007-6181-1770

Tumultus ac trepidatio in urbe. Social Perceptions and Effects of War in Rome and Some Italic Cities in the Late 3rd Century B.C.

Summary: From the Second Punic War onwards, it is possible to identify significant episodes regarding war's effects on Rome and other Italic cities. Apart from their military defence system, the perception of a state of war, its implications and the consequent feelings experienced by citizens of these urban settlements is still an unexplored field, since modern historiography has chosen to focus on the mere war events instead of exploring these less evident, but equally important issues related to them.

Nevertheless, it is useful to examine the atmosphere caused by this state of emergency, such as *tumultus ac trepidationes*, *conplorati* and *metus* in cities which, being fortified centres, were the safest places for seeking refuge.

Accordingly, this study aims to describe these kinds of situations – physical, psychological and mental health conditions endured by inhabitants of *urbes* and *oppida* during wartime. Ancient written sources, particularly the third decade of Livy's *Ab Urbe Condita*, and also Polybius will provide valuable historical information about these matters and the broader institutional, social and anthropological context of the Roman Republic at the end of the 3rd century B.C.E.

Keywords: City of Rome, Second Punic War, *Petelia*, *Casilinum*, *tumultus*, *trepidatio*, violence

Introduction: the first years of the Second Punic War in the Italic peninsula (218–217 B.C.)

The Second Punic War represents a crucial moment in Roman military history, during which the city-state had to confront a formidable threat from the side of the Carthaginian commander-in-chief Hannibal and his considerable military forces.[1] At the

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1 See: Briscoe J. 2006, 44–80.

beginning of this war, the Punic army, thanks to its cavalry, had already achieved an important victory on the Ticino River in 218 B.C. Shortly afterward, Hannibal prevailed once again against the Roman army, led by the consuls of that year, P. Cornelius Scipio and Ti. Sempronius Longus[2] on the Trebbia River. In the following year, the third straight rout for Rome, i.e. on the Trasimene's Lake in 217 B.C. represented a turning point both on the military and on the internal political front.

Therefore, from a historiographic perspective, it is possible to state that the impact of the Hannibalic War, even in its early stages, is recognizable, especially for what concerns the *urbs* par excellence, Rome, but also regarding other Italic cities. In particular, we are going to analyse the two examples of Casilinum and Petelia thanks to the literary and historiographic sources. Knowing how their military defence system worked can help us get a better picture of their urban military forces.[3] Nevertheless, perceptions and feelings are equally important to deepen the knowledge of these events linked to the Hannibalic War. Precisely because this is an unexplored field in historical research, it can offer a new and different point of view on these military events. As said shortly before, the sense of fear (*metus*) and danger, as well as the spread of a sense of generalised anxiety, can be seen as fundamental premises to specific political and institutional measures, also religious practices.

The year 217 B.C. is the *terminus post quem* this speech starts and it would not be otherwise. Hannibal's descent to the Apennines, to the centre and towards the south of the Italic peninsula became a reality and at the same time a terrible danger for the inhabitants of Rome. They realized the threat to the survival of their capital city and of the others Italic cities, and especially of the southern territories, which were their allies, although the Roman network was fragmentary.

Ancient literary sources on these historical events

Thanks to the surviving accounts of these events recorded by several ancient authors, it's possible to reconstruct these moments of collective agitation of the civic communities following the defeat on Lake Trasimene. The main literary source is the historian Livy's work the third decade *Ab Urbe Condita*, which contains much information about this subject, where he occasionally refers back to most ancient authors that he consulted. However, we must remember that Livy wrote his 'History' almost two centuries after the events of the Hannibalic War. For that reason, we must also refer to Polybius, who worked on his 'Histories' (*Ἱστορίαι*) only a few decades after the end of the Second Punic War and is the nearest author to these occurrences. Although

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2 Broughton T.R.S. 1951, 237–238.

3 This is a research field not still explored properly. Several studies concern late Antiquity but regarding to this setting (Hannibalic War) scientific works are limited and they especially focus on the war's consequences. See: Toynbee A.J. 1965; Cornell T.J. 1996; Briscoe J. 2006, 44–80.

other ancient authors also mention the war with Hannibal, they concentrate on the description of the war itself, which are much later sources (such as Appian[4] from the 2nd century CE), or provide only very short contributions, so we will not take them into account in this analysis.

Psychological and physical effects of war between 217 and 212 B.C. The city of Rome

From the analysis of these historical sources, it is possible to draw several conclusions on the psychological, mental, and physical health conditions endured by inhabitants of Italic cities during the Second Punic War. Records refer to the lack of clarity in decision-making, the fear that dominated minds, and physical weakness caused by the scarcity of food inside urban settlements, which at that time were fortified centres and therefore the safest places for seeking refuge.

The communication of the Roman defeat at the battle of Lake Trasimene in 217 B.C. generated panic in the city of Rome since people found it hard to believe in another loss in such a brief time. Citizens rushed to the Forum – a political centre of the city – the public space where Romans gathered during emergencies and where the decisions were announced. Livy described with these words the moments of commotion:

> At Rome the first tidings of this defeat brought the citizens into the Forum in a frightened and tumultuous throng, while the matrons wandered about the streets and demanded of all they met what sudden disaster had been reported and how it was going with the army. And when the crowd, like some vast public assembly, turned to the *Comitium* and the senate-house and called for the magistrates, at last, as the sun was almost going down, Marcus Pomponius, the praetor, said, 'A great battle has been fought, and we were beaten.'[5]

He used the expression of *terror ac tumultus*, to describe dramatically the psychological effect that this third defeat had on the *populus Romanus* in the capital city.[6]

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4 Appian 1912, 312–315. (Hann. 7).

5 'Romae ad primum nuntium cladis eius cum ingenti terrore ac tumultu concursus in forum populi est factus. matronae uagae per uias, quae repens clades allata quaeue fortuna exercitus esset, obuios percontantur; et cum frequentis contionis modo turba in comitium et curiam uersa magistratus uocaret, tandem haud multo ante solis occasum M. Pomponius praetor 'pugna' inquit 'magna uicti sumus''. Livy 1969, 220–225 (22.7.6–8). See: Briscoe J. 2016, 83ff. with footnotes.

6 We can find the Livian expression of tantum terror ac tumultus in the episode (21.25.3ff) that affects the Roman colony of Placentia before the beginning of the Hannibalic War. In the time, when Hannibal had not crossed the Alps yet, the Boi Gaul's tribe attacked this territory militarily. However, at that time the defence's facilities of Placentia were not able to ensure safety, because they were still under construction. So, it was an event so shocking, a sort of psychological trauma, that even the triumvirs, who were on site with the task of assigning lands, were obliged to shelter at Mutina (nearly coincident with the current city of Modena) with the crowds of peasants.

Yet these feelings did not result in unreasonable actions, the crowd headed to the Forum without hesitation.

A typical element of the Livian descriptions of Rome, in this war context, is the role played by women. Not positive at all, much more often than other citizens, they roamed the streets, creating confusion around the city and spreading a sensation of sadness and frustration. A public disorder seized Rome, until the official declaration of the defeat.

The Romans did not have time to act properly and improve the internal situation when another *clades* took place in the Umbrian region. According to Polybius:

> Three days after the news of the great battle had reached Rome, and just when throughout the city the sore, so to speak, was most violently inflamed, came the tidings of this fresh disaster, and now not only the populace but the Senate too were thrown into consternation. Abandoning therefore the system of government by magistrates elected annually, they decided to deal with the present situation more radically, thinking that the state of affairs and the impending peril demanded the appointment of a single general with full powers.[7]

What we learn from this account is that the news of this defeat was announced in Rome only three days after the news of the defeat at Lake Trasimene.[8] The mood of the *cives* was agitated, and even the senators were dismayed by what had occurred. However, it must be underlined that this feeling did not prevent the authorities from taking action; rather, it spurred them to intervene for the benefit of the entire community immediately. Ordinary matters were set aside to focus on the current crisis and decide on an extraordinary measure: the appointment of a dictator (the notorious Q. Fabius Maximus in 217 BCE), whom Polybius described with the phrase *αὐτοκράτορος στρατηγοῦ*, meaning a general with full powers.

However, in Livy's twenty-second book, the reference to these events is quite different:

This is an extremely important aspect regarding cities. Peoples and communities were used to seeking refuge in cities, because of their sense of protection, but these fortified centres were not immune to problems connected with their own features.

7   'ἐν δὲ τῇ Ῥώμῃ, τριταίας οὔσης τῆς κατὰ τὴν μάχην προσαγγελίας, καὶ μάλιστα τότε τοῦ πάθους κατὰ τὴν πόλιν ὡσανεὶ φλεγμαίνοντος, ἐπιγενομένης καὶ ταύτης τῆς περιπετείας οὐ μόνον τὸ πλῆθος, ἀλλὰ καὶ τὴν σύγκλητον αὐτὴν συνέβη διατραπῆναι. διὸ καὶ παρέντες τὴν κατ᾽ ἐνιαυτὸν ἀγωγὴν τῶν πραγμάτων καὶ τὴν αἵρεσιν τῶν ἀρχόντων μειζόνως ἐπεβάλοντο βουλεύεσθαι περὶ τῶν ἐνεστώτων, νομίζοντες αὐτοκράτορος δεῖσθαι στρατηγοῦ τὰ πράγματα καὶ τοὺς περιεστῶτας καιρούς.' Polybius 2010, 232–233 (3.86). In the next passage, the Hellenic author describes Hannibal's route along the Adriatic coast: it seemed impossible that, at that stage of the war, he had the intention to march directly on Rome, as F.W. Walbank affirms (Walbank F.W. 1957, 421).

8   Additional accounts concerning what happened after this defeat are still in: Polybius 2010, 228–235 (3.85–6), see: Walbank F.W. 1957, 420–421; Cornelius Nepos 2014, 264–265 (Hann. 4.3); Valerius Maximus 2000, 368–371(9.12.2); Titi Livi 1971, 73–74.

The news of this affair affected people variously: some, whose thoughts were taken up with a greater sorrow, regarded this fresh loss of the cavalry as trivial in comparison with their former losses; others refused to judge of the misfortune as an isolated fact, but held that, just as when a man was sick, any disorder, however slight, was felt more than a worse one would be by a healthy man, so now, when the state was sick and suffering, any untoward occurrence should be gauged not by its intrinsic importance but by the enfeebled condition of the commonwealth, which could endure no aggravation. And so the citizens had recourse to a remedy that had now for a long time neither been employed nor needed – the creation of a dictator […].[9]

In this relation, we can see the indecisiveness of the Roman citizens and their various impressions on the umpteenth defeat with grief, anguish and gaining awareness, even with a bit of insight, of the weak and compromised city. As the city could not tolerate further aggravation, a dictator was named by people – Q. Fabius Maximus, flanked by the *magister equitum* M. Minucius Rufus.[10] His first order was to strengthen the towers and town walls and to arrange garrisons in different places in the city to increase its military force.[11]

We could say that the situation was now more than critical and yet another staggering misfortune after *Cannae* clouded people's reasoning.[12] Politicians were not able to find solutions and decided to wait, since the war was being fought in the Apulian region, quite far from Rome (but not too far from Latium). Nevertheless, there was a military mobilisation in Rome in order to be prepared for the enemy's approach.

Livy reflected on this situation with the following words:

But when, amid dangers at once so immense and so incalculable, they failed to think of even any tolerable plan of action, and were deafened with the cries and lamentations of the women, both the living and the dead – in the lack as yet of any announcement – being indiscriminately mourned in almost every house […]. To discover and ascertain these facts was a task, he said, for active youths; what the Fathers themselves

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9   'eius rei fama uarie homines adfecit. pars occupatis maiore aegritudine animis leuem ex comparatione priorum ducere recentem equitum iacturam; pars non id quod acciderat per se aestimare sed, ut in adfecto corpore quamuis leuis causa magis quam <in> ualido grauior sentiretur, ita tum aegrae et adfectae ciuitati quodcumque aduersi inciderit, non rerum magnitudine sed uiribus extenuatis, quae nihil quod adgrauaret pati possent, aestimandum esse. itaque ad remedium iam diu neque desideratum nec adhibitum, dictatorem dicendum, ciuitas confugit […].' Livy 1969, 226–229 (22.8.2–5). See: Briscoe J. 2016, 84ff. with footnotes.

10   Broughton T.R.S. 1951, 243.

11   Further sources: Polybius 2010, 230–239 (3.86–8); Titi Livi 1971, 74–75.

12   With regard to the psychological effects of this riot, Livy 1969, 374–379 (22.54) says that never before had there been such panic and uproar (pauoris tumultusque intra moenia Romana), while the city was still safe. In addition, when he recounts other defeats, especially after the battle of Herdonia years later (212 or 210 BCE, Livy 1969, 284–289 (22–25), the tone of the story is basically identical, with the same linguistic and semantic terms, because the feeling could not be different from anxiety and alarm (i.e. pauor and luctus).

must do, since there were not magistrates enough, was this: quell the panic and confusion in the City; keep the matrons off the streets and compel them each to abide in her own home; restrain families from lamentation; procure silence throughout the City; see that bearers of any news were brought before the praetors – every man must wait at home for tidings that concerned himself; – and, besides this, post sentries at the gates, to keep anyone from leaving the City, and make the people rest all hope of safety on the safety of Rome and of its walls.[13]

The *clamor* and the *lamentantium mulierum* led to greater exasperation, also for the fact that women screamed and shouted around the city as a manifestation of mourning. Nevertheless, the control of an organised city was of the utmost importance for the successful execution of a battle. Consequently, a new set of regulations was introduced, some of which pertained to *mulieres*. In particular, the senators would suppress any disturbance or panic (*tumultus ac trepidatio*). Women should be kept away from public spaces and compelled to remain within their homes. Restrictions were imposed on family mourning, as if they represented a risk for the public order. Citywide silence was imposed and, in addition, sentinels were placed at the gates to prevent anyone from leaving the city. They recruited two urban legions for this purpose. These legions are an exceptional military corps, which was formed mainly in extremely urgent war situations, from the last decades of the third century B.C. and at least until the third Macedonian war. In such delicate moments, very little room was left for negative feelings and instincts.

The people of Rome had to be rational and steadfast, and the senators demonstrated respect for their governmental duties more than ever.

In Polybius' account, references related to the emotional sphere are uncommon. For that reason, the example cited below is worth including in this study. In this passage, he tells of universal panic and consternation that spread among the citizens of Rome:

When the news reached Rome, it caused universal panic and consternation among the inhabitants, the thing being so sudden and so entirely unexpected, as Hannibal had never before been so close to the city. Besides this, a suspicion prevailed that the enemy would never be approached so near and displayed such audacity

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13 'cum in malis sicuti ingentibus ita ignotis ne consilium quidem satis expedirent obstreperetque clamor lamentantium mulierum et nondum palam facto uiui mortuique et per omnes paene domos promiscue complorarentur, […] haec exploranda noscendaque per impigros iuuenes esse; illud per patres ipsos agendum, quoniam magistratuum parum sit, ut tumultum ac trepidationem in urbe tollant, matronas publico arceant continerique intra suum quamque limen cogant, comploratus familiarum coerceant, silentium per urbem faciant, nuntios rerum omnium ad praetores deducendos curent, suae quisque fortunae domi auctorem exspectent, custodesque praeterea ad portas ponant qui prohibeant quemquam egredi urbe cogantque homines nullam nisi urbe ac moenibus saluis salutem sperare. ubi conticuerit [recte] tumultus, tum in curiam patres reuocandos consulendumque de urbis custodia esse.' Livy 1969, 348–351 (22.55.3, 6–8). See: Briscoe J. 2016, 146ff. with footnotes. About the following events see: Plutarch 1916, 172–173 (Fab. 18.2); Titi Livi 1971, 128–129.

if the legions before Capua had not been destroyed. The men, therefore, occupied the walls and the most advantageous positions outside the town, while the women made the round of the temples and implored the help of the gods, sweeping the pavements of the holy places with their hair – for such is their custom when their country is in extreme peril.[14]

Polybius explains these feelings as due to the dangerous proximity of Hannibal. He was, in fact, at more or less three miles from the city of Rome. It cannot be an astonishing fact that there were many expressions of turmoil and anxiety in the city of Rome: the archenemy and all the terrible consequences for the Roman people that would have followed were sudden (*αἰφνίδιος*) and unexpected (*ἀνέλπιστος*). In this situation, it was necessary to organise the remaining military forces to defend the capital and its population. This, as stated by Polybius, was essential, especially after the likely defeat of the Roman army near Capua. These units would be the last bulwark between Hannibal and Rome. Additionally, the circle of city walls, restored after the defeat of Lake Trasimene, was an essential protective structure. In addition to this, military means in the city were quite abundant if we consider the presence of the urban legions, already mentioned above. But while the men were called to arms to guarantee the defence of the city, the women are represented as completely devoted to the Roman gods, sweeping the pavements of the holy places with their hair.

In this case, Polybius had probably consulted Greek literary sources, whose authors had difficulties understanding the Roman system of thought and, therefore, the complex nature of the Roman institutional structure and the diverse competences of Roman magistrates, compared to Greek institutional figures. Moreover, difficulty emerged also concerning the Roman religion. The episode recounted by Polybius can be found in the later Livian account. In Livy and, more generally, in Latin literature, the element of 'sweeping the altars with their dishevelled hair' is clearer in its narrative function, and also in its religious meaning. Hair symbolised strength and piety towards the Gods[15]. The fact that women swept the altars – and less probably the pavements, as in the Polybian description – made this action credible or, at least, more comprehensible in Livy than in Polybius. Even if it is known that this last author is one of the main sources used by Livy himself in the composition of his historiographical work.

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14 'οὗ γενομένου καὶ προσπεσόντος εἰς τὴν Ῥώμην, εἰς ὁλοσχερῆ συνέβη ταραχὴν καὶ φόβον ἐμπεσεῖν τοὺς κατὰ τὴν πόλιν, ἅτε τοῦ πράγματος αἰφνιδίου μὲν ὄντος καὶ τελέως ἀνελπίστου διὰ τὸ μηδέποτε τὸν Ἀννίβαν ἐπὶ τοσοῦτον ἀπηρκέναι τῆς πόλεως, ὑποτρεχούσης δέ τινος ἅμα καὶ τοιαύτης ἐννοίας ὡς οὐχ οἷόν τε τοὺς ἐναντίους ἐπὶ τοσοῦτον ἐγγίσαι καὶ καταθαρρῆσαι μὴ οὐ τῶν περὶ Καπύην στρατοπέδων ἀπολωλότων. διόπερ οἱ μὲν ἄνδρες τὰ τείχη προκατελάμβανον καὶ τοὺς πρὸ τῆς πόλεως εὐκαίρους τόπους, αἱ δὲ γυναῖκες περιπορευόμεναι τοὺς ναοὺς ἱκέτευον τοὺς θεούς, πλύνουσαι ταῖς κόμαις τὰ τῶν ἱερῶν ἐδάφη: τοῦτο γὰρ αὐταῖς ἔθος ἐστὶ ποιεῖν, ὅταν τις ὁλοσχερὴς τὴν πατρίδα καταλαμβάνῃ κίνδυνος.' Polybius 2011, 12–15 (9.6.1–4). See: Walbank F.W. 1967, 125.

15 See: Walbank F.W. 1967, 125.

According to Livy's report, the psychological effects of war in Rome, especially shortly after the defeat at Cannae, are almost the same:

> To Rome a messenger from Fregellae, riding on for a day and a night, brought great alarm. Still greater confusion than at its first reception was occasioned by news of the danger spread by men who ran about, adding unfounded reports to what they had heard, and it stirred the entire city. The wailings of women were heard not only from private houses, but from every direction matrons pouring into the streets ran about among the shrines of the gods, sweeping the altars with their dishevelled hair, kneeling, holding up their palms to heaven and the gods, and praying them to rescue the city of Rome from the hands of the enemy and to keep Roman mothers and little children unharmed. The senate awaited the magistrates in the Forum in case they wished its advice about anything. Garrisons were posted on the Citadel, on the Capitol, on the walls, around the city, even on the Alban mount and on the citadel of Aefula.[16]

In this case, the messenger mentioned brought alarm (*terror*) inside the city, because his sight evoked the fear that he presumably did not bring positive news, and this had to provoke greater confusion than before. But, unexpectedly, Hannibal did not besiege Rome, neither in 216 B.C. nor in 212 B.C., and the reasons why he did not make it are still not unambiguous.

Again, the feminine element introduced by Livy aims to increase the atmosphere of disorder and chaos as a background of the scene. Women are portrayed in the act of engaging in continuous weeps and complaints not only in the private dimension of their houses but also in public spaces, i.e. in the streets, while on their way to certain shrines. This female reaction recalls a similar episode told previously by Livy (book 22). In both these episodes, it is possible to identify elements of public disorder related to the large number of women engaging in dirges. This is one of the numerous evidence that Roman people were prey to disorientation and despair. And yet it seems a bit weird that in this case, the Senate did not implement drastic measures to limit their freedom of movement and their tragic emotional displays, as it occurred instead in 216 B.C. when it seems they were forbidden to appear in public, being forced

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16 'Romam Fregellanus nuntius diem noctemque itinere continuato ingentem attulit terrorem. tumultuosius quam allatam erat <uolgatum periculum dis> cursu hominum adfingentium uana auditis totam urbem concitat. ploratus mulierum non ex priuatis solum domibus exaudiebatur, sed undique matronae in publicum effusae circa deum delubra discurrunt crinibus passis aras uerrentes, nixae genibus, supinas manus ad caelum ac deos tendentes orantesque ut urbem Romanam e manibus hostium eriperent matresque Romanas et liberos paruos inuiolatos seruarent. senatus magistratibus in foro praesto est si quid consulere uelint. alii accipiunt imperia disceduntque ad suas quisque officiorum partes: alii offerunt se si quo usus operae sit. praesidia in arce, in Capitolio, in muris, circa urbem, in monte etiam Albano atque arce Aefulana ponuntur.' Livy 1963, 30–35 (26.9.6–10).

to stay at home, in an atmosphere of citywide silence. Rather, the Senate directed its efforts to more pragmatic and urgent measures for the safety of the inhabitants, like locating garrisons around the city's perimeter, in a military strain, that is repeated if we compare it with previous episodes.[17]

In this respect, two examples can be provided. The first is about military provisions taken for the city of Rome immediately after the terrible defeat of Cannae in 216 B.C.: urban walls and towers were strengthened and garrisons were arranged in different places of Rome, together with sentries placed in correspondence of urban gates.[18] The second is about a stunning military manoeuvre inside the city in the year 212 B.C. The consuls Q. Fulvius Flaccus and Ap. Claudius Pulcher[19] ordered the Numidian deserters on the Aventine Hill to join the rest of the Roman army outside the city to face the Punic army. Since people did not know about their presence within the city, their view caused *tumultum ac fugam*, making the crowd panic-stricken and causing a headlong stampede. People tried to save themselves by hiding in houses, but the whole episode was a misunderstanding. These soldiers were not enemies, but allies. In all the occurrences mentioned, the only means women had to help the citizens were prayers and rites prescribed by the Roman traditional religion. Furthermore, the description of 'sweeping the altars with their dishevelled hair, kneeling, holding up their palms to heaven and the gods', clearly recalls the account made by Polybius. Returning to the Livian narration, it evidences that the most important element in times of danger is rather the male one since political rights and collective decisions belonged to citizens only. Men were the true protagonists in political, institutional, economic and military affairs, with the partial exception of the religious sphere, in which women could have a more significant role.

Psychological and physical effects of war between 217 and 215 B.C. The cases of Petelia and Casilinum

Of course, the psychological effects of the Hannibalic War and the physical reactions to it were not limited to Rome. The people of Petelia, a Brutian metropolis[20] in today's Calabrian region, were almost the only Rome ally left among these peoples of this Italic area shortly after the battle of Cannae.[21] The defence of Petelia in the name

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17 The episode is recalled in: Livy 1963, 34–39 (26.10).

18 See: p. 5 with footnotes of this study.

19 See: Broughton T.R.S. 1951, 267.

20 On its morphology as a μητρόπολις in the Strabo's Γεωγραφικά and its central role at local level and beyond see: Intrieri M.1989, 15–20.

21 Another city, which also remained an ally city of Rome, was Consentia (also laid in the same Bruttium region, which initially distanced itself from the rest of the other Bruttian cities that allied with Hannibal). The city was subdued by the general Himilco shortly thereafter. See: Livy 1966, 100–105 (23.30). On its changing alliance with Rome in the Second Punic War: Livy 1966, 340–345

of its loyalty to Rome and, at the same time, of its autonomy, is exemplary and very well-known in Antiquity.[22]

The will and strength of the Petelian resistance are demonstrated by the city's envoys' direct request to the Roman Senate for a Roman garrison. When it was announced in Petelia that the Senate refused the request, melancholy and dread (*maeror et pauor*) grew among the town's senators of the city:

> When this outcome of the embassy was reported at Petelia, such dejection and fear unexpectedly seized their senate that some proposed to flee, each taking any possible road, and to abandon the city, while others, since they had been deserted by their old allies, proposed to join the rest of the Bruttians and through them to surrender to Hannibal. But those who thought nothing should be done hastily or rashly, and that they should deliberate again, prevailed. When the matter was brought up in less excitement the following day, the optimates carried their point, that they should bring in everything from the farms and strengthen the city and the walls.[23]

Thus, different solutions were proposed: to some, it was necessary to abandon the city and to flee to another place (not mentioned in the sources).[24] Others, to preserve the city of Petelia and their lives, suggested a change of alliance and surrendering the town to Hannibal.

The most shared opinion was to not act precipitously, otherwise the regret for the decisions taken would have affected the continuation of the urban defence. Choosing a vehement way could provoke considerable damage beyond repair. The next day,

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(25.1); Livy 1971, 44–51 (28.11), 356–359 (29.38), 436–441 (30.19); Appian 1912, 390–393 (Hann. 56). For a more detailed description of the city see: Intrieri M. 1989, 31–32.

22 See: Levene D.S. 2010, 46–7, 53, 55. The close relation between Petelia and Rome began after the year 272 B.C., that is with the end of the Tarentine war (see: Costabile F. 1984). As a sign of recognition for its loyalty, Petelia could reopened its mint in 204 B.C. under the concession of Rome and at least until 89 B.C., issuing Roman bronze coins. Caccamo Caltabiano M. 1977, 11ff. More generally, on the history of the city and its origins as well as the archaeological evidence and its match with the current Pianette di Strongoli see: Intrieri M. 1989, 12–18, 22–26. Regarding to this archaeological side of Petelia: Greco E. 1980, 83–92.

23 'haec postquam renuntiata legatio Petelinis est, tantus repente maeror pauorque senatum eorum cepit ut pars profugiendi qua quisque posset ac deserendae urbis auctores essent, pars, quando deserti a ueteribus sociis essent, adiungendi se ceteris Bruttiis ac per eos dedendi Hannibali. uicit tamen ea pars quae nihil raptim nec temere agendum consulendumque de integro censuit. relata postero die per minorem trepidationem re tenuerunt optimates ut conuectis omnibus ex agris urbem ac muros firmarent.' Livy 1966, 68–71(23.20.7–10). Also Polybius 2011, 446–453 (7.1–3) in Athen; Valerius Maximus 2000, 162–165 (7.6.1); see: Titi Livi 1976, 20; Briscoe J. 2016, 187ff. with footnotes.

24 Very interesting discussion by M. Caccamo Caltabiano: 'Come immaginare possibili gli spostamenti di quella parte di popolazione costituita dai contadini e dalle loro famiglie, sprovvisti come certo saranno stati di adeguati mezzi di trasporto, in un momento di particolare pericolo, essendo le contrade meridionali percorse dai Cartaginesi e dai Bruzzii. Una tale soluzione meglio si adatta a una parte limitata della popolazione, quella meglio equipaggiata per affrontare un viaggio e soprattutto quella provvista di legami e di amicizie tali da garantire loro, in una situazione così precaria per tutti, un rifugio.' Caccamo Caltabiano M. 1977, 45–46.

indeed, when there was less confusion, it was decided to bring all produce in from the fields and strengthen the city and its walls, because the siege from the Carthaginians would be imminent.

The siege of Petelia had been long and exhausting – it lasted eleven months.[25] Eventually the city was conquered by Himilco, Hannibal's prefect in 215 B.C., because of the hunger of the townspeople. It is an episode fairly known in antiquity, because the Petelians – according to the Livian account – rather than yield to the Carthaginians, nourished themselves with leather, grass, roots, the soft parts of tree bark and strips of leaves:

> That victory cost the Carthaginians much blood and many wounds, and starvation more than any assault overpowered the besieged. For after they had consumed their food-supply in cereals and flesh, the familiar and the unfamiliar, of four-footed beasts of every kind, they finally lived on hides and grasses and roots and tender bark[26] and leaves stripped off.[27] And they were not overpowered until they had no strength left to stand on the walls and bear arms.[28]

We are facing one of the most terrible physical effects that war causes, not only in this moment but generally valid. Though this episode describes some action that helped to survive, men suffered anyway due to lack of strength and endurance, and in consequence, the urban military defences were cancelled. Dealing with this situation, it is probable that, at a certain point, the ruling class of Petelia requested a safe-conduct to Hannibal: for him, it would have been a favourable move to achieve control of the city peacefully.[29]

The last event that I intend to discuss in my paper refers to the *oppidum* of Casilinum located in the Campania region, corresponding to the current city of Capua[30] – a site that the Punic army perhaps did not intend to reach in its march during 216 BCE[31] but which ultimately shared the fate of Petelia.

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25 A similar endurance was possible thanks to the morphology of the place and to the city walls. Intrieri M. 1989, 15–16.

26 A better explanation in: Yardley J.C. 2003, 158.

27 The meaning here would be that: 'they stripped from the veins, stripped down or dissected and not stripped off trees'. Yardley J.C. 2003, 158.

28 'multo sanguine ac uolneribus ea Poenis uictoria stetit nec ulla magis uis obsessos quam fames expugnauit. absumptis enim frugum alimentis carnisque omnis generis quadrupedum suetae <insuetae>que postremo coriis herbisque et radicibus et corticibus teneris strictisque foliis uixere nec ante quam uires ad standum in muris ferendaque arma deerant expugnati sunt.' Livy 1966, 100–105 (23.30.2–4). Also, see: Petronius 1975, 378–379 (141.10); Silius Italicus 1961, 178–179 (12.431); Frontin. 2014, 304–305 (Strateg. 4.5.18); Appian 1912, 312–315 (Hann. 7); Valerius Maximus 2000, 70–71 (6.6 ext. 2); Titi Livi 1976, 28; Caccamo Caltabiano M. 1977, 11ff.; Briscoe J. 2016, 208ff. with footnotes.

29 See: Caccamo Caltabiano M. 1977, 48ff to deepen the destiny of the city in the final years of the conflict and for a comparison between Petelia and Locri during the Second Punic War.

30 See: Johannowsky W. 1975, 3–38.

31 Casilinum was, in fact, nearby other cities, such as Acerrae and Nola, the first of which was set ablaze by Hannibal. Vreese de, J. 1972, 22–26. Also see: Levene D.S. 2010, 46, 201–202, 210, 230.

Hannibal aimed to defeat and dismantle the network of alliances with the southern cities of Rome.[32] Events in Casilinum occurred almost simultaneously with the siege of Petelia. Casilinum was occupied by the Punic army after a long siege that ended in 215 BCE, demonstrating the strong and enduring resistance to the enemy. Trying to help the besieged people – not only the inhabitants of Casilinum but also hundreds of Praenestines, Romans, and Latins who had taken refuge there – the *magister equitum* for that year, Tiberius Sempronius Gracchus,[33] successfully provided food supplies to the town. Livy provides a detailed account of this event:

> For it was established that some, unable to endure hunger, had thrown themselves from the wall, and that men stood unarmed on the walls exposing unprotected bodies to wounds from missile weapons. Gracchus, though indignant at this, did not dare to engage the enemy without the dictator's order, and saw that, if he should try openly to carry in grain, he must fight. As there was also no hope of carrying it in secretly, he filled many huge jars with spelt brought from the farms all around and sent word to the magistrate at *Casilinum* that they should catch up the jars which the river was bringing down. In the following night, while all were intent upon the river and the hope aroused by the Roman messenger, the jars set adrift in midstream floated down, and the grain was evenly divided among them all. This was done the next day also, and the third day. It was night when they were set adrift and when they arrived. In that way they escaped the notice of the enemy's guards. After that, the stream, now swifter than usual because of incessant rains, forced the jars by a cross current to the bank guarded by the enemy. There, caught among the willows growing on the banks, they were seen and it was reported to Hannibal. And thereafter by a closer watch they saw to it that nothing sent down the Volturnus to the city should escape notice. However nuts which were poured out from the Roman camp, as they floated down the middle of the river to *Casilinum*, were caught by wattled hurdles. Finally they reached such a pitch of distress that they tried, after softening them by hot water, to chew thongs and the hides stripped off of shields; and they did not abstain from rats and other animals and dug out every kind of plant and root from the bank beneath the wall.[34]

A philological integration's proposal of usus referring to Punicum abhorrens ab Latinorum nominum was made by T. Ricchieri (Ricchieri T. 2019, 89–97). Ricchieri notes the misunderstanding of a local guide that led Hannibal and the Punic army to 'Casilinum' instead of 'Cassinum' (Livy 1969, 242–245 (22.13.6), see: Ricchieri T. 2019, 89–93.

32 The Etruscans also fought alongside Rome to militarily support Casilinum's resistance against Hannibal's attacks. On the Etruscan Laris Felsnas and his military action during this conflict, see: Sordi M. 1989–1990, 123–125.

33 Specifically in the year 216 BCE, when M. Iunius Pera was elected dictator. The military command was entrusted temporarily to his magister equitum because the dictator had to return to Rome to retake the auspices. Broughton T.R.S. 1951, p. 248.

34 'nam et praecipitasse se quosdam non tolerantes famem constabat et stare inermes in muris, nuda corpora ad missilium telorum ictus praebentes. ea aegre patiens Gracchus, cum neque pugnam conserere dictatoris iniussu auderet – pugnandum autem esse, si palam frumentum

As a matter of fact, this was the Roman reaction after noticing men that had thrown themselves from the wall and men stood unarmed on the walls, exposing unprotected bodies to wounds from missile weapons.[35] It was a desperate answer to a situation where the besieged people had exhausted all options and were losing hope, even if winning control over the town's side on the river Volturnus enabled the defenders to gain some time. T. Gracchus had the brilliant idea of filling many huge jars with spelt brought from the neighbouring farms, because he had to respect the dictator's instructions that forbade him to take food supplies to the Petelians and other besieged people. In fact, a similar tactical move could have led to a fight with the enemy while the Roman commander-in-chief was absent on the military field.[36] The trick, according to which the Casilins had to fish the jars out of the river at night, actually worked because the jars set adrift in midstream floated down the river. The grain was evenly divided among them all at the time when the 'degree of hunger and exhaustion had reached the city. It perhaps surpasses everything that has been handed down about besieged and starving cities.'[37]

Conclusions

The aim of this study is to present a selection of ancient literary sources that, in my opinion, are the most suitable for recreating a specific urban and social atmosphere during the early years of the Hannibalic War. According to these accounts, warfare generated various social perceptions that were, in some cases, identical in the towns described by the authors and, at other times, completely different from one city to another. Additionally, war provoked psychological and physical reactions, which are two sides of the same coin. On one hand, the physical reactions are documented in

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importaret, uidebat – neque clam importandi spes esset, farre ex agris circa undique conuecto cum complura dolia complesset, nuntium ad magistratum Casilinum misit ut exciperent dolia quae amnis deferret. insequenti nocte intentis omnibus in flumen ac spem ab nuntio Romano factam dolia medio missa amni defluxerunt; aequaliter inter omnes frumentum diuisum. id postero quoque die ac tertio factum est; nocte et mittebantur et perueniebant; eo custodias hostium fallebant. imbribus deinde continuis citatior solito amnis transuerso uertice dolia impulit ad ripam quam hostes seruabant. ibi haerentia inter obnata ripis salicta conspiciuntur, nuntiatumque Hannibali est et deinde intentiore custodia cautum ne quid falleret Uolturno ad urbem missum. nuces tamen fusae ab Romanis castris, cum medio amni ad Casilinum defluerent, cratibus excipiebantur. postremo ad id uentum inopiae est, ut lora detractasque scutis pelles, ubi feruida mollissent aqua, mandere conarentur nec muribus alioue animali abstinerent et omne herbarum radicumque genus aggeribus infimis muri eruerent.' Livy 1966, 62–69 (23.19.6–13). For more events about Casilinum in the first years of the Hannibalic War, see: Valerius Maximus 2000, 164–167 (7.6.2–3), 302–303 (9.1 ext. 1); Strabo 1923, 458–465 (5.4.10–11); Florus 2014, 92–115 (1.22)Frontin. 2014, 304-305 (Strateg. 4.5.18); also see: Titi Livi 1976, 18–19; Briscoe J. 2016, 185ff. with footnotes; Sordi M. 1989–1990, 125.

35 Before that, another episode regarding the siege of Casilinum occurred, but it did not have success: in Livy 1969, 277–281 (22.23) it is recalled when the device of silence was employed for persuading Hannibal that the city was deserted. His decision to open the city gates caused, instead, a fierce Roman military attack that overwhelmed him and his army.

36 Vreese de, J. 1972, 25.

37 Vreese de, J. 1972, 25.

the accounts analysed that mention Petelia and Casilinum; on the other hand, the community's feelings are shown to contribute to a greater awareness of the situation, particularly in the city of Rome. These social needs required inhabitants to act appropriately in these challenging circumstances, utilising institutional and political means and, thus, the direct action of the State to address emergencies and crises.

References

Published works

Appian 1912. *Roman History* 1. H. White (trans.), *Loeb Classical Library*. London–Cambridge–Harvard.

Briscoe J. 2006. *The Second Punic War.* In: A.E. Astin, F.W. Walbank, M.W. Frederiksen, R.M. Ogilvie (eds), *The Cambridge Ancient History. Rome and the Mediterranean to 133 B.C.* 8. Cambridge, 44–80.

Briscoe J. 2016. *Titi Livi Ab urbe condita, recognouit ed adnotatione instruxit. Books 21–25* 3. Oxford.

Broughton T.R.S. 1951. *The Magistrates of the Roman Republic* 1. New York.

Caccamo Caltabiano M. 1977. *Una città del sud tra Roma e Annibale: la monetazione di Petelia.* Palermo.

Cornelius Nepos 2014. J.C. Rolfe (trans.), *Loeb Classical Library*. London–Cambridge–Harvard.

Cornell T.J. 1996. *Hannibal's Legacy: the Effects of the Hannibalic War on Italy*. In: T. Cornell, B. Rankov, P. Sabin (eds), *The Second Punic War: a Reappraisal.* London, 97–117.

Costabile F. 1984. *Istituzioni e forme costituzionali nelle città del Bruzio in età romana. Civitates foederatae, coloniae e municipia attraverso i documenti epigrafici.* Napoli.

Florus 2014. *Epitome of Roman History*. E.S. Forster (trans.), *Loeb Classical Library*. London–Cambridge–Harvard.

Greco E. 1980. *Petelia, Vertine e Calasarna.* "Annali di Archeologia e Storia Antica" 2, 83–92.

Intrieri M. 1989. *Petelia fra tradizione mitica e documentazione storica.* "Miscellanea di studi storici" 7, 9–33.

Johannowsky W. 1975. *Problemi archeologici campani.* "Rendiconti della Accademia di Archeologia, Lettere e Belle Arti" 50, 3–38.

Levene D.S. 2010. *Livy on the Hannibalic War*. Oxford–New York.

Livy 1963. *History of Rome. Books XXVI–XXVII* 7. F. Gardner Moore (trans.), *Loeb Classical Library*. London–Cambridge–Harvard.

Livy 1966. *History of Rome. Books XXIII–XXV* 6. F. Gardner Moore (trans.), *Loeb Classical Library*. London–Cambridge–Harvard.

Livy 1969. *History of Rome. Books XXI–XXII* 5. B.O. Foster (trans.), *Loeb Classical Library*. London–Cambridge–Harvard.

Livy 1971. *History of Rome. Books XXVIII–XXX* 8. F. Gardner Moore (trans.), *Loeb Classical Library*. Cambridge–Harvard–London.

Petronius 1975. *Satyricon*. M. Heseltine (trans.), *Loeb Classical Library*. London–Cambridge–Harvard.

Plutarch 2014. *Lives. Pericles and Fabius Maximus. Nicias and Crassus*. B. Perrin (trans.), *Loeb Classical Library*. London–Cambridge–Harvard.

Polybius 2010. *The Histories. Books III–IV* 2. W.R. Paton (trans.), *Loeb Classical Library*. London–Cambridge–Harvard.

Polybius 2011. *The Histories. Books V–VIII* 3. W.R. Paton (trans.), *Loeb Classical Library*. London–Cambridge–Harvard.

Polybius 2011. *The Histories. Books IX–XV* 4. W.R. Paton (trans.), F.W. Walbank & C. Habicht (revised), *Loeb Classical Library*. London–Cambridge–Harvard.

Ricchieri T. 2019. *Due note testuali a Livio 22 (13, 6 e 35, 3)*. "Materiali e Discussioni per l'Analisi dei Testi Classici" 83, 89–97.

Silius Italicus 1961. *Punica. Books IX–XVII* 2. J.D. Duff (trans.), *Loeb Classical Library*. London–Cambridge–Harvard.

Sordi M.1989–1990. *Laris Felsnas e la resistenza di Casilino*. "Studi Etruschi" 56, 123–125.

Strabo 1923. *Geography. Books III–V* 2. H.L. Jones (trans.), *Loeb Classical Library*. London–Cambridge–Harvard.

Titi Livi 1971. *Ab Urbe condita libri XXI–XXII*. T.A. Dorey (ed.), *Bibliotheca scriptorvm graecorvm et romanorvm tevbneriana*. Leipzig.

Titi Livi 1976. *Ab Urbe condita libri XXIII–XXV*. T.A. Dorey (ed.), *Bibliotheca scriptorvm graecorvm et romanorvm tevbneriana*. Leipzig 1976.

Toynbee A.J. 1965. *Hannibal's Legacy. The Hannibalic War's Effects on Roman Life. Rome and Her Neighbours After Hannibal's Exit* 2. London.

Valerius Maximus 2000. *Memorable Doings and Sayings* 2. D.R. Shackleton Bailey (trans.), *Loeb Classical Library*. London–Cambridge–Harvard.

Vreese de, J. 1972. *Casilinum*. "Hermeneus" 44, 22–26.

Walbank F.W. 1957. *A Historical Commentary on Polybius. Commentary on books 1–6*. Oxford.

Walbank F.W. 1967. *A Historical Commentary on Polybius. Commentary on books 7–18*. Oxford.

Yardley J.C. 2003. *Bark and Leaf–Eating in Petelia (Livy 23.30.3)*. "The Ancient History Bulletin" 17, 158.

Krzysztof Gryglewski
University of Lodz
e-mail: krzysztof.gryglewski@edu.uni.lodz.pl
https://orcid.org/0009-0003-7687-5698

Military Service of Knights, Vogts and Village Mayors in the Kingdom of Poland under the Reign of Władysław II Jagiełło:
Legal Regulations

Summary: The reign of Władysław Jagiełło in Poland was highly significant. He not only established a new dynasty but also succeeded diplomatically and militarily in foreign policy. His forty-year reign was also a time of granting privileges, which was necessary to win the support of the nobility and to execute the king's will. This led to changes in military obligations, allowing the nobility to gain prerogatives, including the right to war prisoners. The king also repeated and extended existing privileges, such as the right to be paid for military campaigns on foreign territory and the right to compensation for the losses of equipment and horses. These changes were significant both militarily and politically and reinforced the nobility's power within the kingdom. Changes in military services of the feudal system in Poland, which occurred during the reign of Władysław II Jagiełło, were essential in understanding the future military evolution of the Polish army.

Keywords: Kingdom of Poland, 15th century, Władyslaw Jagiełło, knight's law, military history

One of the most renowned episodes during the reign of Władysław Jagiełło was the Battle of Grunwald (July 15, 1410), where Polish-Lithuanian forces defeated the army of the Teutonic Order, supported by numerous foreign mercenaries and volunteers. This clash became a cornerstone for the future development of the Polish-Lithuanian Union. The battle on the Grunwald fields was also one of the largest battles in late medieval Central Europe, involving around forty thousand armed men in total. Needless to say, this confrontation was not the only example of military conflict involving the

Kingdom of Poland. During Władysław Jagiełło's reign (1386–1434), several other wars were fought against the Teutonic Order (e.g., in 1414, 1422), in Lithuania (e.g., 1390–1391, 1431–1432), and in Ruthenia (e.g., 1431). These frequent wars significantly burdened the state and its participants, which historians often overlooked in favour of tales regarding chivalry and its armament. This article examines the legal basis of military service under the first Jagiellon king and identifies those who were subjected to it along with their duties and privileges during wartime.

In medieval Polish law, three forms of military mobilisation can be distinguished. The first was the general defence (*defensio terrae*).[1] When proclaimed, every man capable of bearing arms, regardless of social class, was obliged to fight in defence of the Kingdom. The army formed through such mobilisation was highly diverse in training and equipment quality. Under Władysław Jagiełło, this form was not widely used, therefore it will not be the focus of this article, though it must be mentioned for a complete picture.

The second method of army formation was the proclamation of the general levy (*expeditio generalis*). This mobilisation encompassed the entire country, requiring those with military service obligations due to land ownership to report for duty. It is estimated that during Jagiełło's time, such mobilisation could summon tens of thousands of armed men. The main component of this army was the knighthood.[2] Historians debate the origins of this obligation, though it is most commonly believed that all landowners under knightly law (*ius militare*) were required to serve in the *expeditio generalis*.[3] This law exempted them from paying taxes to the king but obliged them to bear the costs of war participation.[4] In addition to knights, village mayors (German: *Schuldheiss*; Latin: *scultetus*; Polish: *sołtys*,) and town administrators – vogts (German: *Vogt*; Latin: *advocatus*; Polish: *wójt*) managing settlements under German law also participated in the general levy.[5] The establishment of villages and towns under German law in Polish lands began in the first half of the 13th century. Granting German law to a settlement was accompanied by a document specifying, among other things, the military service duties of the village or town head. Imposing these obligations on them was likely linked to the fact that part of their property in the managed settlement consisted of land, making their social status similar to that of the nobility.

The third form was the partial levy (*expeditio particularis*), a call for military service from a specific territory. In practice, this mobilisation involved knights from one

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1 Grabarczyk T. 2000, 200.

2 Szymczak J. 1989, 253; Nadolski A. 1994, 194.

3 The legal basis for the military service obligation of knights remains a subject of debate. It is believed to have been linked to land ownership, but this connection is not entirely clarified. See: Bogucki A. 2007, 59–89.

4 Ginter K. 2008, 68.

5 Sculteti usually were assigned to villages and advocati to towns, but it wasn't always the case.

or several administrative units, so-called lands (Polish: *województwo* or *ziemia*). The resulting army was smaller than that of the *expeditio generalis* but had the advantage of being quicker to assemble and less burdensome for the king's subjects. The armies formed through both these mobilisations could be used for the Kingdom's defence or campaigns beyond its borders. This article will further discuss issues related to military service in the general levy and the partial levy.

When Władysław Jagiełło ascended the Polish throne, the military obligations of his subjects were primarily governed by the *Statutes* of Casimir III the Great, written in the mid-14th century, and the privilege issued in Košice in 1374 by Louis of Anjou. These laws were modified several times during Jagiełło's reign, primarily through privileges granted to the nobility. The king issued these to gain the support of his subjects, especially the most powerful estate – the nobility.[6] It is worth noting that the terms of noble military service were not uniform across the Kingdom of Poland. Significant differences existed, for instance, in Red Ruthenia.[7] These differences had important implications for military obligations, similar in form to those of village mayors and vogts. For this reason, these obligations will be discussed in a separate section of the article.

Equipment

The smallest military unit among knights in the Kingdom of Poland was known as the 'lance' (Latin: *hasta*, *lancea*; Polish: *kopia*).[8] This unit was believed to consist of one heavily armed rider and two lightly armed mounted warriors.[9] While the lance was a standardised accounting unit in the Teutonic Order – used to calculate wages or troop numbers (e.g., a detachment of 100 lances equated to 300 horses)[10] – the situation in Poland was more complex.[11] Despite historians simplifying the lance to three armed riders, many variations existed. The number of people comprising a lance ranged from two to as many as five combatants. There is no doubt that the lance was an essential organisational unit for fulfilling military obligations. Unfortunately, little information is available on how knights organised and equipped their retinues.

One or more lances formed a retinue, varying widely in size. These retinues were combined into the basic tactical unit of medieval Poland: the banner. Most banners consisted of knights from specific lands (*terra*) – territorial administrative units of the Kingdom of Poland. For instance, knights owning estates in a particular administrative

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6 Bömelburg H.J. 1999, 46–47.

7 Kurtyka J. 2000, 83.

8 Bardach J. et al. 1985, 104.

9 Ginter K. 2008, 265.

10 Ekdahl S. 2008, 349; Ginter K. 2008, 67.

11 Ginter K. 2008, 65–66; Kukiel M. 1929, 17.

region served in the banner of Kraków land. Private (organised by magnates), familial (formed by specific families),[12] or royal banners (e.g., the Court or Chasing banners, including courtiers) were also formed.

One of the primary sources on the rules of knightly military service is the afore-mentioned *Statutes*, Poland's first attempt at legal unification, though not entirely successful. Article 124[13] of the *Statutes* mentions that knights were obliged to serve in arms 'as best as they can' (*servire in armis, sicut melius potentatur*).[14] This phrase indicates that knights (*barones et nobiles*) were required to equip themselves as well as their financial situation allowed. This article was very general, making it challeng-ing to define what 'the best possible way' meant, leaving room for abuse by the gen-try.[15] Lawyers were aware of this issue, and Article 144[16] of the *Statutes* clarified that the quality and extent of obligations depended on the knight's wealth.[17] This gave the king greater control over the extent to which knights fulfilled their duties. However, this article was part of the so-called 'petitions' – a portion of the *Statutes*[18] that never came into force and remained a mere proposal.

Area of Operations and Remuneration

One of the key aspects of legal regulations concerning military service in the King-dom of Poland was whether the nobility was to be deployed in wars conducted within the Kingdom's territory or beyond its borders. Historical documents distinguish be-tween defensive campaigns, considered an obligation of the noble estate (*comunitas nobilium*), and external wars, deemed part of the monarch's private policy. This du-ality translated into varied responsibilities and rights for the knights, depending on whether they were defending the country's territory or engaging in offensive actions. These issues were addressed in the *Statutes* of Casimir the Great, where the legisla-tor emphasised: 'But beyond the Kingdom's borders, he is not obliged to serve us un-less he receives appropriate remuneration or is personally requested by us'. As such, knights were obliged to serve in the country's defence without payment. However, for foreign expeditions, they had the right to expect satisfactory compensation, though the amount or timing was not specified.

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12 Mosingiewicz K. 1984, 124.

13 Due to edition by Romuald Hube, it was article no. 17.

14 'De servicio exhiben(do). Declaramus eciam (et) decernimus, quod barones et nobiles nostri terre Polonie nobis et nostris succesoribus in terra et regno Polonie servire in armis, sicut melius po-tentatur, teneantur; sed extra [metas] regni non teneatur servire nobis, nisi ipsis competens sa-tisaccio impendatur, vel per nos petiti'. AKP 1921, 42; Hube R. 1881, XLIII.

15 Spieralski Z. 1958, 419.

16 Due to edition: Hube R. 1881, it was article no. 37.

17 Hube R. 1881, LI.

18 Kutrzeba S. 2017, 341–343; Ginter K. 2008, 249.

The privilege of Louis I of Anjou, adopted in Košice in 1374, reaffirmed the knights' duty to serve in defensive wars, while information on offensive campaigns abroad was omitted for unknown reasons. More details regarding knightly remuneration appear in privileges issued by Władysław II Jagiełło. In a document issued in Kraków (1386),[19] the king assured that he was obliged to pay knights for any foreign expedition. If the king paid the army but the campaign did not take place, the nobility was required to be ready for another foreign expedition within two years. If such a campaign occurred, they were to participate without further pay. This clause suggests that remuneration for offensive wars was already in place. Further information on the military obligations of knights was provided in the second privilege of King Władysław II, issued in Piotrków (1388).[20] This document reaffirmed the knights' duty to defend the Kingdom under previously established terms and clarified conditions for participating in foreign campaigns. The king guaranteed five marks (Polish: *grzywna*)[21] for each 'lance' participating in such expeditions. This was the first detailed mention of remuneration in privileges granted to Polish knights. These details were repeated in subsequent privileges issued in Brześć (1425),[22] Jedlnia (1430), and Kraków (1433). Unfortunately, few records confirm the king's fulfilment of this obligation.

Existing notes in royal court expenditure books from the reigns of Władysław II and Jadwiga only concern individual knights. For example, a knight named Drogosz

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19 '4. Promittimus eciam, quod quocienscumque et quandocumque nobiles terrarum regni Polonie nobis requirentibus ad expedicionem et ad repellendam seviciam hostium nostrorum extra metas terrarum suarum processerint, ipsis satisfaccionem condignam. tam pro dampnis [...] gratanter impendemus et impendi faciemus.

   5. In casum (sic) autem, in quem (sic) aliquis hostis regni aliquam terrarum aperte vel occulte intraverit et nobiles illius terre cum ipso hoste intra metas terre ipsorum conflictum fecerint, ipsis pro [...] dampnis notabilibus satisfaccionem impendemus'. The First Kraków Privilege of Władysław Jagiełło, granted as King of Poland. Kraków, February 18, 1386. CE 2. 1891, 8.

20 '2. nobis facienda retinere volumus penitus et habe re Promittimus etiam quod si tempore se offerente et necessitate urgente in spem alicujus expeditionis futurae hostium et aemulorum insultus et hostilitates sentien tes terrigenis nostris pecunias videlicet quinque marcas super hastam dare vel distribuere nos contingat casu vero seu successu temporis offerente dum infra spatium duorum annorum post distributionem pecuniarum sic ut praemittitur fa ctam ad expeditionem non processerimus extunc iidem terrigenae ab hujusmodi pecuniis et à servitiis ratione praedictarum pecuniarum faciendis erunt soluti pe nitus et (3.) exemti Si vero infra decursum eorundem duorum annorum ad expe ditionem cum eisdem terrigenis nostris transitum fecerimus et extra metas regni processerimus extunc predicti terrigenae ab eisdem pecuniis et a servitiis praetex tu earundem similiter sint soluti Absolvimus insuper et liberamus omnes et sin gulos omnium nostrorum terrigenarum kmethones ab omnibus solutionibus contri butionibus exactionibus vecturis laboribus et equitaturis angariis gravamini bus frumentorum donationibus sep vulgariter dictís'. Privilege of Władysław Jagiełło. Piotrków, February 29, 1388. JP 1831, 192.

21 1 mark = 48 groschen.

22 '6. Item promittimus insuper et spondemus, quod dum ad requisicionem nostram nobiles nostri regni extra metas eiusdem regni ad repellandam (sic) hostium seviciam transferre contingerit, ipsis satisfaccionem condignam pro captivitate ceterisque dampnis notabilibus faciemus. [...] In casu vero, quo aliquis emulus regni nostri quocumque modo regnum ipsum intraverit et cum eodem conflictum intra metas ipsius regni terrigenas nostros facere contingerit: eisdem terrigenis pro captivitate dumtaxat; si vero extra metas id ipsum fieri contingerit, tunc et pro dampnis, si que quod absit incurrerint, et pro captivitate satisfaccionem condignam impendere (sic)'. The privilege granted by Władysław Jagiełło in recognition of the nobility's acknowledgement of his son Władysław as heir to the throne. Brześć, May 1, 1425. CE 1891, 188.

(originally: *Drogossio*) received 50 marks in 1394 for assembling ten 'lances'.[23] The reasons for such singular payments are unclear. Perhaps these knights performed specific services for the monarch, such as escort duties, though no direct evidence supports this hypothesis. The issue of general remuneration for the nobility remains obscure. While thousands of knights participated in wars, there is no evidence of systematic payment. It is unclear whether the obligation was fulfilled universally or whether the king's authority led the nobility to forgo or limit their claims.

Prisoners of War

Another issue related to military service during Jagiełło's reign, regulated by royal privileges, concerned the ransom of prisoners. For instance, Louis I of Anjou, in a privilege for Jan of Tarnów, promised to ransom him if he were captured during the war, expecting in return all prisoners taken by him.[24] While the broader significance of such individual declarations is uncertain, they reflect contemporary practices and noble expectations regarding military service. The first general privilege addressing the issue of prisoners was the Kraków privilege (1388),[25] in which Władysław Jagiełło secured his rights to prisoners captured by Polish knights. The king could exchange them or release them for ransom, both scenarios benefiting him.[26]

These provisions proved relevant during the war with the Teutonic Order (1409–1411), during which Poles captured many prisoners. Some were captured twice,[27] requiring the Order to pay ransoms, especially for Western European knights, to maintain alliances and avoid international embarrassment. The potential profitability of ransoms is illustrated by the case of Nikolaus von Kottovitz, a Teutonic knight captured in 1410, who paid 150 *sexagenas* Prague groschen (Latin: *sexagena* = 60 groshen; German: *Schock*; Polish: *kopa*) and provided armour and two crossbows for his release.[28] The ransom of Teutonic prisoners was the subject of peace negotiations in Toruń and the following year. Ultimately, the Order agreed to pay 100,000 *sexagenas* of Prague groschen,[29] covering war damages and ransom for prisoners, finalised in 1412. Such profits, though rare, could offset the costs of war. The king's rights to prisoners

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23 RD 1896, 196. There were more such payments noted in registers.

24 'quod captiuati per iam dictum Johannem, aut suos homines in dicta gwerra vel expedicione'. AKLS 1888, 56.

25 '6. Captivos autem, per nobiles regni Poloniae predicti tam intra metas regni quam eciam extra detentos, pro nobis reservamus'. Kraków privilege granted by Władysław Jagiełło. Kraków, February 18, 1386. CE 1891, 9.

26 Śliwiński B. 1993, 320. Similar dealings were present in other European countries, like the Teutonic Order. See: Ekdahl S. 2008, 353.

27 Ekdahl S. 2008, 356.

28 Pelech M. 1987, 138; Grabarczyk T. 2000, 59.

29 Długosz J. 2009a, 202–203; Jóźwiak S. et al. 2010, 71.

extended to the 1414 war against the Teutonic Order. Jan Długosz mentions that knights delivered 60 prisoners to Jagiełło during the campaign.[30] However, deviations from this practice occurred such as in December 1410, when Maciej of Wąsosz negotiated a ransom for Kasper Schönefeld, a prisoner captured at Koronowo on October 10, 1410, bypassing the king.[31] This case highlights the fact that knights sometimes claimed ransoms for prisoners despite royal rights, which raises questions regarding the king's awareness or approval of such actions.[32]

Royal rights to prisoners remained unchanged until 1430. Revisions in 1433[33] stipulated that while the king retained the rights to captured enemies, he was required to pay the captors for them. This shift reduced the king's absolute authority over prisoners, allowing the nobility to ransom their captives independently. Records of such transactions include Jan Kuropatwa of Łańcuchów, who detained Teutonic knights captured on September 1, 1435, during the battle at Ukmergė (Polish: *Wiłkomierz*) on his estate to secure ransoms.[34]

Provisions

Supplying a large army during campaigns was a challenging logistical task. Władysław Jagiełło addressed this issue in an edict issued in Lublin in 1432[35] during a campaign against the rebellious Lithuanian prince Švitrigaila, the king's youngest brother. Most provisions in the edict concerned maintaining order during marches and punishing knights who looted Polish territories. Jagiełło referenced an earlier, currently unknown today document from Casimir the Great's reign. Looting certainly was one of the methods of acquiring food during wars. Moreover, knights did not limit their activities to enemy territories but also plundered Polish lands. The king sought to prevent such incidents. Władysław Jagiełło also forbade troops from staying in villages and towns, as this would create favourable conditions for looting and foster conflicts with the local population. It is difficult to determine the content of earlier instructions, but their existence suggests that problems with knights had a longer history.[36]

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30 Długosz J. 2009b, 41.

31 Niewiński A. 2020, 183–184; Jóźwiak S. 2010, 99.

32 Gryglewski K. 2023, 64–65.

33 '7. Et si quis ex nostris baronibus nebilibus proceribus seu terrigenis aliquem vel aliquos captiwum vel captivos, cuiuscumque status condicionis aut eminencie fuerit, captivaverit: illi vel illis promittimus a quolibet huiusmodi captivo dare et solvere unam sexagenam monete in regno nostro currentis et recipere pro nobis captiwum depactandum, exceptis civibus et plebeis, quos ille vel illi depactent, qui eos duxerit seu duxerint captivandos, pro libito sue voluntatis'. Second Kraków privilege of king Władysław Jagiełło. Kraków, January 9, 1433. CE, 309–310.

34 Sochacka A. 2009, 15–16.

35 Kutrzeba S. 1930, 1–7.

36 Kaczmarczyk Z., Weyman S. 1958, 55.

The latter part of the edict outlined fixed food prices that were to be enforced in the military camp. On the one hand, this prevented sellers from inflating prices; on the other, participants in the campaign could not coerce merchants into reducing the prices. The camp was a large military gathering where food was often scarce. These provisions, likely based on previous experiences, reflected the king's concern for the knights' well-being.

Individual Obligations

The general privileges mentioned above (up to the end of Władysław Jagiełło's reign) did not, however, apply to the nobility of the Ruthenian lands. These areas had been annexed to the Kingdom of Poland by Casimir the Great as a result of prolonged wars that ended in 1366. The population of the newly annexed territories operated under their laws, which differed significantly from those in Polish lands. Consequently, when Casimir the Great issued his legal codification known as the *Statutes*, they did not cover the territory of Red Ruthenia. After Casimir's death, these lands became the focus of Polish-Hungarian rivalry. Ultimately, Louis of Anjou (died 1382), king of Hungary and Poland, placed them under Hungarian administration. This decision was not accepted by the Polish side, which took advantage of Hungary's internal crisis after Louis's death and in 1387 ousted the Hungarian garrisons, restoring Polish control over the Ruthenian territories.

The military obligations of Polish knights granted estates in these lands were not determined by the laws in force in Polish territories (the *Statutes* of Casimir the Great) but by individual documents issued to them.[37] These documents specified, among other things, the form and scope of the military service required of a given knight. As a result, the knights had varied obligations. The factors determining the differences in military service among landowners in Ruthenia remain unclear. Existing research has not yet linked this variability to the size of the estates granted to the knights.[38]

How military service was regulated in Ruthenia placed its knights in a less favourable position compared to the nobility in other parts of the Kingdom of Poland. It is, therefore, not surprising that the knights from Ruthenia sought to eliminate this inequality. A good opportunity to achieve this arose with the birth of Władysław, the first son of Władysław Jagiełło, in 1424. The king wanted to ensure his son's succession to the throne, which required the nobility's approval. The Ruthenian nobility decided to leverage this situation and began demanding privileges equal to those already enjoyed by the rest of the Polish knights. It appeared that their goal was achieved in 1425 when a privilege issued in Brześć Kujawski equalised the military burdens of the

37 Kurtyka J. 2000, 86.
38 Zajączkowski S.M. 1978b, 81.

Ruthenian nobility with those of other Polish territories. However, this document ultimately never came into force. The conflict intensified in 1427 when the king ordered the Ruthenian knights to prepare for a campaign against the Ottomans. Many refused, conditioning their participation on receiving payment of five marks per 'lance' before the campaign. They were thus demanding compensation similar to that guaranteed by earlier privileges to the knights of Polish lands. The king responded with repressions and confiscated the lands of disobedient knights, but once the situation was under control, he released the captives and returned most of the confiscated properties. Only in 1430, in the privilege issued at Jedlnia and confirmed in Kraków in 1433, did the king agree to equalise the rights of the Ruthenian nobility with those of the rest of the Polish Kingdom. This was ultimately realised in 1434, when Władysław III (1434–1444), son of Władysław Jagiełło, ascended the throne in Kraków, and the Kraków privilege was extended to the knights of the Ruthenian lands.[39]

A similar form of defining military obligations through individual duties applied to village heads and town administrators managing settlements established under German law across the Kingdom of Poland, including Ruthenian territories. The specifics of their military service were outlined in location charters, detailing the quality of equipment, the number of troops and the price of horses. These obligations also varied significantly – some village heads were required to participate in all types of military campaigns, others only in defensive actions, and still others only within their voivodeship.[40] The determination of how administrators were to fulfil their military service in individual documents made them comparable in this regard to the nobility of Ruthenia.

Sculteti and *advocati* provided valuable support during military mobilisation. They served as heavily or lightly armed cavalry,[41] with equipment not significantly different from that of the nobility. For instance, in 1423, a document concerning Częstochowa required the wójt to serve with one heavily armed companion on a good horse.[42] Similarly, the vogt of Stara Sól (near Przemyśl) in 1421 was obligated to serve personally and also provide a lancer and four archers.[43] *Sculteti* were required to serve at their own expense in wars within the Kingdom of Poland; for campaigns beyond the Kingdom's borders, the king had to pay them.[44] In private settlements, landlords typically paid the village heads, who served within their lord's contingent.[45] From 1423 (the privilege of Warta), the role of village heads began to decline when Władysław

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39 Ginter K. 2008, 262.

40 Zajączkowski S.M. 1973, 27–28.

41 Zajączkowski S.M. 1973, 35, 37.

42 Zajączkowski S.M. 1978a, 37.

43 MAML 1890, 33; Zajączkowski S.M. 1978a, 37.

44 Zajączkowski S.M. 1973, 30.

45 Kaczmarczyk Z., Weyman S. 1958, 56.

Jagiełło granted the nobility greater control over this group. Knights were allowed to gradually annex and incorporate the lands of village heads into their estates, leading to the atrophy and eventual marginalisation of this group during wars. As a result, the nobility strengthened their position, eliminating a potentially competing group. This process occurred mainly during the 15th century.[46]

The military organisation based on individual charters was undoubtedly advantageous for the monarch, allowing him to dictate the scale of obligations and control their fulfilment. Unfortunately, as the nobility's influence grew, this military service declined. Ruthenian knights were incorporated into Polish law and served 'to the best of their abilities', limiting the monarch's ability to ensure proportional military service based on wealth, while the role of village heads and vogts in the army was marginalised.

<p style="text-align:center">***</p>

The military obligations of knights during the reign of Władysław Jagiełło underwent significant changes. The *Statutes* of Casimir the Great addressed this issue in very general terms. His successors clarified these provisions under pressure from the knights. There is no doubt that privileges were most often proclaimed at moments when the monarch needed the support of society. For instance, Louis I of Hungary had to secure the Polish throne for one of his daughters. Władysław Jagiełło sought to strengthen his position at the beginning of his reign and later to ensure the inheritance of the crown by his son. These circumstances were favourable for the knights to put forward their demands. The changes enforced in such situations shaped laws that became the cornerstone of the future power of the nobility in the Kingdom of Poland.

A particularly interesting aspect of this evolution was its benefits to military campaign participants. Aside from two obligations – the defence of the Kingdom and the right to take prisoners – these changes primarily favoured the nobility. They acquired the right to compensation for campaigns conducted beyond the borders of the country, indemnities for lost equipment and captivity, and later, even for captured prisoners. These changes had a fiscal nature, and their implementation required the monarch to have sufficient financial resources. It is unclear whether these obligations were honoured by the king, but they undoubtedly posed a challenge to the royal treasury. These concessions enhanced the financial power of the nobility while simultaneously weakening the king's influence. Trends in how military duties evolved also reflected the nobility's expectations and can be seen as a means to fulfil their aspirations. These aspirations concerned financial benefits but also included matters such as participation in significant state decisions, like the initiation of wars or their conduct.[47]

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46 Łysiak L. 1964, 80–81.
47 Burkhardt J. 2016, 200–202.

The described changes in the knights' military service were just one of many areas of political struggle between the king and the nobility. These conflicts shaped the political system of the Kingdom of Poland, where the knights emerged as the dominant force with significant influence on political decisions and their implementation. An interesting aspect of this process was also the awareness of the nobility as a cohesive estate. It seems that these changes were not the result of a coordinated and planned consolidation of the entire estate within the Kingdom. Such a pattern can only be observed at a territorial level (at most, at the provincial level). One notable instance occurred in 1427 when knights from Ruthenian lands demanded equal rights with the rest of the country. Perhaps the fact that this conflict involved only one estate from a single province (which had different legal foundations for military service compared to the rest of the Kingdom) allowed Władysław Jagiełło to quell these demands. This suggests that the nobility from other provinces did not identify with their issues. Local communities had a sense of certain unity, but it did not yet exist on a national level.[48] It seems that occasionally similar demands arose in various regions of the Kingdom, leading to temporary coordination of actions, but only on an ad hoc basis. Perhaps the success of enforcing such demands contributed to the formation of a broader awareness. This article merely outlines the main aspects of this complex issue. Nonetheless, further research is necessary to better understand not only the legal aspects of military obligations but also the mentality of people at that time.

References

Published works

AKLS 1888. *Archiwum Książąt Lubartowiczów Sanguszków* 2. Z. Radzimiński (ed.), Lwów.

AKP 1921. *Archiwum Komisji Prawniczej. Akademii umiejętności polskiej* 2: *Kodeks Królewski*. Kraków.

Bardach J., Leśnodorski B., Pietrzak M. 1985. *Historia państwa i prawa polskiego*. Warszawa.

Bömelburg H.J. 1999. *Ständische Reformen in mitteleuropäischen Staatsverbänden im Vergleich: Die Reichreformbewegung und die Exekutionsbewegung in Polen (1410–1580)*, In: *Modernizacja struktur władzy w warunkach opóźnienia. Europa Środkowa i Wschodnia na przełomie średniowiecza i czasów nowożytnych*. Warszawa, 35–57.

Bogucki A. 2007. *Problem prawa rycerskiego w Polsce*. In: *Społeczeństwo Polski średniowiecznej* 11. Warszawa, 59–89.

Burkhardt J. 2016. *Frictions and Fictions of Community: Structures and Representations of Power in Central Europe, c. 1350–1500*. "The Medieval History Journal" 19(2), 191–228.

CE 1891. *Codex Epistolaris. Seculi decimiquinti* 2. A. Lewicki (ed.), Kraków.

48 Samsonowicz H. 2007, 112.

Długosz J. 2009a. *Roczniki czyli kroniki sławnego Królestwa Polskiego*. Book 10 and 11: *(1406–1412)*. S. Gawęda et al. (eds), Warszawa.

Długosz J. 2009b. *Roczniki czyli kroniki sławnego Królestwa Polskiego*. Book 11: *(1413–1430)*. S. Gawęda et al. (eds), Warszawa.

Ekdahl S. 2008. *The Teutonic Order's mercenaries during the "Great War" with Poland-Lithuania (1409–1411)*. In: *Mercenaries and paid men. The mercenary identity in the Middle Ages*. J. France (ed.), Leiden–Boston, 345–361.

Ginter K. 2008. *Udział szlachty polskiej w pospolitym ruszeniu w XIV i XV wieku. Aspekty prawne i stan faktyczny*. Kraków.

Grabarczyk T. 2000. *Piechota zaciężna Królestwa Polskiego w XV wieku*. Łódź.

Gryglewski K. 2023. *Wojna i pieniądze w czasach Władysława Jagiełły*. Master's dissertation wrote under supervision of dr. hab. T. Grabarczyk, prof. UŁ. University of Lodz. Faculty od Philosophy and History.

Hube R. 1881. *Prawo polskie w 14-tym wieku: ustawodawstwo Kazimierza Wielkiego*. Warszawa.

Jóźwiak S. 2010. *Jeńcy strony krzyżackiej po bitwie pod Koronowem*. "Zapiski Historyczne" 75(2), 87–102.

Jóźwiak S., Kwiatkowski K., Szweda A., Szybkowski S. 2010. *Wojna Polski i Litwy z Zakonem Krzyżackim w latach 1409–1411*. Malbork.

JP 1831. *Jus polonicum, codicibus veteribus manuscriptis et edidit*. J.W. Bandtkie (ed.), Warszawa.

Kaczmarczyk Z., Weyman S. 1958. *Reformy wojskowe i organizacja siły zbrojnej za Kazimierza Wielkiego*, Warszawa.

Kukiel M. 1929. *Zarys historji wojskowości w Polsce*. Kraków.

Kurtyka J. 2000. *Z dziejów walki szlachty ruskiej o równouprawnienie: represje lat 1426–1427 i sejmiki roku 1439*. "Roczniki Historyczne" 66, 83–120.

Kutrzeba S. 1930. *Słowo o statucie wielkopolskim Kazimierza Wielkiego*. In: *Księga pamiątkowa ku czci Władysława Abrahama* 1. Lwów, 341–350.

Kutrzeba S. 2017. *Polskie ustawy i artykuły wojskowe od XV do XVIII wieku*. Oświęcim.

Laskowski O. 1943. *Grunwald*. Londyn.

Łysiak L. 1964. *Własność sołtysia (wójtowska) w Małopolsce do końca XVI wieku*. "Zeszyty naukowe Uniwersytetu Jagiellońskiego" 94. Prace prawnicze 15. Kraków.

MAML 1890. *Materiały archiwalne wyjęte głównie z metryki litewskiej od 1348 do 1607 roku*. A. Prochaska (ed.), Lwów.

Mosingiewicz K. 1984. *Chorągwie rodowe i ich dowódcy w bitwie pod Grunwaldem*. In: *Prace z dziejów państwa i Zakonu Krzyżackiego*. Toruń, 107–126.

Nadolski A. 1994. *Lądowa technika wojskowa od roku 1334 do końca XV wieku. Ogólna charakterystyka*. In: *Polska technika wojskowa do 1500 roku*. Warszawa, 186–198.

Niewiński A. 2020. *Jeniectwo wojenne w późnym średniowieczu. Studia nad problematyką zjawiska w Polsce w kontekście zachodnioeuropejskim*. Oświęcim.

Pelech M. 1987. *W sprawie okupu za jeńców krzyżackich z wielkiej wojny (1409–1411)*. part 1. "Zapiski Historyczne" 52(1), 131–152.

Pelech M. 1987. *W sprawie okupu za jeńców krzyżackich z wielkiej wojny (1409–1411)*. part 2. "Zapiski Historyczne" 52(2), 95–112.

RD 1896. *Rachunki dworu króla Władysława Jagiełły i królowej Jadwigi z lat 1388 do 1420.* F. Piekosiński (ed.), Kraków.

Samsonowicz H. 2007. *Świadomość zbiorowa wspólnot społecznych w Polsce XIII–XV wieku.* In: *Społeczeństwo polski średniowiecznej* 11. Warszawa, 91–112.

Sochacka A. 2009. *Jeńcy u Jana Kuropatwy w Łańcuchowie w 1435 roku.* In: *Studia łęczyckie* 1. Łęczyca, 15–27.

Spieralski Z. 1958. *Z problematyki szlacheckiego pospolitego ruszenia. Przyczynek do statutów Kazimierza Wielkiego*, "Studia i Materiały do Historii Wojskowości" 4, 414–424.

Szymczak J. 1989. *Produkcja i koszty uzbrojenia rycerskiego w Polsce XIII–XV w.* „Acta Universitatis Lodziensis". Łódź.

Śliwiński B. 1993. *O niektórych aspektach wykupu z niewoli jeńców-rycerzy w Polsce dzielnicowej i zjednoczonej.* In: *Ojczyzna bliższa i dalsza. Studia historyczne ofiarowane Feliksowi Kirykowi w sześćdziesiątą rocznicę urodzin.* Kraków, 311–321.

Zajączkowski S.M. 1973. *O wojskowych powinnościach sołtysów w Polsce w okresie monarchii stanowej.* "Studia i Materiały do Historii Wojskowości" 19(1), 23–59.

Zajączkowski S.M. 1978a. *Obowiązki wojskowe wójtów w państwie polskim w okresie monarchii stanowej.* "Studia i Materiały do Historii Wojskowości" 21, 3–44.

Zajączkowski S.M. 1978b. *W sprawie wielkości pocztów rycerskich w Polsce w okresie monarchii stanowej.* "Acta Universitatis Lodziensis, Zeszyty Naukowe UŁ. Nauki humanistyczno-społeczne. Folia Historica" series I. 29, 61–88.

Michaël Green
University of Lodz
e-mail: michael.green@filhist.uni.lodz.pl
iD https://orcid.org/0000-0002-5488-3828

Grand Tour Correspondence in the Time of War:
The Early Stages of the War of the Spanish Succession in the Letters of Henry Bentinck, Viscount Woodstock and His Tutor Paul Rapin-Thoyras (1701–1702)

Summary: Letters sent during a Grand Tour, an early modern educational journey, are often considered important sources for the history of tourism and travel, history of diplomacy or family relations. However, the example of the correspondence of the Anglo-Dutch nobleman Henry Bentinck, Viscount Woodstock and his Huguenot tutor, Paul Rapin-Thoyras with Woodstock's father, Hans Willem Bentinck, the 1st Earl of Portland, demonstrates that these letters can also contain important information on various military aspects and provide another view on known events such as during the War of the Spanish Succession. In this article, several examples of such cases are examined, together with the alternative, fuller story of the capture of the French Marechal De Villeroy by the Imperial forces. Portland, whose letters are not preserved, was a close friend of King William III of England and was a key figure in Anglo-Dutch politics at the time, thus being in the midst of the events. The analysis is conducted based on Grand Tour letters written in French and sent from various locations both by the pupil and his tutor.

Keywords: War of the Spanish Succession, Grand Tour, correspondence, letters, intelligence, army, military

Introduction

The Grand Tour was the highest point of one's education in the late seventeenth and throughout the eighteenth centuries. It was a journey, which was supposed to get the young man (as it was usually males who undertook it) acquainted with the traditions of different countries, their languages, as well as to reinforce family relations with

foreign connections and present the offspring to them.[1] It was therefore the obvious choice for the aristocracy of the time to send their offspring on such an educational journey. When in the summer of 1700, Hans Willem Bentinck, the 1st Earl of Portland, a prominent Anglo-Dutch politician and courtier, a close friend of William III, Stadtholder of Holland and King of England, decided upon the grand tour for his son, Henry Bentinck, Viscount Woodstock, the political situation in Europe was aggravated by growing tensions between the Holy Roman Empire and France, who were both interested in obtaining the Spanish crown for their respective heirs. Although there were talks concerning the possible outbreak of war, Portland decided that the journey should nonetheless proceed.[2]

Portland decided that Woodstock's head tutor, Paul Rapin-Thoyras, the future author of the first comprehensive history of England, should plan the trip and accompany Woodstock as his travelling tutor. He was tasked with overseeing the journey, taking care of finances and reporting to the father on the trip's progress. The Grand Tour began in the second half of 1701 from The Hague in the United Provinces, and eventually lasted until May 1703, though the last year was undertaken by Woodstock alone, with his tutor returning to the United Provinces in the autumn of 1702. During the Grand Tour, it was customary for the offspring to write letters home, as is the case here, in order to report on the journey's progress and the most important events. The War of Spanish Succession broke out in the spring of 1702, but the first signs were already being seen in the summer of 1701, just as Woodstock and Rapin were finalising their preparations. It was therefore present in the background of the Grand Tour from the start.

The correspondence from Woodstock and Rapin to Portland is fully preserved, whereas Portland's responses are not. This collection provides a unique perspective on the early stages of the war, sometimes presenting alternative versions of well-known events, as I will discuss further in the article. In the following passages, I will analyse some of the references Woodstock and Rapin made to the war, which was never the main subject of their letters, in particular focussing on potential intelligence information and on the capturing of the French commander, the Duc de Villeroy, which is portrayed differently here compared with existing scholarship. While previous studies have explored the educational aspects of their Grand Tour and have examined the correspondence in terms of privacy, its war-related content remains underexplored.[3]

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1 There is a wide range of scholarly research on the nature of the Grand Tour, such as: Chaney E. 1998; Black J. 2003; Sweet R., Verhoeven G., Goldsmith S. (eds), 2017.

2 For a details study of the War of the Spanish succession see: Pohlig M., Schaich M. (eds), 2018.

3 I have edited the entire correspondence in: Green M. (ed.), 2021. The original introduction in English to this volume has been published as: Green M. 2025. Previously, I have also written about the educational aspect of this grand tour in: Green M. 2014, 465–478. The event of capturing Villeroy has been briefly discussed in the introduction to the correspondence edition. All references in this article as to the printed edition of this correspondence, translated by the author from French to English.

Before delving into the subject matter of this article, let us briefly understand the type of source that we encounter here. Letters are one of the components of the so-called egodocuments, which are texts written by oneself about oneself.[4] In the case of family letters, to which the correspondence discussed here belongs, they are part of the realm of private writing, i.e. aimed at a specific circle of people.[5] Importantly, one needs to take into account that letters sent in the early modern period could be intercepted and read by an unauthorised person, despite some legislation on that matter in countries like Denmark-Norway and France. Even when the letters had reached the addressees untouched, they would have often been read by the secretary, or read aloud to the family or members of the household. The household is considered to be one of the so-called heuristic zones of early modern privacy, which means that there was a certain amount of access to information between various inhabitants of the house.[6] It was therefore understood by the writer that not everything could be confined to paper. Besides that, letter-writing in this specific case had an educational purpose, as it was customary for children, even older ones to write to their parents to practice their epistolary skills, and during the grand tour the goal was to inform the family of the whereabouts of the travellers and their well-being. Building on this context, the focus can move to several letters written as part of the previously mentioned Grand Tour correspondence that address various aspects of the War of the Spanish Succession.

After six months of preparation by Jean Rou (1638–1711), who tutored the young Viscount Woodstock in the history of Europe for context, and endless negotiations with his father over the route, the journey began on October 22, 1701, from The Hague, proceeding through the German States to Italy and back.[7] The journey ended on May 30, 1703. The correspondence, written in French, mentioned the word 'guerre' (war) for the first time in the first letter, written by Rapin to Portland from The Hague, before the journey started: 'I take the liberty of sending you [Portland – M.G.] a project of the journey abridged as I made before all these noises of the war.'[8] This initial plan also mentioned, in addition to those previously listed Hungary, Demark, Sweden, Austria and Southern Italy, as well as France to Calais. All these would be abandoned due to the conditions on the ground. Woodstock echoes the rumours, as on March 29, 1701, Woodstock writes, still from his residence in The Hague, that he doubts it would be a good idea to travel, as if the war starts, and he would not be

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4 Dekker R. 1989, 61–71.

5 On letter writing, see: Daybell J., Gordon A. (eds), 2016; Daybell J. 2024.

6 Zones of privacy were developed by Mette Birkedal Bruun, and elsewhere I have proposed an alternative version of this methodological tool. See: Birkedal Bruun M. 2022, 12–60; Green M., Huysman I. 2023, 13–26.

7 Green M. 2015, 350–353.

8 'Je prends la liberté de lui envoyer un projet de voyage en abrégé tel que je l'avais fait avant tous ces bruits de guerre.' Green M. (ed.), 2021, 81.

part of the army, he would then be considered coward.[9] His preference was to join the army instead, as the Dutch and the English would connect their powers to fight against the old enemy – the French.

The first letter written from the journey dates October 31, 1701, and was sent from Dusseldorf, and Woodstock reassures his father that: '[…] my journey will be as it is marked on the paper that Mr Rapin had the honour to give you, in case that any minor change could happen, I will not neglect to inform you about it as soon as possible.'[10] This makes it clear that the travelling party is aware that the war would probably make significant changes to their plans.

On the way through various German towns, it seems that Rapin and Woodstock were also collecting intelligence for Portland that could be useful for the war. For example, in a letter sent by Rapin from Frankfurt on November 15, 1701, he informs the earl that after dinner they climbed up to the castle of Eberstein (mentioned as Erbreitstein by the author), in a carriage of six horses, something that Rapin thought would be impossible because of the steepness of the mountain. The position of this castle, which is located on a hill on the river Murg in Bavaria, is so advantageous that it can only be attacked from one point, and it takes no less than three armies to block it. In the book *Topographia Archiducatus Carinthiae*, the author explains that it is very big and built in an 'old-fashioned' way.[11]

> The French cannonaded and bombarded it while the Elector was in his house, which made the Elector very angry, as far as I was able to understand from his speeches. Mr. Baron de Saffich[12] told us that Mr. de Boufflers[13] had shown him an order signed by the King of France, to sack and destroy everything that belonged to the Elector of Trier without sparing anything, being in despair because the Elector had not wanted to put Coblenz in his hands, at the time of the King's [William III – M.G] passage to England.[14]

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9   Green M. (ed.), 2021, 84.

10 '[…] mon voyage, ce sera comme c'est marqué sur le papier que Mr. Rapin a eu l'honneur de vous donner, en cas qu'il y puisse arriver le moindre changement, je ne manquerai pas de vous le faire savoir aussitôt.' Green M. (ed.), 2021, 97.

11 Valvasor J.R. 1688, 33.

12 Most likely it is Carl Caspar, baron of Leyen zu Saffig (d. 1703) and held the position of obermarschall of the city of Treves. See: Green M. (ed.), 2021, 103, footnote 80.

13 Louis François duke of Boufflers and count of Cagny (1644–1711), one of the French generals during the War of the Spanish Succession. See: Green M. (ed.), 2021, 104, footnote 81.

14 'La situation de ce château est si avantageuse qu'il ne peut être attaqué que par un seul endroit, et il ne faut pas moins de trois armées pour le bloquer. Les Français le canonnèrent et bombardèrent pendant que l'Électeur [Maximillian II Emmanuel] était dans sa maison; ce qui fâcha beaucoup l'Electeur, autant que je l'ai pu comprendre de ses discours; et Mr. le baron de Saffich nous dit que Mr. de Boufflers lui avait fait voir un ordre signé par le roi de France, de saccager et détruire tout ce qui appartiendrait à l'électeur de Trèves sans rien épargner, étant au désespoir de ce que l'Électeur n'avait pas voulu lui mettre Coblence entre les mains, dans le temps du passage du roi [Guillaume III] en Angleterre.' Green M. (ed.), 2021, 104.

In the passage above, Rapin informs Portland in disguise of telling an old story of 1689, from the time of the Glorious Revolution, that the castle is located at a strategic point and cannot be easily taken. Yet, in 1701, Maximilian II Emanuel was on the French side, rather than the Holy Roman Empire, and as such was a potential enemy. Therefore, this information can indeed have a certain military value. This also reinforces the assumption that perhaps the letters sent to Portland from the Grand Tour were meant not only to inform about the whereabouts and deeds of the travelling party, but also to pass intelligence to the earl, who in turn would forward it to William III.

Fig. 1. Castle Eberstain (Source: Valvasor J.R. 1688, 34)

Such intertwining of information that could be considered militarily important with daily life during the Grand Tour happened repeatedly. Particularly interesting is Rapin's letter written in Munich on December 1, 1701. In the first part of the letter, he informs Portland of the people Woodstock and himself had met while passing through Frankfurt and Nuremberg. The last section of this description concerns the city of Augsburg, where after the usual meetings Rapin begins to detail something that potentially could have dual interpretations:

[…] the towers, by which the water is raised to more than 200 feet, to then distribute it into the various fountains of the city; a postern or secret door of a very particular invention, by which people can be let in during the night without there being any fear of surprise; this postern is composed of 4 or 5 large doors, and a drawbridge,

which open and close by themselves, without anyone ever being found in their path; a servant who is in the middle of a house more than 200 paces away, moves all these springs with surprising ease and promptness.[15]

While this passage could be completely innocent, telling Portland about the wonderful mechanical construction that Woodstock and Rapin observed along the way, this information could also be used by military intelligence to help capture the city.

The Capture of the Duc de Villeroy

Due to the limited scope of this article, it is worthwhile focusing on the most important piece of information that this correspondence provides – the capture of François de Neufville (1664–1730), duc de Villeroy, the commander of the French forces. Marechal de Villeroy gained his position following the injury sustained by Marechal Nicolas de Catinat (1637–1712) at the Battle of Chiari. Villeroy's Imperial counterpart was Prince Eugene of Savoy, who defeated his predecessor in Chiari, and then having conducted the siege of Mantua, captured the duke himself during the Battle of Cremona.

Rapin writes on February 11, 1702, from Vienna that Woodstock and himself were planning to go to Innsbruck, where they wanted to see the duke, who, according to rumours 'makes a very bad impression' (*fait une très mauvaise figure*), promising Portland to send a more detailed account of his capturing.[16] Woodstock, who sent his letter the same day as usual, echoes Rapin's words, saying that Villeroy 'resembles a knight in poor shape' (*ressemble au chevalier de la triste figure*).[17]

In a letter sent from Innsbruck on February 28, Rapin recounts that he and Woodstock had visited the Marechal the previous day (February 27, 1702). The Marechal received them amicably, trying to appear as one of Portland's friends. The obvious question is naturally why Woodstock and Rapin visited an enemy commander, and why they would express care for him and make an effort to help him in his captivity? This can be explained to some extent by the fact that both Woodstock and Rapin accompanied Portland, as already mentioned above a personal friend of William III, during his one-year-stay in Paris as the diplomatic envoy to the French Court in 1698, where they probably had the opportunity to meet Villeroy in person and establish

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15 '[…] les tours, par lesquelles on élève l'eau à plus de 200 pieds, pour la distribuer ensuite dans les diverses fontaines de la ville; une poterne ou porte secrète d'une invention très particulière, par laquelle on peut laisser entrer les gens durant la nuit sans qu'il y ait à craindre aucune surprise; cette poterne est composé de 4 ou 5 grandes portes, et d'un pont-levis, qui s'ouvrent et se ferment d'elles même[s], sans qu'on trouve jamais personne en son chemin; une servante qui est dans le milieu d'une maison éloignée de plus de 200 pas, fait mouvoir tous ces ressorts avec une facilité et une promptitude surprenante.' Green M. (ed.), 2021, 109.

16 Green M. (ed.), 2021, 145.

17 Green M. (ed.), 2021, 146.

personal connections with him.[18] There was obviously mutual recognition between Villeroy and Woodstock since the duke agreed to receive him in his prison. Perhaps, due to his very poor state and being frightened, he was hoping that through Woodstock he could somehow get some of his pleas to William III. Importantly, Rapin states that:

> What he told me agrees quite well with what I had the honour of writing to Your Excellency these last few days, except for a few circumstances which I did not know; He was taken by an Irish captain named Macdonnal, whom he offered 3,000 pistols and a regiment in France if he would let him go, but he refused him. Mr de Villeroy was slightly wounded by a blow from a partisan, which grazed his stomach, and by a sword wound to the hand, which is not much: he is very worried about his future.[19]

Here, the letter reveals details that the known accounts of the duke's capture do not mention. The existing accounts, for example, fail to mention the wounds he sustained in battle, yet they refer to Marquis de Crenan, who was with him during the battle and died from his injuries.[20] The diary of the Duc de Saint-Simon, often used by historians to gather information about the court of Louis XIV, states that Macdonnal (or Macdonald) requested 1,000 pistols for the duke's release.[21] Interestingly, the memoirs of Prince Eugene of Savoy mention a considerable amount of 10,000 pistols.[22] It appears that, due to the first-hand information provided by Villeroy to Woodstock and Rapin, this account is likely the most accurate.

On February 28, 1702, the day after the visit, Rapin informs Portland in his letter that Woodstock could not write a letter to his father because he visited the duke and offered the duke money (probably to help him maintain himself), which he refused.[23] Curiously, Rapin also states that Villeroy asked both Woodstock and himself to send a letter on his behalf to the Cardinal d'Estrées, which was nothing but an account of what had happened in Cremona.[24] The account of Woodstock of the same meeting with the duke was written on March 3, 1702, and sent from Venice. It is a slightly more

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18 Bentinck represented at the court his friend William III, Stadtholder of Holland and King of England. See: Bezemer-Sellers V. 1990, 99–130, here 99. On the almost lifelong friendship between the two, see the classic work: Grew M.E. 1924.

19 'Ce qu'il me dit s'accorde assez bien à ce que j'eus l'honneur d'écrire à Votre Excellence ces jours passées, à quelques circonstances près, que je ne savais pas; c'est un capitaine irlandais, nommé Macdonnal qui l'a pris, il lui offrit 3 mille pistoles, et un régiment en France, s'il voulait le laisser aller, mais il les refusa. Mr. de Villeroy fut un peu blessé d'un coup de pertuisane, qui lui effleura le ventre, et d'un coup d'épée à la main, qui n'est pas grand-chose : il est fort inquiet sur sa destinée.' Green M. (ed.), 2021, 150–151.

20 Daniel G. 1722, 420.

21 Saint-Simon 1876, 196.

22 Eugène of Savoy 1811, 263. See: Green M. (ed.), 2021, 150–151.

23 Green M. (ed.), 151.

24 'qui n'était qu'une relation de ce qui était arrivé à Crémone.' Green M. (ed.), 2021, 153.

detailed repetition of the text of Rapin, without the details about the circumstances of his capture but with those of the kindness shown to him by the captives.[25]

This particular example is a good illustration of how egodocuments can shed additional light and provide unknown details regarding important events. In this case, it is a first-hand account of Villeroy, told to a witness, from which the reader learns that the capture of the Marechal was violent, and he sustained two injuries. The size of the bribe he offered to the captor was also stated, which is probably a more realistic account than those reported by other, second-hand sources.

This meeting, though among people acquainted with each other previously, also poses the question of the reality of the war – how was it possible for people from two different sides of the war to maintain good relations with each other and even attempt to assist in difficult situations? Rapin and Woodstock were part of the conflict, though not actively participating, but belonging to the side of the Holy Roman Empire, siding with the emperor Leopold I against France and its king Louis XIV. Yet what can be seen in the depiction above is that not only were they allowed to visit an enemy prisoner and converse with him, but they were also allowed to receive a letter from him to deliver. It can be assumed that the letter was verified before being sent, but nonetheless, the situation seems extraordinary, particularly because they agreed to assist an enemy general with his request. This type of relationship requires further investigation and analysis. Nonetheless, throughout the correspondence, it can be seen how Woodstock and Rapin, who started their journey in what was already in 1701 enemy territory, passed into the territory of the allies without particular difficulty. Their main concern was to avoid capture by the enemy army and to avoid being robbed on the roads.

Yet, despite the rather friendly exchange, the plans of the travellers were changed, probably because it was no longer safe for Dutchmen to travel on French-controlled territory, especially in the second half of 1702. The plans to visit Southern Italy were cancelled, because of the presence of the enemy army. On May 20, 1702, Rapin writes from Rome:

> We had intended to go and see Naples before leaving this country, but it was not possible and no one advised us to apply for a passport, since they had already been refused to so many others [...] I had planned [for us – M.G.] to go from Genoa to Turin, and from Turin to Geneva, but Milord Woodstock is disgusted by it, because of the difficulty of the roads, because it is necessary to make large detours in the mountains to avoid passing into the lands of Spain.[26]

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25 Green M. (ed.), 2021, 153.

26 'Nous avions dessein d'aller voir Naples avant que de quitter ce pays, mais il n'a pas été possible et personne ne nous a conseillé de demander un passeport, puisque on l'avait déjà refusé à tant d'autres [...] J'avais projeté d'aller de Gênes à Turin, et de Turin à Genève, mais Milord

The difficulties that the war posed on the life of the travelling party are clearly seen in the passage above. It would have been necessary to avoid passing through enemy territory in order not to be captured. The echoes of war were reported in almost every letter sent from Italy, highlighting the fear of the city's inhabitants of a possible attack. These letters also detailed various confirmed and unconfirmed rumours circulating in the region. Moreover, the correspondence is full of information regarding the dangers for travellers on the roads, especially in the mountain areas of Northern Italy, where the thugs were awaiting to attack and rob passers-by. The lack of income caused by the war increased the possibility of this happening. One such noteworthy example is written by Rapin to Portland in his letter from Florence, dating July 1, 1702:

> [...] it is better to use too much precaution than to be lacking; for if by misfortune Milord Woodstock were to be taken by the French or the Spanish, you [Portland – M.G.] would have difficulty in getting him back during the war, and [not] without paying a large ransom; and the example of a son of Mr. de Louvois frightens me, for in the past war, he was arrested in Milan by the Spanish, and kept for three years, although he had a passport from the King of Spain, under the pretext that the passport had been given before the declaration of war, for when one is in the hands of one's enemies, it is up to them to explain passports as they wish.[27]

The dangers of being captured were known to the travellers and as the letter above shows, they did their utmost to avoid such situations, even at the cost of cancelling parts of the travel plan. Additionally, Woodstock in his letters mentions this danger, as in the letter sent from Florence on July 15, 1702:

> [...] we had intended to go to Livorno and Genoa, but everyone gives us contrary advice because of the risk that there are brigantines of Final, Spaniards and French that there are on the coasts, only to wait for passers-by, and as there is an envoy from France here and another in Genoa, they could easily give each other some advice, there would be no pleasure in falling into the hands of the enemies at present.[28]

Woodstock en est dégoûté, à cause de la difficulté des chemins, car il faut faire de grands détours dans les montagnes pour éviter de passer dans les terres d'Espagne.' Green M. (ed.), 2021, 195.

27 '[...] il vaut mieux user de trop de précaution que d'en manquer; car si par malheur Milord Woodstock venait à être pris par les Français ou par les Espagnols, vous auriez de la peine à le retirer pendant la guerre, et sans payer une grosse rançon; et l'exemple d'un fils de Mr. de Louvois me fait peur, car dans la guerre passée, il fut arrêté dans le Milanais par les Espagnols, et gardé durant trois ans, quoiqu'il eut un passeport du roi d'Espagne, sous prétexte que le passeport avait été donné avant la déclaration de la guerre, car quand on est entre les mains de ses ennemis, c'est à eux à expliquer les passeports comme ils veulent.' Green M. (ed.), 2021, 204–205.

28 '[...] nous avions dessein d'aller à Livourne et à Gênes, mais tout le monde nous donne un conseil contraire à cause du risque qu'il y a des brigantins du Final, des Espagnols et Français qu'il y a sur les côtes, seulement pour attendre les passants, et comme il y a un envoyé de France ici

Once again Woodstock not only informs Portland of the dangers but cleverly depicts the diplomatic network of the enemy – he identifies the envoys located in Florence and Genoa, who would probably exchange information with each other regarding potential targets for attack and capture.

Conclusion

In conclusion, this brief overview presents how specific sources categorised by historians as Grand Tour correspondence contain a wealth of information that can also interest historians of military conflict. The reader can learn particular and sometimes unknown details of warfare, the mood of the population, military preparations, and, as mentioned previously, alternative versions of famous events. The correspondence examined here exemplifies this. While much more in-depth research would be required to uncover whether both travellers were also serving as spies for William III, which is a strong possibility, given that the accounts of fortifications and the nuances of the terrain would likely be of great interest to the King, there is little doubt that the letters reveal a different perspective on warfare, which often escapes historians' attention or is simply unknown to them.

References

Published works

Bezemer-Sellers V. 1990. *The Bentinck Garden at Sorgvliet*. In: J. Dixon (ed.), *The Dutch Garden in the Seventeenth Century*. Washington DC, 99–130.

Birkedal Bruun M. 2022. *Towards an Approach to Early Modern Privacy: The Retirement of the Great Condé*. In: M. Green, L.C. Nørgaard, M.B. Bruun (eds), *Early Modern Privacy: Sources and Approaches*. Leiden, 12–60.

Black J. 2003. *France and the Grand Tour*. New York.

Chaney E. 1998. *The Evolution of the Grand Tour: Anglo-Italian Cultural Relations since the Renaissance*. London–Portland OR.

Daniel G. 1721. *Histoire de la milice françoise, et des changemens qui s'y sont faits depuis l'établissement de la Monarchie dans les Gaules jusqu'à la fin du Regne de Louis le Grand* 2. Paris.

Daybell J. 2024. *Epistolary Technologies of Separation and Archives of Emotion*. In: M. Green, L.C. Nørgaard (eds), 2025. *Notions of Privacy in Early Modern Correspondence*. Turnhout 27–48.

Daybell J., Gordon A. (eds), 2016. *Cultures of Correspondence in Early Modern Britain*. Philadelphia.

et un autre à Gênes il pourraient facilement se donner quelque avis, il n'y aurait aucun plaisir de tomber présentement dans les mains des ennemis.' Green M. (ed.), 2021, 208–209.

Dekker R. 1989. *Ego-Documents in the Netherlands 1500–1814*. "Dutch Crossing: A Journal of Low Countries Studies" 39, 61–71.

Eugène of Savoy 1811, *Memoirs of Prince Eugène of Savoy, Written by Himself*. F. Shoberl (trans.), London.

Green M. 2014. *Reporting the Grand Tour: The Correspondence of Henry Bentinck, Viscount Woodstock, and Paul Rapin-Thoyras with the Earl of Portland, 1701–1703*. "Paedagogica Historica" 50(4), 465–478.

Green M. 2015. *The Huguenot Jean Rou (1638–1711): Scholar, Educator, Civil Servant*. Paris, 350–353.

Green M. 2025. *Privacy Aspects of Anglo-Dutch Grand Tour Correspondence (1701–1703). Viscount Woodstock and Paul Rapin-Thoyras to the Earl of Portland*. In: M. Green, L.C. Nørgaard (eds), 2025, 139–172.

Green M., Huysman I., in collaboration with J. Bakić, N. Klein Käfer 2023. *The Low Countries, Private Life, and Privacy*. In: M. Green, I. Huysman (eds), *Private Life and Privacy in Early Modern Low Countries*. Turnhout, 13–26.

Green M. (ed.), 2021. *Le Grand Tour 1701–1703. Lettres de Henry Bentinck et de son précepteur Paul Rapin-Thoyras, à Hans Willem Bentinck.* Paris.

Green M., Nørgaard L.C. (eds), 2025. *Notions of Privacy in Early Modern Correspondence*. Leiden.

Grew M.E. 1924. *William Bentinck and William III (Prince of Orange). The Life of Bentinck Earl of Portland from the Welbeck Correspondence*. London.

Pohlig M., Schaich M. (eds), 2018. *The War of the Spanish Succession: New Perspectives*. Oxford.

Saint-Simon 1876. *The Memoirs of the Duke of Saint-Simon on the Reign of Louis XIV and the Regency* 1. B.St. John (trans.), London.

Sweet R., Verhoeven G., Goldsmith S. (eds), 2017. *Beyond the Grand Tour: Northern Metropolises and Early Modern Travel Behaviour*. Milton Park–New York.

Valvasor J.R. 1688. *Topographia Archiducatus Carinthiae*. Nuremberg.

Manouchehr Moshtagh Khorasani
Frankfurt School of Finance and Management
e-mail: manouchehr@moshtaghkhorasani.com
ID https://orcid.org/0000-0002-7663-1963

A Comprehensive Examination of the 1852 Persian Military Manual:
'General Regulations for the Exercises and Marches of the Infantry of the Esteemed Government of Iran'

Summary: This article deals with the study and analysis of an important Persian military manual, entitled 'General Regulations for the Exercises and Marches of the Infantry of the Esteemed Government of Iran' (قواعد کلیه از برای مشق و حرکات پیاده نظام دولت علیه ایران). The manual, a historical artefact of considerable importance, is dated Ramadan 1268 Hijra, corresponding to June 1852 CE, a period marked by the reign of Nāssereldin Shāh Qajar. The manual is a testament to the modernisation efforts initiated by Crown Prince Abbās Mirzā during the early Qajar era. It provides a unique insight into the military strategies and training methods of the time, reflecting the transformative changes within the Iranian military. Comprising 51 pages and adorned with 35 illustrations, the manual provides a comprehensive guide to training exercises for armed and unarmed infantry troops. It provides insight into the rigorous training regimes and tactical manoeuvres of the Persian infantry in the mid-19th century. Thus, the manual is not merely a military guide but a historical document that provides information on the evolution of Persian military tactics in response to the modernisation efforts of the time.

Keywords: Military handbook, Iran, Persia, Marching, Military exercises

Introduction

The presented article deals with a Persian manual from the Qajar era, entitled '*General Regulations for the Exercises and Marches of the Infantry of the Esteemed Government of Iran*' (قواعد کلیه از برای مشق و حرکات پیاده نظام دولت علیه ایران).[1] The manual was written in Ramadan 1268 Hijra, corresponding to June 1852 CE, during the reign of Nāssereldin Shāh Qajar. The Shah, whose life spanned from July 17, 1831, to May 1, 1896, was on the throne from September 5, 1848, until his death. A preserved copy of this historic document, inventory number 2672, is kept in the National Library of Iran. The manual, written in the elegant Naste'aliq script, consists of 51 pages and contains 35 colour illustrations depicting Qajar soldiers in various poses, wielding muskets, waving banners and holding sabres.

Iran's rich history is steeped in the tradition of military manual writing, covering a wide range of topics from military strategy and sword classification to archery manuals and crucible steel production. The tradition of writing manuals on firearms, cannon making and military training dates back at least to the Safavid period. Notable examples include an untitled Safavid manuscript on bronze cannon casting attributed to Soleymān, the treatise on rockets written by Mohammad Rezā Tabrizi,[2] and the treatise on the arsenal (*Resāle-ye Qurxāne*) written by Mohammad Bāqer Tabrizi in 1257 hijra (1841 CE).[3] This analysis aims to shed light on the military practices and strategies of the Qajar era, as well as the broader historical context of military manual production in Iran. The study of this manual offers a unique window into the military history of Iran, providing valuable insights into the evolution of warfare tactics, weaponry and military training in the region.

One of the main difficulties in studying Persian military manuals is the lack of modern translations for many Persian words and terms of the period. This is further complicated by the lack of knowledge regarding period firearms in Iran. To navigate this linguistic and historical maze, it was necessary to examine numerous European manuscripts of the same era to identify equivalent terms. The word *fešang* (فشنگ) is an excellent example. In contemporary Persian, it translates as 'bullet'. In the historical context, however, it was used to denote a 'rocket.' This is a significant semantic shift. Furthermore, there are cases where a single Persian term is used to describe a variety of weapons. The term *xompāre* (خمپاره) serves as a prime example of this, as it is used interchangeably to describe a 'bullet body', a 'mortar', or a 'grenade'. The true nuances of these terms only become apparent when compared to contemporary

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1 NLAIRI, no. 2672.

2 NLAIRI, no. 1055. See: Moshtagh Khorasani M. 2018, 15.

3 NLAIRI, no. 1766. See: Moshtagh Khorasani M. 2018, 15.

European manuscripts describing the same type of weapon. This comparative approach reveals the subtle differences and aids in the accurate interpretation of these historical Persian military manuals.

Historical background

The esteemed military Manual, '*General Regulations for Exercises and Marches of the Infantry of the Esteemed Government of Iran*' (قواعد کلیه از برای مشق و حرکات پیاده نظام دولت علیه ایران) comes from the era of Nāssereldin Shāh Qajar – July 17, 1831, to May 1, 1896, CE). This historical document, which shows Iranian soldiers in European uniforms, provides a fascinating insight into the period when Iran began to incorporate European military models into its armed forces. The genesis of these military reforms can be traced back to the reign of Fath Ali Shāh Qājār (1797–1834 CE). In 1802, Edward Scott Warning, a British observer, gave a detailed account of the state of the Persian military. His journey took him to Bushehr in 1802, and his experiences were later published in his book *Tour to Shiraz* in London in 1807.[4] Warning's vivid descriptions portray Persian soldiers heavily laden with an array of weapons. He noted that each soldier was fully armed, and their horses struggled under the weight of their weapons. The soldiers' arsenal included a pair of pistols in leather holsters, a sling on their belts, a carabineer or long musket, a sabre, a dagger and a long lance. Each weapon was accompanied by its black powder flask, bullet containers and a ramrod. The clanking of their equipment, which could weigh as much as eighty pounds, was a distinctive sound as they approached. Despite the heavy load, Warning observed that the Persian soldiers' equipment was lighter than that of their Turkish counterparts. He also noted the superior quality of their weapons, especially their swords. The Persian swords, with their watered blades, were of higher quality than those used by the Turks. Warning's account provides a clear indication that Persian soldiers of the time were equipped with a mixture of traditional and modern weapons.[5] This historical context is crucial to understanding the evolution of Iran's military reforms, particularly the adoption of European models.

In his 1807 work, Warning meticulously detailed the structure and operations of the Persian military, revealing an organised and disciplined force that served the king. Each military unit consisted of a thousand men under the command of a *minbāši* (نیمباشی), a hundred men led by a *yuzbāši* (یوزباشی), and a group of ten men led by an *unbāši* (اونباشی). To ensure his sovereignty, the king ingeniously kept one son from each tribal unit, or even himself, within the confines of his court. This strategic move not only guaranteed his royal authority but also fostered a sense of unity and

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4 Warning E.S. 1807, 192.

5 Warning E.S. 1807, 192.

loyalty among the various tribal units. The Persian military was predominantly cavalry-based, a testament to their strategic preference for speed and mobility. However, their tactical versatility was evident in their ability to assemble infantry units when the situation demanded it, such as during a siege of a city or fortress. The Iranian soldiers were renowned for their bravery and discipline, drawing parallels with the Italian soldiers who were known for their relentless fighting spirit and remarkable ability to sustain zero casualties throughout the day.[6]

It should be noted, however, that the quality of infantry soldiers was considered inferior to that of cavalry soldiers. The primary role of the infantry was to bombard a city or fortress for an extended period with the goal of creating a breach in the wall to gain entry. In their military confrontations against the Turks, the Iranians often emerged victorious, and they even triumphed in a war against India. Their remarkable speed of movement was a key factor in their military success. They were capable of covering forty to fifty miles[7] a day, and in times of emergency, they could cover seventy miles[8] a day for three consecutive days.[9] In the early skirmishes with the Russian army, the Iranian forces demonstrated remarkable prowess. A monumental painting, measuring 9 by 5½ meters and housed in the National Museum of Iran (Iran Bastan Museum), captures one such encounter. This magnificent work of art depicts Fath Ali Shāh Qajar, the second Shah of the Qajar dynasty, engaged in a fierce battle with the Russians.

The museum refers to this historical depiction as the *Battle of Ganja*, a title echoed in several publications, including Āryāi's 2018 work.[10] However, a faction of scholars, including Diba[11] and Krugov and Nechitailov,[12] argue that the painting more accurately represents the *Battle of Yerevan* of June 1804 and suggest that the artwork should more appropriately be termed the *Siege of Yerevan*. The siege of Yerevan, which the painting may illustrate, lasted from July to September 1804. General Pavel Tsitsianov initially managed to lay siege to Yerevan, albeit with considerable difficulty. However, the Iranian forces within the citadel of Yerevan successfully thwarted Russian attempts at a direct assault. In the early skirmishes with the Russian army, the Iranian forces demonstrated remarkable prowess. Furthermore, the Iranian troops stationed beyond the citadel's perimeter effectively encircled the Russian army, disrupting its supply lines. Under the strategic leadership of Crown Prince Abbās Mirzā and King Fath Ali Shāh Qajar, the Iranian forces triumphed over the Russian army, a victory noted by

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6 Warning E.S. 1807, 203–204.

7 Circa 64–89.5 km.

8 Circa 113 km.

9 Warning E.S. 1807, 205–206.

10 Āryāi M. 2018.

11 Diba L. 2006, 98.

12 Krugov A., Nechitailov M. 2016, 164.

Atkin[13] and Kettenhofen.[14] In the aftermath of this defeat, Tsitsianov, in a desperate attempt to divert attention from his shortcomings, sought to shift the blame onto others. His primary scapegoat was General and Prince Dmitri Mikhailovich Volkonsky, whom he accused of failing to adequately supply his troops. Tsitsianov conveniently overlooked the fact that the entire region from Yerevan to Georgia was under the control of Iranian forces, a fact confirmed by Atkin.[15] This strategic oversight on Tsitsianov's part further underscored his incompetence as a military leader.

Despite the inherent strengths of the Iranian army, they were outmatched in several battles against the Russians. This necessitated a significant overhaul of their military strategies and capabilities to regain their competitive edge. As a result, the crown prince of Fath Ali Shāh Qājār, Abbās Mirzā (1789–1833), embarked on a comprehensive reform of the Iranian army. Beyg Danbali, a historian of the Qājār period, provides an account of these reforms in his book, *Māsar al Soltāniye*. He reports that Abbās Mirzā sent a group of Iranian artisans to England with the mission of mastering the art of making muskets according to British designs. These artisans spent approximately four to five years in England, perfecting their skills and acquiring knowledge. Upon their return to Iran, they demonstrated an exceptional level of proficiency, producing flintlock muskets and gun accessories of such high quality surpassing those of their British mentors. Danbali estimates that these skilled Iranian gunsmiths produced some 20,000 new muskets, greatly increasing the firepower of the Persian army.[16]

Hence, during the Qājār era, a significant military reform was initiated under the leadership of Crown Prince Abbās Mirzā. Further, as reported by Beyg Danbali in 1820, a military order was issued to select brave young men from Azerbaijan in Iran for specialised training. These men were trained by French and English military advisors in the latest techniques of warfare. Over two years, an impressive force of 12,000 soldiers was trained, receiving instructions in agility, mass shooting, marksmanship and basic military principles. This rigorous training ensured the loading and firing of muskets with regularity and precision.[17] This period marked a significant advancement in the military prowess of the Persian forces, with the integration of modern warfare techniques and the use of finely crafted weapons.

To be more specific, following the Russian military pressure and their expansionist policies from the north, Fath Ali Shāh Qajar and especially his crown prince Abbās Mirzā had already seen a necessity to conduct a major military reorganization to withstand the Russian incursions. Abbās Mirzā believed that Iran could only

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13 Atkin M. 1980, 99.

14 Kettenhofen E. et al. 1988, 542–551.

15 Atkin M. 1980, 76–77.

16 Moshtagh Khorasani M. 2018, 22.

17 Beyg Danbali A. 1820, 132.

face a European military power by imitating its structure, organization, and tactics.[18] To reach his goal, he first invited French and then British military advisors. He then sent Iranian students to military academies abroad, attempted to create a standing infantry and artillery, and introduced a conscription system. But even before these reforms, some Russian deserters to Iran had already been forming and drilling some Iranian battalions based on European models. These exercises included drilling, marching, and handling the muskets. The first French mission took place under General Claude Matthieu de Gardane (1766–1818) in 1807. As a consequence, Iran entered an alliance with Napoleonic France against Britain and Russia.[19]

These military advances initiated by Abbās Mirzā did not go unnoticed and caused concern for General Aleksey Petrovich Yermolov, the commander-in-chief of the Russian forces in Georgia. Yermolov, who had close ties to Abbas Mirzā's opponents, closely observed the crown prince's activities and frequently reported his observations to St. Petersburg, highlighting Iran's growing military capabilities. His reports, however, were largely dismissed in Russia. His rivals, and even Russian Emperor Nicholas I, regarded Yermolov's warnings as exaggerations designed to serve his personal interests and to justify a second invasion of Iran. The prevailing belief was that the Iranians had learned their lesson from the power of Russian military might in the previous Caucasian War and would abide by the Treaty of Golestan. As such, another war was considered unnecessary and potentially detrimental to Imperial Russia's interests. In particular, Tsar Nicholas I was anxious to maintain peace with Iran, fearing that any aggression might drive the Iranians closer to the British, Russia's regional rivals.[20]

In his diplomatic correspondence with Count Karl Nesselrode, the Russian Foreign Minister, Yermelov wrote a detailed account of his observations and concerns regarding the actions of Crown Prince Abbās Mirzā. He wrote: 'Not only do I see no good will or willingness in Abbās Mirzā to respect our interests... but he is not even able to hide his dissatisfaction at seeing our dominance over their lost provinces.' Yermelov then proceeded to detail the military advances initiated and overseen by the Crown Prince that further substantiated his fears. He reported:

> [...] with the help of British, he is successfully implementing broad and significant reforms in every aspect of the country. He is organising regular military units on the basis of sound principles. The artillery is in a very satisfactory condition, and its numbers are rapidly increasing. There is a remarkable metal-smelting factory, as well as an armory, working day and night to replenish the armories and arsenals of

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18 Cronin S. 2012.

19 Cronin S. 2012.

20 Moshtagh Khorasani M. 2018, 22–23.

Persia. They built citadels and fortresses based on European models. They exploit their mines for copper, lead, and iron.[21]

Yermelov also noted the financial constraints that Abbās Mirzā faced because of his frugal father, King Fath-Ali Shāh Qajar. He wrote: 'Abbās Mirzā's efforts are somewhat restricted by the limited resources provided by his frugal father. However, through his personal thrift and contentment, he has managed to allocate most of his income to military expenditures and maintenance.' Yermelov's observations revealed that Abbās Mirzā had amassed thirty battalions of 1,000 men each, equipped with 100 field artillery pieces. He warned: 'Abbās Mirzā's reforms are being rapidly implemented in all aspects of the military, and it will not be long before the Persian infantry rivals the best European counterparts.'[22]

But due to a changing European context and power-shifting after Napoleon and the tsar signed the Treaty of Tilsit (July 7–9, 1807), the influence of France started to vanish, Fath Ali Shāh accepted to allow a British mission comprising 50 British officers and Indian sepoys from Britain and India.[23] The British mission replaced the French-supplied equipment with British muskets and sabres. The reform was then continued by the English military advisors Major Christie and Lieutenant Lindsay of the Indian Army, who were part of Sir John Malcolm's entourage on his diplomatic mission to the Persian court. Their contributions to the Persian military were equally commendable. They formed the Persian infantry, which included a bodyguard unit stationed at a garrison in Tehran. This unit was tasked with accompanying the Shāh on his travels. Uniformity was maintained in the armament of the infantrymen, although their uniforms varied. This detailed account underscores the profound influence of Abbās Mirzā's reforms on the Persian military, a legacy that lasted well into the reign of Nassereldin Shāh Qājar. Dressed in white trousers and a red waistcoat with blue sleeves and collar, the bodyguard was distinguished from the provincial troops, whose waistcoats were of various colours. The Persian artillery, known for being the most disciplined unit, boasted an impressive array of finely crafted field pieces and well-horsed ammunition wagons.[24]

It is unclear which military manuals the British used to train Iranian soldiers; however, *The Manual Exercise, as Ordered by His Majesty in 1764,* had been in use for some time. The 1764 Drill Manual, a comprehensive guide to military operations, served as the cornerstone of the Continental Army's tactical approach until 1778. British soldiers were deeply engaged in regular military drills. This manual was a familiar

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21 Moshtagh Khorasani M. 2018, 23.

22 *Akty*. 1875, 178–179.

23 Wright D. 1977, 50.

24 Jennerich E.J. 1973.

reference for members of both armies, offering profound insight into the functioning of an 18th-century military force (*The Manual Exercise, as Ordered by His Majesty in 1764*). Additionally, efforts were made to modify Iranian military uniforms to align their aesthetic with that of the British forces. Nevertheless, the reality of this transition fell short of a complete overhaul; the only distinctly European element incorporated into the Iranian uniform was the jacket, a contribution from the French advisors. Beyond this, the uniform preserved its traditional Iranian essence, featuring wide trousers or pantaloons, a staple of local attire, alongside the iconic sheepskin hat. Officers, in particular, seemed to view their uniform as merely a formalised version of their regular attire. The British allowed officers to maintain the privilege of sporting beards while requiring ordinary soldiers to shave; however, the soldiers adhered to their traditional grooming style, which involved a shaved head adorned with a top knot and side curls. This unique blend of British, French, and Iranian elements produced a uniform that symbolised cultural identity as much as it marked military service.[25] The British also utilised other military manuals. Another notable manual was *Rules and Regulations for the Formations, Field Exercise and Movements of His Majesty's Forces* (1792), which played a key role in developing general rules and regulations for the United States Military.

However, some adaptations were necessary. For example, the rugged terrain of Persia, with its mountainous landscapes, required a unique approach to warfare. The Persians ingeniously mounted smaller 3–4-inch calibre cannons on the backs of camels. These swivel cannons, or *zanburaks*, allowed for greater mobility in the difficult topography. The irregular component of the Persian army, though not a permanent fixture, was mobilised during extraordinary circumstances. Every Persian male was trained in the arts of weaponry and horsemanship from a tender age. This early exposure to martial skills, coupled with their tribal affiliations, fostered a sense of bravery and unity among the irregular forces, making them a formidable force in their own right.[26]

After the war between Iran and Russia concluded with the signing of the Golestan Treaty in October 1813, a third agreement between Iran and Britain, the 1814 Anglo-Persian Treaty, was established. However, during the Anglo-Russian alliance of 1812–1813, Britain began to scale back its military missions and commitments in Iran.[27] By 1819, British officers serving in Iran gradually withdrew, leaving only Captain Isaac Hart in charge of ʿAbbās Mirzā's bodyguard. This period was marked by a growing scepticism, not only from contemporary observers but also from the officers of the military missions themselves. They questioned the extent to which Iran was truly

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25 Kibovski A., Yegorov V. 1966.

26 Jennerich E.J. 1973.

27 Cronin S. 2012.

reaping benefits from its experimentation with European military models and the incorporation of European officers into its ranks.[28] European observers had always perceived Iran's military strength to be rooted in its irregular cavalry supplied by the tribal khans. This force had demonstrated its effectiveness through swift raids and defensive skirmishing. In contrast, the *neẓām* troops, despite their European training, did not inspire the same level of confidence. The question that arose was whether Iran's attempts to modernise its military by adopting European models and employing European officers were truly beneficial. The scepticism was not unfounded. The irregular cavalry, with its tribal roots and unconventional tactics, had proven to be a formidable force. The *neẓām* troops, despite their training and discipline, did not seem to match up to the effectiveness of the irregular cavalry.[29] However, this army could prove its strength against the Ottoman Empire in campaigns of 1821–1823, destroying the Ottoman army in the battle of Erzurum in 1821.[30] However, the Persian army was not successful in another war against Russian forces when Russians entered Tabriz in November 1827, culminating in the Treaty of Turkmanchay.[31]

After the British military advisors left Iran, Abbās Mirzā hired European military advisors on an individual basis. These advisors came from various countries, including France, Italy, and Spain, and were seeking new opportunities after the end of the Napoleonic Wars.[32] Later, due to concerns in London and Calcutta about a Russian threat to India, Abbās Mirzā managed to convince Britain to send a second British mission. The officers arrived in Iran at the end of 1833. After the deaths of Abbās Mirzā in October 1833 and Fatḥ Ali Shah in October 1834, the British officers were primarily responsible for drilling and training Iranian troops, but they faced significant hostility from their Iranian counterparts.[33] Mohammad Shah Qajar ascended to the throne on October 23, 1834 and ruled until September 5, 1848.[34]

In 1836, Moḥammad Shah found himself increasingly drawn towards the political and diplomatic allure of Russia. This growing affinity led to a rather abrupt dismissal of all British officers from his summer encampment. This marked the end of Britain's second attempt to establish a foothold in Iran, an endeavour that proved even less fruitful than their first mission. The final nail in the coffin of this British experiment was the political and diplomatic fallout triggered by Moḥammad Shah's attack on Herat in 1837. This event not only strained the already tenuous relationship between Britain and Iran but also led to its complete disintegration. In 1838, Britain

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28 Cronin S. 2012.

29 Cronin S. 2012.

30 Williamson G. 2008.

31 Cronin S. 2012.

32 Cronin S. 2012.

33 Cronin S. 2012.

34 Cronin S. 2012.

took a decisive step by severing all diplomatic ties with Iran and ordering all its officers serving under the Shah to leave the country.[35]

Despite the less-than-satisfactory outcome of his experience with the British military mission, Mohammad Shah remained undeterred in his quest for foreign aid to support his military reforms. The strained relations with Britain and the deep-seated mistrust towards Russia made him turn towards France again. The French agreed to Mohammad Shah's proposal. They pledged to provide Persia with weaponry and a cadre of experienced military instructors to replace the British. Thus, in September 1839, a mission led by Edouard de Sercey embarked from Paris, reaching the city of Tabriz by January 1840. However, the French mission's tenure in Iran was short-lived, lasting less than four years. Their efforts to reform the Persian military were largely unsuccessful, hampered by a myriad of challenges as their mission was met with a lukewarm response from the Iranian government itself.[36]

In the annals of Iranian history, the reign of Nāssereldin Shāh Qajar (1848–1896) is distinguished as a period of significant military development. The lasting impact of Abbās Mirzā's transformative reforms was profoundly evident in a European article published in 1857. The reforms meticulously dissected the composition of the Persian army, revealing a dichotomy of forces: the regular troops, disciplined according to European military systems, and the irregular troops, mobilised only in times of crisis. The genesis of the regular troops can be found in the first Napoleonic era in France. In 1808, a cadre of intelligence officers was sent to Persia to modernise the army. Their efforts yielded positive results, as evidenced by the significant progress made in the Persian military structure.[37]

The new king initiated a new phase of military reforms with the help of his new chief minister, Mirzā Taqi Khan Amir-e Kabir, who established *Dar al-Fonun* as an elite military and technical college.[38] Amir-e Kabir turned to Europe to find further support for his reform efforts, especially for the teaching of the *Dar al-Fonun*. As he did not trust the British, French, or Russians, Amir-e Kabir asked the Habsburg Empire (Austria) for assistance. In November 1851, an Austrian mission reached Tehran, but Amir-e Kabir had fallen from power 11 days before their arrival. However, the Austrians did not receive a warm welcome and started to face difficulties. A group of Italian officers also arrived in 1850, further complicating the work of Austrian officers.[39]

As previously mentioned, this article explores the intricacies of a manual from this era entitled *General Regulations for the Exercises and Marches of the Infantry of the Esteemed Government of Iran*, written in 1852. This manual is a testament to the

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35 Cronin S. 2012.

36 Cronin S. 2012.

37 Jennerich E.J. 1973.

38 Cronin S. 2012.

39 Jennerich E.J. 1973.

military advances of the time and reflects the influence of European military strategies on Persian warfare. During the reign of Nāssereldin Shāh Qajar, a plethora of Persian manuscripts on warfare were written, and numerous European military texts were translated into Persian. These translations covered a range of European languages, including English, French, German and Russian, indicating a broad spectrum of influence and knowledge exchange. In the *Book of Ahmad*, dated 1894, Tabrizi emphasises the paramount importance of military science. He asserts that military science is the most important of all sciences and highlights the need for its proper teaching. Tabrizi's argument is founded on the changing nature of warfare, which had evolved from an era of bows, arrows, swords and spears to one dominated by advanced weaponry.[40]

Tabrizi discusses the power of modern weapons such as the Krupp rifle, the Lebel rifle, the Mauser rifle and the Mannlicher rifle. These weapons, he notes, can fire a bullet at a range of 5000 *zar'*[41] and eliminate 30 to 50 people per minute. He also emphasises the destructive power of naval guns, which weigh 300 *xarvār*[42] without a shot and can destroy a large portal city within hours with their two *xarvār* rounds fired from armoured ships. Tabrizi proceeded to emphasise the huge gap in military prowess between Asian and European nations, noting that Asian nations can barely fathom the combat efficiency of their European counterparts. He attributes this disparity to the power of military science, which involves studying the military history of previous centuries and examining battle manoeuvres to optimise the use of military forces on the battlefield against the enemy. Tabrizi's historical account reveals a fascinating social norm prevalent in his time. He recounts a period when the youth were actively encouraged to wear military uniforms, a practice that was not merely a fashion statement but a strategic move to promote discipline. It was a deliberate attempt to prepare them for a possible future in the military. This fascinating insight into the social norms of his time is documented in Tabrizi's work.[43]

The advent of European innovation and military expertise led to the introduction of flintlock muskets, a significant development in the history of warfare. These flintlock muskets, a testament to the technological advancements of the time, are prominently featured in the esteemed publication, *General Regulations for the Exercises and Marches of the Infantry of the Esteemed Government of Iran*. During the Qājār era, from

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[40] Tabrizi A.A. 1894, 145.

[41] As will be shown later in the translation and annotation of Congreve's manuscript Mohammad Rezā Tabrizi (NLAIRI. no. 1055) uses the term zar' for the term yard used by Congreve (Congrave W. 1810, 1). However, The Digital Lexicon of Dehxodā states that one zar' is equal to two meters, whereas one yard equals 36 inches (0.9144 m). To add more to the confusion, the maximum firing range of Lebel rifle was 1800 m (1644 yards), https://www.parsi.wiki/fa/wiki/447623/%d8%b2%d8%b1%d8%b9.

[42] Based on Nāzem al-Otabā, The Digital Lexicon of Dehxodā states that one xarvār equals one hundred man of Tabriz. See: https://www.parsi.wiki/fa/wiki/233569/%d8%ae%d8%b1%d9%88%d8%a7%d8%b1.

[43] Tabrizi A.A. 1894, 146.

1794 to 1925, these imported flintlocks bore the mark of the East India Company (E.I.C.). This powerful entity played a pivotal role in shaping global trade and politics. In the Persian language, these flintlocks were called either *čaxmāq-e engirizi*, which translates to English flintlock, or *čaxmāq-e farangi*, which means European flintlock.[44]

In Persian handbooks, the craftsman known as the *čaxmāqsāz*, or flintlock maker, played an important role. This guild was once teeming with members at a time when the stone flintlock was a common sight, while its European or foreign counterparts were rare. These craftsmen were renowned for their exceptional work on *čaxmāqhā-ye engirizi*, or English flintlocks, each of which commanded a price of 15,000 dinār. During the reign of the *King of Kings*, the esteemed Ostād Mohammad Isfahāni Čaxmāqsāz sold each flintlock for three *tumān*, a sum equivalent to a respectable year's salary for a young man at the end of the 19th century. In Europe, the creation of a flintlock was a collaborative effort, with each component made by a different guild. The quenching of the *qorxoloq*, or trigger guard, and the construction of the firing mechanism were tasks reserved for the most experienced craftsmen. In Isfahan, however, the process was a testament to the skill of the individual craftsman. Ostād Mohammad, for example, was a master of all stages of flintlock creation, a trait shared by other masters of his time. Years previously, most of Isfahan's flintlock makers moved to Tehran. Some, driven by personal ambition, ventured to Khorāsān, Kordestān and Fārs. A handful remained in Isfahan and continued to produce high-quality flintlocks whenever demand arose. These flintlocks, crafted with skill and precision, were sought after in all regions of Iran, a testament to the enduring legacy of the *čaxmāqsāz*.[45]

In addition to the famous Ostād Mohammad, there were other eminent flintlock craftsmen such as Ali, whose work was marked with the inscription *amal-e Ali* (the work of Ali). This mark was found on a flintlock mechanism for a gun with a pattern-welded barrel made by Hosseyn Mollā. Another notable craftsman was Sār Ali, whose work was identified by the mark *amal-e Sār Ali* (the work of Sār Ali). His flintlock, attributed to the Qājār period, is preserved in the Military Museum of Tehrān. These weapons, made with such precision and skill, were used effectively by Persian soldiers.[46]

An Analysis of General Regulations for the Exercises and Marches of Infantry of the Esteemed Government of Iran

An in-depth study of the *General Regulations for the Exercises and Marches of Infantry of the Esteemed Government of Iran* reveals a fascinating insight into the military history of the nation at that time. This historic manual, catalogued under the inventory

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44 See: Joqrāfiyā-ye Esfahān (Tahvildār Esfahāni H. 1964, 108).

45 Tahvildār Esfahāni H. 1964, 108.

46 Moshtagh Khorasani M. 2018, 23–24.

number 2672, is preserved in the National Library of Iran. Written in the artful *Naste'aliq* script, the manual comprises a total of 51 pages. It is further embellished with 35 vivid illustrations that bring to life the Qajar soldiers in various postures. The illustrations depict the soldiers in various scenarios, from wielding muskets and waving banners to holding sabres, providing a visual narrative of the military practices of the time. The manuscript begins by explaining that it is divided into five distinct parts. However, it only investigates the first part, leaving the remaining four parts unknown. This first part is further divided into four chapters containing two hundred and fifteen principles. It is plausible that the remaining sections were documented as separate manuals, a common practice at the time. The first part of the manual is devoted to the instruction of new soldiers, providing a comprehensive guide to their training and development. This section serves as an invaluable resource for understanding the military training methods and strategies employed during this period in Iranian history. The following is a brief yet comprehensive overview of the various sections presented in the manual.[47]

Part One:
The Art of Training Novice Soldiers

This first section is divided into four comprehensive chapters. These chapters meticulously outline a total of 215 fundamental principles.

Chapter One:
The Art of Training Unarmed Soldiers

This chapter, divided into four insightful lessons, begins by emphasizing the first principle: the commander of the troops (*farmānde-ye qošun* فرماندهقشون) is responsible for training his soldiers.

– Lesson One: Understanding Military Postures (*hālat nezāmi* حالتنظامی)
  This lesson provides valuable insights into the various military postures, including the positioning of the legs, arms, shoulders, and the importance of maintaining eye contact. It also introduces Persian command terminologies such as 'Attention Position' (*xabardār* خبردار) and 'Stand at Ease' (*rāhatbāš* راحتباش).

– Lesson Two: The Art of Turning (*gardān* گردان)
  This lesson investigates the techniques of turning and half-turning to the left and right. It also introduces commands such as 'shouldered arms' (*dušfang* دوشفنگ) and 'present arms' (*pišfang* پیشفنگ).

– Lesson Three: The discipline of Slow Marching (*āhaste marš* آهستهمرش).

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47 The Manual.

This lesson focuses on the discipline of slow marching, introducing commands such as 'Step Exercise' (*pāy-e mašq* پایِمشق), 'Step Forward' (*be piš* بهپیش), and 'March' (*mārš* مارش).

– Lesson Four: Mastering Different Steps (*pāhāye moxtalefe* پاهایِمختلفه)

This final lesson of the first chapter explores the different steps in marching, including commands such as (*darjā* درجا), marching (*mārš* مارش), going forward (*be piš* بهپیش) and (*taraf-e rāst yā čap* طرفِراستیاچپ).

Chapter Two:
The Art of Instructing Soldiers in Firearms Mastery

The chapter is divided into six comprehensive lessons, each designed to equip soldiers with the necessary skills to handle firearms proficiently.

– Lesson One: The Fundamentals of 'Shouldered Arms' (*dušfang* دوشفنگ). This lesson examines the basic commands such as 'Present Arms' (*pišfang* پیشفنگ), 'Support Arms' (*bāzufang* بازوفنگ), and 'Charge Bayonet' (*neyzepiš* نیزهپیش).

– Lesson Two: The Mechanics of Loading (*porkardan* پرکردن) and Firing (*andāxtan* انداختن). This lesson includes a variety of commands such as 'Load' (*porkonfang* پرکنفنگ), 'Grip Cartridge' (*bekabršang* بکبرشنگ), 'Tear Cartridge' (*bedaršang* بدرشنگ), 'Charge Cartridge' (*fešangfang* فشنگفنگ), 'Ram Cartridge' (*sombekeš* سنبهکش), 'Return Rammer' (*sombejā* سنبهجا), 'Throw About' (*hāzerfang* حاظرفنگ), 'Aim' (*ru* رو), 'Fire' (*tir* تیر), 'Ready from Shoulder Arms' (*bālāfang* بالافنگ), and 'Draw the Flintlock' (*čaqmāqkeš* چقماقکش).

– Lesson Three: The Strategy of Slanting Fires (*ātašhāy-e monharefe* آتشهایِمنحرفه).

– Lesson Four: The Second Type of Weapons Exercise (*mašq-e tofang* مشقتفنگ). This lesson covers 'Unfixing the Bayonet' (*neyzejā* نیزهجا), 'Securing Weapons' (*baqalfang* بغلفنگ), 'Bowing' (*namāzfang* نمازفنگ), 'Holding Weapons in Front' (*bepišfang* بهپیشفنگ), 'Shoulder Shift' (*darrāhfang* درراهفنگ), 'Trail Arms' (*bepāfang* بهپافنگ), and 'Inspect Arms' (*bāzdidfang* بازدیدفنگ).

– Lesson Five: This lesson is not included in the manual. It is unclear whether the author misnumbered the lessons or if this section is missing from the current manuscript.

– Lesson Six: The Techniques of 'Stacking Arms, (čātme bastan چاتمهبستن) and 'Unpiling Arms' (*darjāfang* درجافنگ), 'Marching' (mārš مارش), and 'Reversing Arms' (*sarnegunfang* سرنگونفنگ).

Each lesson is designed to be comprehensive and detailed, providing soldiers with a thorough understanding of firearm handling, from the basic principles to advanced techniques. The aim is to ensure that each soldier is well-equipped to handle any situation that may arise in the field.

Fig. 1. The Art of Training Unarmed Soldiers (Source: NLAIRI, no. 2672, 3)

Fig. 2. The Art of Instructing Soldiers in Firearms Mastery (Source: NLAIRI, no. 2672, 12)

Fig. 3. 'Shouldering Arms' (*dušfang*) (Source: NLAIRI, no. 2672, 43)

Fig. 4. The Art of Banner Exercise (Source: NLAIRI, no. 2672, 48)

Fig. 5. Officers' Sword Training (Source: NLAIRI, no. 2672, 49)

Chapter Three:
The Art of Training Sergeants and Corporals

- Lesson One: 'Gun Exercise' (mašq-e tofang مشق‌تفنگ), explores the various commands that sergeants and corporals must master. These include 'Shouldered Arms' (*dušfang* دوشفنگ) of sergeants and corporals, where the rifle is carried over the shoulder, 'Support Arms' (*bāzufang* بازوفنگ), a position where the gun is held with the butt facing the ground, 'Order Arms' (*pahlufang* پهلوفنگ), a command to bring the rifle to a vertical position and 'Trail Arms' (*bepāfang* بپافنگ), a command to place the rifle butt on the ground.
- Lesson Two: 'On Loading and Firing,' provides an in-depth understanding of the military commands associated with the operation of a rifle. These include 'load' (*porkonfang* پرکنفنگ), a command to prepare the rifle for firing, 'shoulder arms' (*dušfang* دوشفنگ), a command to place the rifle on the shoulder and 'cast about' (*hāzerfang* حاظرفنگ), a command to change the direction of the rifle.
- Lesson Three: 'Supporting Arms' (*bāzufang* بازوفنگ) focuses on the commands related to the use of the bayonet. These include 'Releasing the Bayonet' (*neyzejā* نیزه‌جا), 'Shouldering Arms' (*dušfang* دوشفنگ), 'Secure Arms' (*baqalfang* بغلفنگ), a command to secure the rifle and bayonet, 'Fix Bayonet' (neyzefang نیزه‌فنگ), a command to attach the bayonet to the rifle and 'Shoulder Shift' (*darrāhfang* درراهفنگ), a command to shift the rifle and bayonet from one shoulder to the other.

This chapter is a comprehensive guide, providing a detailed understanding of the commands and operations associated with the use of a gun and bayonet, essential for the training of sergeants and corporals.

Chapter Four:
The Art of Banner Exercise and Officers' Swordsmanship

This chapter investigates the intricate disciplines of Banner Exercise (*Mašq-e Beydaq* مشق‌بیدق) and Officers' Sword Training (*Mašq-e Šamšir-e Sāhebmansabān* مشق شمشیر صاحبمنصبان). These two lessons form the backbone of this chapter, each offering a unique perspective on the martial arts of the Middle East.

- Lesson One: The Banner Exercise (*Mašq-e Beydaq* مشق‌بیدق) introduces the reader to the ancient practice of *Mašq-e Beydaq*, a traditional form of exercise involving the use of banners. This lesson explores the various techniques and commands associated with this discipline, providing a comprehensive guide for those seeking to master this unique form of exercise.
- Lesson Two: Officers' Sword Training (*Mašq-e Šamšir-e Sāhebmansabān* مشق‌شمشیر‌صاحب‌منصبان) explores the art of *Mašq-e Šamšir-e Sāhebmansabān*, a specialised form of sword training designed for officers. This lesson provides an in-depth look at the various techniques

and commands associated with this discipline, offering a detailed guide for those aspiring to master the art of swordsmanship.

This chapter also provides a detailed explanation of various commands associated with these disciplines, including 'The Carry', 'The Recover' and 'The Salute.' Additionally, it explores the techniques involved in carrying a sword, such as 'Prayer Position' (*Namāzfang* نمازفنگ), 'Shouldered Arms' (*Dušfang* دوشفنگ) and 'Arms Reversed' (*Sarnegunfang* سرنگونفنگ).

Each lesson is designed to provide a comprehensive understanding of these disciplines, offering a detailed guide for those seeking to master these unique forms of exercise and martial arts. Whether it is a novice seeking to learn the basics or an experienced practitioner looking to refine their skills, this chapter offers a wealth of knowledge and insight into the art of Banner Exercise and Officers' Sword Training.

Conclusion

This article presents an examination of the transformative phase of the Persian military, a process that began during the reign of Fath Ali Shāh Qājār (1797–1834 CE). This era marked a significant shift in the Persian military paradigm as it sought to incorporate European military strategies and techniques, a move facilitated by the invitation of numerous European military advisors. This period of military modernisation was marked by the production of a plethora of Persian military manuals. These comprehensive guides covered a wide range of topics, from the intricate process of casting cannons and the categorisation of firearms to the strategic planning of military formations and exercises. One such manual that stands as a testament to this period of military development is the *General Regulations for the Exercises and Marches of the Infantry of the Esteemed Government of Iran*, dated Ramadan 1268 Hijra (June 1852 CE). This manual is a compendium of various exercises, both with and without firearms, banner drills and sword drills. The study of Persian manuals from this period promises to be a perfect opportunity for future research, offering a deeper understanding of this fascinating period of military modernisation in Iran. The study of these manuals will undoubtedly illuminate the intricate processes and strategic thinking that underpinned the transformation of the Persian military during the reign of Fath Ali Shāh Qājār.

References

Archival source

NLAIRI. no. 1055 – National Library and Archives of the Islamic Republic of Iran. Mohammad Rezā Tabrizi. *Resālei dar* Fešang [Treatise on Rockets]. 1840 (1256 hijra). No. 1055.

NLAIRI. no. 1766 – National Library and Archives of the Islamic Republic of Iran.
Mohammad Bāqer Tabrizi *Resāle-ye Qurxāne* [Treatise on Arsenal]. 1841 (1257 hijra).
No. 1766.

NLAIRI. no. 2672 – National Library and Archives of the Islamic Republic of Iran.
Ghavaed koliyeh az moshgh ve harkat peyadeh nezam dolat aliyeh Iran [General Regulations for the Exercises and Marches of the Infantry of the Esteemed Government of Iran]. No. 2672.

Published works

Akty. 1875. *Otnoshenye gen. Yermolova k gr. Nesselrode ot oktyabrya 1817*. In: *Akty, sobrannyye Kavkazskoy arkheograficheskoy komissiyey* 6(2). Tiflis, 178–179.

Āryāi M. 2018. *Pardeh Qanjeh Ravāyatkonandeh Bakhshi az Tārix Tehrān*. Amordād. https://amordadnews.com/10466/. Available on-line: June 28, 2023.

Atkin M. 1980. *Russia and Iran, 1780–1828.* Minnesota.

Beyg Danbali A. 1972. *Maāsar Soltāniye.*

The Canadian Forces Manual of Drill and Ceremonial. https://www.canada.ca/en/services/defence/caf/military-identity-system/drill-manual.html. Available on-line: February 25, 2025.

Congreve W. 1810. *A Concise Account of the Origin and Progress of the Rocket System with a View of the Apparent Advantages both as to the Effect Produced, and the Companions.* London.

Cronin S. 2012. *Army v. Qajar Period*. In *Encyclopædia Iranica.* http://www.iranicaonline.org/articles/army-v. Available on-line: January 9, 2024.

Diba L.S. 2006. *Making History: A Monumental Battle Painting of the Perso-Russian Wars.* "Artibus Asiae" 66(2), 97–110.

The Digital Lexicon of Dehxodā. https://www.parsi.wiki/. Available on-line: January 19, 2024.

Emām Šuštari M.A. 1961. *Tārix-e Megyasat va Noqud dar Hokumat-e Eslāmi.* Tehrān.

Gilham W. 1862. *Manual of the Musket extracted from Gilham's Manual for Volunteers and Militia.* Richmond.

Jennerich E.J. 1973. *The Persian Army*. "The Journal of the International Society of Military Collectors", no. 1–36, Pittsburgh.

Kettenhofen E., Bournoutian G.A., Hewsen R.H. 1998. *Erevan*. In: E. Yarshater (ed.), *Encyclopædia Iranica,* London–New York, 542–551. https://www.iranicaonline.org/articles/erevan-1. Available on-line: January 19, 2024.

Khorasani M.M. 2018. *Persian Fire and Steel: Historical Firearms of Iran.* Frankfurt am Main.

Kibovskii A., Yegorov V. 1996. *Persidskaya regulyarnaya armiya 1-y pol. XIX v.* „Tseykhgauz. Rossiyskiy voyenno-istoricheskiy zhurnal" 5, 20–25. Quoted from the English version: http://marksrussianmilitaryhistory.info/PERSIA.html. Available on-line: January 10, 2025.

Krugov A., Nechitailov M.B. 2016. *Persidskaia armiia v vojnah s Rossiej. 1796–1828.* Moskva.

Ma'tufi A. 1999. *Tārix-e Čāhr Hezār Sāle-ye Arteš Irān: Az Tamaddon-e Ilām Tā 1320 Xoršidi, Jange Irān Va Arāq* 1–2. Tehrān.

The Manual. Manual of Drill and Ceremonial. https://www.canada.ca/en/services/defence/caf/military-identity-system/drill-manual/chapter-4.html#figure-4-1-1. Available on-line: June 3, 2024.

The Manual. The Manual Exercise, as Ordered by His Majesty, in the Year 1764. https://collections.nlm.nih.gov/catalog/nlm:nlmuid-2167044R-bk. Available on-line: April 31, 2024.

Nāzem al-Otabā, The Digital Lexicon of Dehxodā. https://www.parsi.wiki/. Available on-line: February 25, 2025.

Perry J. 1968. *Karim Khan Zand: A History of Iran, 1747–1779.* Chicago.

Tabrizi A.A. 1894. *Safine-ye Tālebi yā Ketāb-e Ahmad.* Imprimente Akhtar.

Tahvildār Esfahāni H. 1964(1342). *Jogrāfiyā-ye Esfahān: Jogrāfiyā-ye Tabi'i va Ensāni va Āmār-e Asnāf-e Šahr*. Annotated by M. Sotude. Tehrān.

Warning E.Sc. 1807(1369) *Tour to Shiraz*. In: *Dah Safarnāme.* M. Amiri (transl.), Tehran.

Williamson G. 2008. *The Turko-Persian War of 1813–1823: Winning the War but Losing the Peace*. In: R. Farmanfarmaian (ed.), *War and Peace in Qajar Persia: Implications Past and Present.* London, 88–109.

Wright D. 1977. *The English amongst the Persians during the Qajar Period 1787–1921.* London.

David Hubený
National Archives, Prague
e-mail: david.hubeny@na.gov.cz
https://orcid.org/0000-0002-6680-7152

Nadezda Kruglova
National Archives, Prague
e-mail: nadezda.kruglova@na.gov.cz
https://orcid.org/0000-0002-7565-6536

Regional Office for Aid to the Victims of War in Prague (1919–1938)

Summary: The killings and mutilations brought about by World War I left a significant mark on society: missing husbands and fathers, surviving war veterans, widows and orphans. The newly formed Czechoslovakia had to deal with this tragic legacy and care for the 600,000 men, women, and children affected by the war. To do this, it was necessary to strengthen the relevant public administration apparatus, as the existing social security was not prepared for such a burden. The new state could not fail where the Habsburg monarchy had already failed, ceasing to perform its basic social and economic functions for its population.

The Czechoslovak Republic, consisting of several higher-level administrative-territorial units called 'lands' (*země*), began to create regional offices and authorities to provide care for disabled soldiers or men who had fallen ill as a result of military service, widows of deceased soldiers, widows of disabled veterans of the war and post-war years, as well as parents of deceased or disabled victims of the war and from the post-war years.

This paper will describe the legislative framework of the authorities using the example of the Regional Office for Aid to the Victims of War in Prague, its functioning and organisation of personnel, as well as the types of cases handled by the authorities and their reception by society.

Keywords: Czechoslovakia, war invalids, social welfare, public administration, public service

Introduction

The loss of life and the many wounded brought by World War I left a significant mark on societies – many husbands and fathers went missing without a trace, and many of the survivors became war invalids, leaving behind widows and orphans. It is not without reason that Erich Maria Remarque's novel *All Quiet on the Western Front* (*Im Westen nichts Neues*) contains the following description of a war hospital:

> On the next floor below are the abdominal and spine cases, head wounds and double amputations. On the right side of the wing are the jaw wounds, gas cases, nose, ear, and neck wounds. On the left the blind and the lung wounds, pelvis wounds, wounds in the joints, wounds in the kidneys, wounds in the testicles, wounds in the intestines. Here a man realises for the first time how many places a man can get hit.
>
> Two fellows die of tetanus. Their skin turns pale, their limbs stiffen, at last only their eyes live – stubbornly. Many of the wounded have their shattered limbs hanging free in the air from a gallows; underneath the wound, a basin is placed into which drips the pus. Every two or three hours the vessel is emptied. Other men lie in stretching bandages with heavy weights hanging from the end of the bed. I see intestine wounds that are constantly full of excreta. The surgeon's clerk shows me X-ray photographs of completely smashed hip bones, knees, and shoulders.
>
> A man cannot realise that above such shattered bodies, there are still human faces in which life goes its daily round. And this is only one hospital, one single station [...] A hospital alone shows what war is.[1]

In Austria-Hungary, the idea of state aid for the disabled was born already at the beginning of 1915. It was put into practice by a decree of the Vienna Ministry of the Interior (Innenministerium Vien) of March 15, 1915, which established institutions called Regional Commissions for the Care of Soldiers Returning from War (Zemská komise pro péči o vracející se vojíny). A special advisory board was set up at the Vienna Ministry of the Interior to deal with this problem. It was decided that the management of the regional commissions would be primarily the responsibility of the insurance companies dealing with insurance against work accidents.[2]

The armed struggle did not end with the end of the World War in 1918 but continued with varying intensity between countries formed after the collapses of former powers or within the failed states. The challenge faced by the Department of Social Welfare and Health was thus significant. The newly formed Czechoslovakia, with a population of over 13 million inhabitants, had to deal with this tragic legacy and take care of

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1 Remarque E.M. 1989, 251–252.
2 Brablec J. [1920], 3–4.

600,000 war invalids, widows, and orphans. This was only a preliminary estimate, but it nevertheless pointed to the need to strengthen the relevant public administration apparatus, as the existing system was not equipped to bear such a burden. The new state could not fail where the former Habsburg monarchy, which had ceased to fulfil basic social and economic functions concerning its population, had already failed, thus losing its raison d'être.

Tasks and responsibilities of the new state

The Czechoslovak Republic, consisting of several higher-level administrative units called 'lands (*země*), began to create regional directorates to assist war victims, which were supposed to take care of soldiers maimed by war or men who had fallen ill as a result of military service, widows of deceased soldiers, widows of disabled veterans of war, as well as parents of deceased.

The newly established departments of aid to war victims had a great deal of work: while in 1919 there were 170,000 people entitled to social insurance in the Czechoslovakia,[3] by 1923 it was estimated that there were 350,000 victims in Bohemia, 180,000 in Moravia and Silesia, 170,000 in Slovakia, and 20,000 in Subcarpathian Ruthenia, with a further 20,000 living beyond the borders of Czechoslovakia. It is estimated that the war affected, to some extent some 800,000 people.[4] Moreover, it can be assumed that the number of victims was much higher in Subcarpathian Ruthenia, but the widespread illiteracy and lack of trust in government authorities caused by the previous Hungarian administration meant that many more people needed help but did not ask for it. It was clear, however, that the number of individuals dependent on state aid would change, for example, due to the deaths of disabled people and widows, and also due to the growing up of orphans, who were entitled to maintenance support until they reached the age of 18 – after which they were obliged to find work or receive help from other public organisations. For such people, it was quite difficult to get a higher education,[5] but the best students could count on additional benefits.[6]

Aid totalling almost one billion crowns in 1920 and almost 660 million crowns in 1921 was paid to the eligible individuals. According to the beneficiaries, the amounts were not sufficient to meet the needs of war invalids and families of the deceased and they demanded an increase in these amounts.[7]

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3 Brablec J. [1920], 20–21.

4 Svoboda J. 1923, 4.

5 Růžička M. 2011, 207.

6 Růžička M. 2011, 208.

7 Stegmann N. 2010, 216.

Legislative, organisational, and dislocation changes

Paragraph 4 of the Act No. 199 of April 8, 1919, on the organisation of assistance to victims of war, became the basis for the establishment of regional departments for assistance to victims of war, which formed a part of the Ministry of Social Welfare (Ministerstvo sociální péče). According to the same paragraph, cooperation with other ministries was envisaged and based on other legal provisions, such as cooperation with municipalities (§ 6), and coordination of aid with foreign countries (§ 5). Further details were laid down in Government Decree No. 561 of October 17, 1919.

The Prague Office for War Victims (Pražský úřad pro válečné poškozence),[8] which superseded the State Regional Commission for the Care of Returning Soldiers, was located in Prague (§ 1) in the building of the House of Invalids, where it began its operations on May 1, 1919,[9] although the need to carry out the necessary adaptation work meant that regular work did not begin until June 1, 1919.[10] Soon, however, the commission made efforts to obtain additional premises in the House of Invalids, as it had originally received only a part of it. Unfortunately, these attempts, which even took the form of a petition at the Revolutionary National Assembly (Revoluční národní shromáždění) and negotiations with the President, were unsuccessful.[11]

Fig. 1. Seal imprint of the Regional Office for War Victims in Czech (Source: MSP. Box 482)

The administrative headquarters were very modest, as the very building that housed the House of Invalids was founded in 1658 by Count Peter Strozzi, who in his will bequeathed money for the construction of the building that was to provide care for the war invalids. The building was not put into use until 1735 (Fig. 2).[12]

Local aid departments for the victims of war were subordinate to the regional aid divisions and were located on the premises of the local political administration (§ 2). These units were executive organs of the district divisions, to which they were also subordinate in personnel and material matters. For this reason, the local divisions were tasked with carrying out the orders of the higher administration, but above all, with directly caring for the war victims (§ 3) and it was stipulated that 'all governmental institutions are obliged' to provide them with 'the necessary support' (§ 4).

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8 In the National Archive, within the fund of the Státní úřad pro válečné poškozence v Praze, documents related to the activities of the Regional Office for War Victim Assistance in Prague are preserved (Fig. 1). After World War II, the office of the same name took over the functions of the interwar administration and only part of the documents was transferred to the archive. Box 1–31.

9 Brablec J. [1920], 6.

10 Skala J.K. [1922], 6.

11 Skala J.K. [1922], 8.

12 Heřmánek P. 2015, 15–16.

In the beginning, there were 38 such units in the Bohemia region alone.[13] Some of them were responsible for several political areas, such as the Kutná Hora branch, which operated in both the Kutná Hora and Čáslav regions. Also, for example, due to the incorporation of some districts into the capital of the Republic, the number of units changed, and over time, their number decreased as a result of their merger.[14] In 1925, there were already only 17 district offices in the Bohemia region, which was caused by a decrease in the number of applications.[15]

The district offices were headed by directors appointed by the Ministry of Social Welfare at the request of the director of the regional directorate for aid to war victims. The tasks of the staff employed in local units included the direct care of disabled people, i.e. making sure they were neat and clean and did not beg. Care workers helped them find job that would provide their clients with a livelihood. All of this naturally suggested maintaining confidentiality concerning the clients.[16] However, in practical terms, there were many complaints about these employees, who were accused of rude behaviour or failure to observe working hours.[17] Branch managers were required to submit an annual report on their activities within two weeks of the end of the year.[18]

Fig. 2. House of Invalids in the interwar period (Source: FČTK. No. 10770/2)

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13 Svoboda J. 1923, 11–13.

14 Růžička M. 2011, 128, 260.

15 Růžička M. 2011, 331.

16 Růžička M. 2011, 128–129.

17 Brablec J. [1920], 28.

18 Brablec J. [1920], 28.

The directors of the regional divisions were appointed by the Ministry of Social Welfare,[19] which also directly managed them, while the director of the regional division managed the personnel of the regional branches. The director also appointed the managers of the various departments to whom he or she could delegate the right to sign less important documents.[20] It was the Ministry that usually, at a director's request, appointed, promoted, transferred, or dismissed staff.[21] Directors of regional divisions were required to submit an annual report for the past year.[22]

The Regional Office for Aid to the Victims of War in Prague was initially divided into 17 internal departments,[23] but it soon became apparent that there was a need for a reorganisation, which was gradually carried out in 1921. This slowness in implementing necessary changes was dictated by the desire to avoid administrative chaos. As a result, the Office was divided into a main bureau and 10 departments that could be further subdivided into groups, if necessary.[24] However, reorganisations continued in the 1920s. Changes also took place in the 1930s, and the organisational structure finally stabilised in 1935, when the last major reorganisation took place. The bureau continued to deal with administrative and organisational work, resolve personnel issues, maintain contact with other units, and supervise legal and organisational issues. It oversaw the work of several departments:

– Department I – which was responsible for pension issues and charitable support for war veterans in the region.[25]
– Department Ia – responsible for issues concerning social and charitable support for veterans and survivors of war, including the blind. It also dealt with the registration of tobacco kiosks operated by veterans, cooperatives, and other matters.[26]
– Department Ib – care for war veterans abroad.
– Department Ic – care for the families of individuals fallen in the war.[27]
– Department II – medical care, both outpatient clinics and hospital care.
– Department IIa – socio-medical examinations, decisions regarding the regional appeals commission, and administrative matters relating to the provision of orthopaedic aid devices.[28]

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19 Růžička M. 2011, 127.
20 Brablec J. [1920], 26.
21 Brablec J. [1920], 26–27.
22 Brablec J. [1920], 27.
23 Skala J.K. [1922], 14.
24 Skala J.K. [1922], 14–16.
25 Výroční zpráva. 1936, 3.
26 Výroční zpráva. 1936, 4.
27 Výroční zpráva. 1936, 5.
28 Výroční zpráva. 1936, 6.

– Departments IIIa-c – accounting.[29]

– Department IV – various auxiliary units (e.g., records office, chancellery).[30]

In 1936, according to Act No. 67/1936,[31] which regulated the payment of benefits to war victims, the tasks considered by Department I changed. The Prague administration also organised various charity collections and events to obtain items for orphans, who also received goods from the invalids' associations. For example, in 1923, 2,800 suits for boys, 2,857 dresses for girls, 2,360 shirts for boys and 2,370 shirts for girls, and 1,200 pairs of shoes were distributed in this way, mainly for children aged 4 to 14.[32] The administration first distributed aid to full orphans and then to orphans from large families, widows, and invalids.[33]

As early as 1919, the first training courses for invalids were organised in agriculture, retail, and industry at trade schools, or directly with tradesmen and associations.[34] Furthermore, support was given for setting up their own businesses or taking over the running of tobacco shops provided by the authorities.[35] Another source of income was, for example, work in cinemas,[36] and in 1919 alone, 16 licences were issued to invalids' associations in Bohemia.[37] The issuing of cinema licences was a complicated matter, as there were many organisations interested in obtaining them. This required cooperation with the Ministry of the Interior, which usually issued cinema licences, and the Ministry of Social Welfare, which in turn lobbied for the interests of war invalids. Therefore, it was not uncommon for two organisations to compete for a licence to show biographical films in the same place, with the authorities trying to reach an agreement among themselves. In Duchcov,[38] for example, the local invalids did not agree to the contract, although the competitive company proposed to employ only war invalids in the cinema and to donate 20% of the profits to the war invalids' organisation and another 20% to the Ministry of Social Welfare (Fig. 3).[39] In other places, such as Louny,[40] the invalids' cinema had to break the monopoly of the only cinema in the town, whose owner was abusing his position.[41]

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29 Výroční zpráva. 1936, 7–9.

30 Výroční zpráva. 1936, 10–11.

31 Výroční zpráva. 1937, 3.

32 Růžička M. 2011, 206–207.

33 Růžička M. 2011, 207.

34 Brablec J. [1920], 15.

35 Brablec J. [1920], 18.

36 Růžička M. 2011, 292–293.

37 Brablec J. [1920], 19.

38 Duchcov – Ústí nad Labem Region, Czech Republic.

39 MSP. Box 482.

40 Louny – Ústí nad Labem Region, Czech Republic.
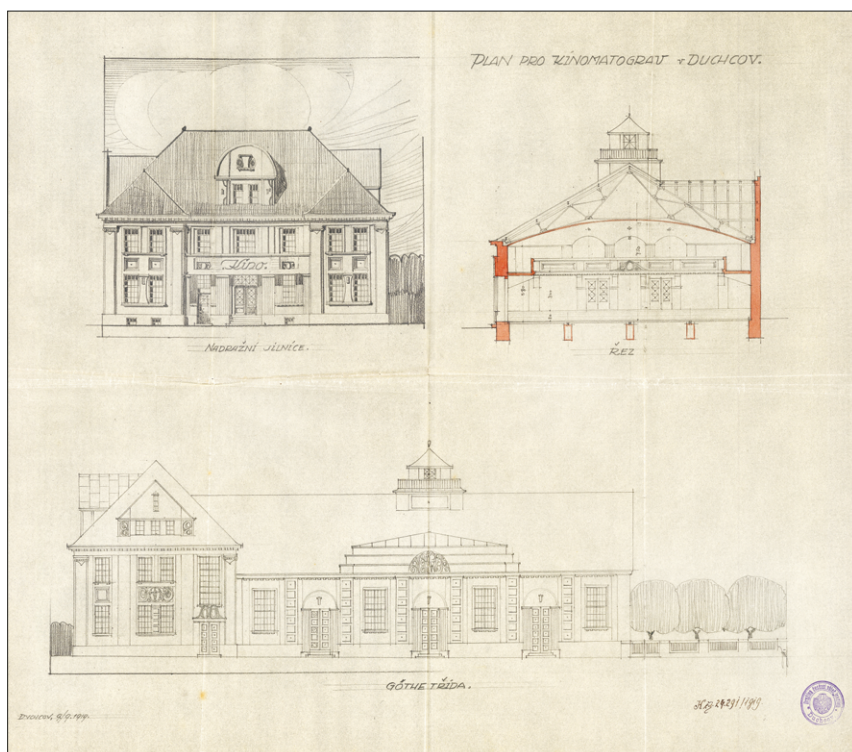
41 MSP. Box 4.

Fig. 3. Design for the construction of a cinema in Duchcov in 1919 (Source: MSP. Box 482)

Fig. 4. New boarding house for war veterans in Hořice, built and occupied in the mid-1930s. (Source: FČTK. No. 35613)

The building of the Regional Office for Aid to the Victims of War in Prague also housed the most affected war invalids, but they had to comply with certain rules, such as diet and night rest. Furthermore, they had the right to use the services of a hairdresser every week and were entitled to a change of underwear – all at the expense of the office.[42]

The veterans lived in the House of Invalids until the mid-1930s, when a modern building was built in Hořice, completed in 1934 (Fig. 4). In May 1935, most of the disabled individuals were moved there, although some of them stayed in the previous House of Invalids, for instance, because of their work in Prague.[43] There were even protests against this change, as some people did not want the House of Invalids to become just an office building.[44]

Employment of the management staff

From May 1 to December 31, 1919 – 43,515 cases were submitted to the Prague office, and[45] according to the preliminary records of war victims, 75,000 war victims were registered in Bohemia by the end of 1919.[46] Of course, due to the large number of invalids and the limited number of clerks, there were delays in handling cases. For example, in the first years, the Prague Office received between 30 and 50 appeals against the decisions of the local branches, but the regional board for aid to the victims of war could only process 20 appeals per day.[47] In the following years, the workload did not decrease, and while 43,515 cases were a huge number to handle during seven months in 1919, in 1920, the number increased to 107,949, and in 1921, to as many as 177,822.[48] These matters were dealt with by full-time employees, of whom there were about 200 in 1919, including war invalids. Within a year, the number of administrative staff increased by several dozen (Table 1, 2).

However, this proved insufficient, and by December 31, 1921, there were 441 staff, 73 of whom were clerks,[49] and by the end of 1923 the number of staff had risen to 547 people.[50] The workload decreased in the mid-1920s, when new applications for pensions stopped coming in, and the office no longer had to assist in setting up invalids' associations, obtaining licences, and resolving issues regarding determining

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42 Růžička M. 2011, 187.

43 Růžička M. 2011, 187.

44 Růžička M. 2011, 225.

45 Brablec J. [1920], 7.

46 Brablec J. [1920], 9.

47 Růžička M. 2011, 307.

48 Skala J.K. [1922], 86.

49 Skala J.K. [1922], 16.

50 Zpráva 1924, 3.

the amount of invalidity pension following a medical examination.[51] This allowed for a reorganisation of the Office, merging some departments,[52] and gradually reducing staff. In 1935, 349 posts in the Office were standardised, but only 312 were filled, of which a further 28 jobs were transferred to other departments and one employee of the Ministry of Social Welfare was assigned to the Office, which resulted in an actual staff number of 285 individuals. Of these, 117 were war invalids and another 5 were disabled people and invalid officers.[53]

Tab. 1. Number of employees of the Regional Office for Aid to the Victims of War in Prague in 1919

Category	Number
Officials	18
Contract workers	117
Auxiliary personnel	51
Servants	10
Total	196
Including invalids – legionaries	22
Including invalids – non-legionaries	88
Invalids in total	**110**

Source: Brablec J. [1920], 7.

Tab. 2. Number of employees of the Regional Office for Aid to the Victims of War in Prague in 1920

Category	Number
Employees with legal training	4
Accountants	11
Office employees	13
Contract workers	148
Management support staff	74
Servants	15
Total	265

Source: Skala J.K. [1922], 16.

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51 Růžička M. 2011, 329.

52 Růžička M. 2011, 330.

53 Výroční zpráva. 1936, 83.

For the management to function properly, qualified staff were needed. The first director of the Prague Office was Ondřej Kypr, who had already been involved in various organisations helping war veterans before its establishment (Fig. 5). He had himself fought in the war and been wounded,[54] about which – in addition to describing his work to support war invalids – he wrote in several of his works. At the same time, he edited the official journal "Sociální revue", to which he made a significant contribution. He also promoted the idea that disabled people should not just rely on state assistance but should be active themselves.[55]

Ondřej Kypr headed the board of the Prague registry from May 1, 1919, although he did not have the required formal education to become a civil servant. The Ministry of Social Welfare ensured that he retained his position and received adequate remuneration as a contract worker. The reason for this was summarised in the following words: 'He handled his duties perfectly and there are no grounds to change this situation' – as stated in the documents of the Council of Ministers meeting from 1927. The influential ruling Agrarian Party also supported Ondřej Kypr. Its secretary, Rudolf Beran, in a private letter concerning maintaining Ondřej Kypr's post during the reorganisation of the public service in 1927 came out strongly in Kypr's defence, stating, among other things, that 'Director Kypr has provided an extremely valuable service to the state, which should not be underestimated', as he had 'saved the invalids from Bolshevisation'.[56]

From 1921 onwards, Ondřej Kypr's long-term deputy was Josef Skala, who first proved himself during the organisation of the Regional War Victims Board in Brno. In both places, he demonstrated exceptional organisational talent, and in one of the applications for his promotion, a senior minister stated that he had achieved a 'completely exceptional qualification' that required 'an exceptional promotion' and to keep him in public service.[57] J. Skala also prepared most of the annual reports, which were a compilation of statistics and other information on the office's activities.

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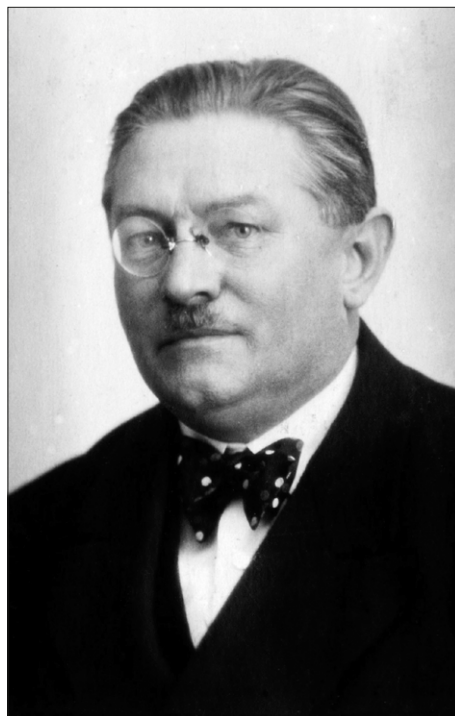
54 Růžička M. 2011, 118.

55 Růžička M. 2011, 130.

56 PMR. Box 1175.

57 PMR. Box 1175.

Fig. 6–7. Manufacture of orthopaedic appliances in the war invalids' orthopaedic cooperative. (Source: FČTK. No. 36312, 36313)

Fig. 8. The title page of International medical journal „Slovanský sborník ortopedický" (Source: SSO 1934)

Fig. 9. Advertisement of a company 'Orthopaedicke družstvo' producing orthopaedic prostheses (Source: SSO 1934, advertising page)

Fig. 10. An advertisement for the ERGON company from Brno, which manufactures, among others, prostheses and orthopaedic footwear (Source: SSO 1934, advertising page)

Conclusions

In the endeavour to support the victims of the war, the legionaries were favoured as pioneers of the idea of an independent Czechoslovak state, which naturally caused dissatisfaction among those citizens who had hitherto served in Austro-Hungarian uniform, especially those of German and Hungarian nationalities,[58] who were not thrilled with the establishment of the Republic in which the representatives of the formerly ruling nations became national minorities. This situation was considered at the time to be a deserved advantage and was also supported by Director O. Kypr.[59]

Overall, it can be said that significant efforts were made to find means of support and survival, particularly for war invalids, both through suitable work and in production cooperatives for them.

At the beginning of 1922, Ondřej Kypr proudly announced that Czechoslovak methods had been positively evaluated by representatives of analogous institutions in Austria, Great Britain, and even Yugoslavia, which had built its system on the Czechoslovak model. The influence of the Czechoslovak approach extended also to its neighbouring country, Germany.[60]

In addition to the social care provided by state and regional institutions, the system was complemented by various voluntary associations. Since the war, it was necessary to produce various aids and devices for invalids, they often manufactured and took care of these themselves, for example, in an orthopaedic cooperative (Fig. 6–7). Unfortunately, these production cooperatives were not always properly managed.[61] Also, the influence of medicine on the provision of aids cannot be overlooked. However, regional authorities played an indispensable role by providing financial support and issuing referrals for various medical examinations and orders for orthopaedic devices (Fig. 8–10).

58 Stegmann N. 2010, 216.

59 Skala J.K. [1922], 3.

60 Skala J.K. [1922], 3.

61 Růžička M. 2011, 131.
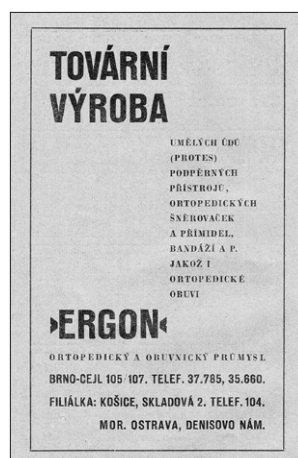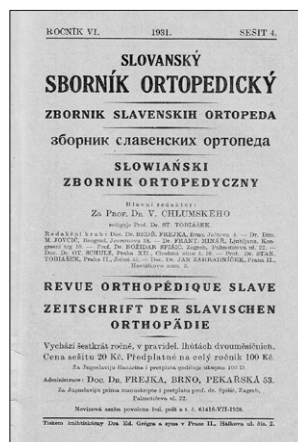
References

Archival sources

National Archives Czech Republic

FČTK – Fotoarchiv Československé tiskové kanceláře

MSP – Ministerstvo sociální péče

PŘ II – Policejní ředitelství Praha II – všeobecná spisovna

PMR – Předsednictvo ministerské rady

Published works

Brablec J. [1920]. *Zpráva o činnosti zemských úřadů pro péči o válečné poškozence v roce 1919.* Praha.

Heřmánek P. 2015. *'Aby nemuseli nakonec žebrati'. Příběhy z dějin karlínské Invalidovny.* Praha.

Remarque E.M. 1989. *All Quiet on the Western Front.*

Růžička M. 2011. *Péče o válečné invalidy v Československu v letech 1918–1938. Disertační práce.* Filozofická fakulta Univerzity Karlovy. Praha.

Skala J.K. [1922]. *Tři roky boje proti následkům války. Zpráva o činnosti Zemského úřadu pro péči o válečné poškozence v Praze za léta 1919, 1920, 1921.* Praha.

SSO 1934. "Slovanský sborník ortopedický" 6(4).

Stegmann N. 2010. *Sozialpolitk und Kriegsdeutungen: Kriegsinvaliden im Spiegel tschechoslowakischer Volbirder 1918–1920.* In: L. Kostrbová, J. Malínská et al. (eds), *1918. Model komplexního transformačního procesu?* Praha, 203–218.

Svoboda J. 1923. *Příručka válečného poškozence československého.* Brno.

Výroční zpráva. 1936. *Výroční zpráva o činnosti Zemského úřadu pro péči o válečné poškozence v zemi České za rok 1935.* Praha.

Výroční zpráva. 1937. *Výroční zpráva o činnosti Zemského úřadu pro péči o válečné poškozence v zemi České za rok 1936.* Praha.

Zpráva. 1924. *Zpráva o činnosti Zemského úřadu pro péči o válečné poškozence v Čechách v roce 1923.* Praha.

Natalia Bełdyga
Kaunas University of Technology
e-mail: natalia.beldyga@ktu.edu

https://orcid.org/0000-0002-7805-7221

Community Resilience Dimensions of Agency and Human Values in the Response of Polish Border
Communities to the Refugee Crisis Caused by the Russian Invasion of Ukraine in 2022

Summary: This research aims to explore the role of community resilience in response to the refugee crisis caused by the Russian invasion of Ukraine on February 24, 2022 by specifically studying two core dimensions of community resilience, namely agency and human values, to see if they helped to build and enhance community resilience to crisis and uncertainty. In this respect, two cases of responses to the refugee crisis made by two Polish border communities in two corners of Poland, one in the northeast, in Suwałki, in the borderland area often referred to as Suwałki Gap, and the second one in the southeast, in Biecz, known as 'Little Kraków,' have been analysed by conducting qualitative interviews with research participants in three interview groups of volunteers, community members, and municipality who privately or professionally provided help for Ukrainian refugees arriving to Poland. Qualitative results of the analysis reveal that deep awareness of members of both Polish border communities about who the aggressor is and who the defender is in the conflict between Russia and Ukraine was the main motivation to activate distinct values of, among others, compassion or mutuality that influenced the response to the arrival of Ukrainian citizens fleeing their invaded homeland and seeking safety and security in Poland – which was mainly a demonstration of sympathy and solidarity with Ukrainian refugees. The findings also reveal that one of the core community resilience dimensions – agency – was exercised collectively and individually, both bottom-up and top-down. Although the decisions were mostly spontaneously dictated by the needs of the heart, the decisions to act were made purposefully. In light of the current refugee crisis, of which the Italian island of Lampedusa is the

centre, and with which EU countries have been attempting to cope, it is crucial to continue further research about the cases of responses to such crises, specifically the reactions of the most affected responders. The results of the empirical research on the analysed cases of responses to the refugee crisis and uncertainty caused by the Russian invasion of Ukraine on February 24, 2022 made by Polish border communities may contribute to the existing research and discourse on the role and impact of citizens' and communities' resilience potential in disaster response and preparedness.

Keywords: response to crises and uncertainty, refugee and humanitarian crisis, community resilience, human values, agency

Introduction

Global crises, sudden disruptions, and changes may evoke and affect the responses made both by the states and the citizens,[1] as well as unforeseen, bottom-up collective actions.[2] Since the aftermath of World War II, Europe has faced an unprecedented mass movement of globally displaced people, representing a world record of inflow of refugees and economic migrants[3] fleeing their homelands due to poverty – in particular in sub-Saharan Africa, and deprivation, persecution and armed conflicts – in particular in the Middle East. Poorly exercised authority, violence, domestic conflicts, and wars in North Africa, the Middle East and other parts of the Arab area, as well as the complex status of the large parts of Africa, have forced people to pursue a better life outside their homelands.[4] The year 2015, often labelled as 'the year of the migration crisis' or the 'EU refugee crisis,' when during 'the long summer of migration' Europe experienced over one million arrivals of migrants and refugees travelling to Europe using the Mediterranean entry sea route[5] arriving in Greece as the main entry point to Europe, was the time of one the biggest and most challenging refugee crises on the EU borders that evoked the responses on the individual, local, and state level.[6] As a result of a political debate, the European Parliament, the European Council, and the European Commission recognised and acknowledged the humanitarian side of the migration and refugee crisis and determined the Mediterranean entry route to Europe[7] – together with the emergency measures, the principle of solidarity,

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1 Fotaki M. 2022, 295–323.

2 Boersma K. et al. 2018, 728–742.

3 Szabó Z.P. et al. 2020, 94–114.

4 Attinà F. 2016, 15–31.

5 Panebianco S., Fontana I. 2018, 1–17.

6 Fotaki M. 2022, 295–323.

7 Panebianco S., Fontana I. 2018, 1–17.

common obligation, duty, shared responsibility[8] – a top priority on the EU agenda. Since the end of the Cold War, it has become the norm that the international community is involved in humanitarian response and collective action, and organisations such as the United Nations and state governments are expected to be responsible for supporting the protection of citizens from genocide and other extremely brutal and cruel mass acts of violence and inhumanity.[9] The Mediterranean Route to the EU has become the benchmark for new ways in which various actors practise humanitarian interventions and responses.[10] When in the spring of 2015, hundreds of refugees started to arrive at the Greek islands of Lesbos, Chios, Kos, and Samos, the initiatives taken by the local authorities and communities – which, in an act of solidarity, got involved in the response to this emerging humanitarian crisis and the ad-hoc solution – included the creation of reception facilities and the provision of food and non-food items, and first aid at the landing points, as well as transport and accommodation.[11] Other destination EU countries were also affected by this crisis.[12] For instance, in Hungary, through which one of the entry routes to Western Europe passes, the Keleti train station in the state's capital, Budapest, was transformed into a shelter for the thousands of refugees and migrants as well as into a hub of humanitarian aid and support provided by, among others, volunteers and activists showing solidarity with those in need.[13] Also, Italy – due to its geographical location and close vicinity to North African countries – became the main landing point and transit country for migrants travelling through the Mediterranean channel wanting to arrive at their desired destinations in Europe, in particular in Northern Europe.[14] In Holland, where over 1.2 million people formally sought asylum, the refugee crisis was also an opportunity for various actors and communities to become actively involved in responding to a sudden inflow of refugees in Amsterdam.[15] Similarly to Budapest's Keleti train station, Amsterdam Central Station has become the hub of numerous emerging, often spontaneous, citizen initiatives and small gestures, such as collecting clothes and groceries and distributing those goods among the refugees.[16]

E. Goroya *et al.* mention volunteers who joined forces to provide migrants and refugees with food, clothing, and medical help.[17] In turn, K. Boersma *et al.* talk about

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8 Panebianco S. 2016, 1–31.

9 Bellamy A. 2015, 161–185.

10 Panebianco S., Fontana I. 2018, 1–17.

11 Bousiou A. 2024, 1–14.

12 Attinà F. 2016, 15–31.

13 Kallius A. et al. 2016, 25–37.

14 Panebianco S. 2016, 1–31.

15 Rast M.C. et al. 2019, 1–19.

16 Rast M.C., Ghorashi H. 2018, 188–198.

17 Goroya E. et al. 2105.

the emergence of unexpected, spontaneous volunteering groups and grassroots movements involved in collective bottom-up activities and initiatives in reaction to the crisis that were motivated by a sense of solidarity in contrast to the top-down command approach adopted by formal institutions in an attempt to cope with the challenge of a large number of refugees arriving to Holland in a short period.[18] Authors note that such divergent bottom-up civil society responses to such emergencies can be a major alternative option to complete and enhance the top-down actions of formal institutions. Eva Youkhana and Ove Sutter[19] remark that due to a sudden wave of humanitarian volunteering and grassroots community-based civil society initiatives, many responsibilities in the area of care and first aid that normally should be provided by the formal institutions were taken over by those non-state actors. Feyzi Baban and Kim Rygiel[20] refer to the case in Germany, where citizens were ready to take risks and show solidarity with people they did not know and draw attention to the significant role of grassroots citizen initiatives, solidarity activism, and welcome movements that demonstrate and develop our universal humanity.[21]

In times when society has been coping with a variety of calamities and the Italian island of Lampedusa has again become a centre of refugee crisis and a burning issue debated not only by the EU but other high-profile global institutions, the phenomenon of European citizens' involvement in response to the crisis caused by the sudden arrival and dramatic inflow of tens of thousands of migrants and refugees to many European cities and towns, the demonstration of solidarity with the newcomers manifested in civil-based and communities' initiatives, and spontaneous bottom-up activities, such as helping the refugees with transportation, accommodation, provision of food, clothes and shelter,[22] necessitates a comprehensive study on the resilience potential of non-state actors – namely civilians, especially communities – in response to crises. In agreement with the argument presented by M.C. Rast and H. Ghorashi,[23] this type of resilience not only triggers adaptability and helps new initiatives to emerge but may also address the need to build knowledge about the response to a crisis and create a new model of crisis management that could potentially be implemented across countries.[24] M.C. Rast *et al.* propose that the resilience potential and the level of creativity shown by civilians – namely local communities, volunteers, and other involved non-state actors – in response to a refugee crisis and

18 Boersma K. et al. 2018, 728–742.

19 Youkhana E., Sutter O. 2017, 1–6.

20 Baban F., Rygiel K. 2017, 98–116.

21 Baban F., Rygiel K. 2017; Youkhana E., Sutter O. 2017, 1–6.

22 van der Veer L. 2020, 368–387; Feischmidt M., Zakarias I. 2019, 59–99.

23 Rast M.C., Ghorashi H. 2018, 188–198.

24 Attinà F. 2016, 15–31.

refugee reception should be recognised, connected, fostered, and advanced by the governments.[25] Likewise, L. van der Veer encourages the idea that complex correlations of actors engaged in helping refugees should be studied.[26]

The Novelty

The novelty of this study is that, firstly, it analyses the most recent cases of responses in Polish border communities in two different corners of Poland to a new type of refugee crisis evoked by the Russian invasion of Ukraine on February 24, 2022, to establish if there has been a similar reaction and if this pattern of response can be further developed and used in the future preparedness of the civilian population to a crisis. Notably, due to its proximity to the Russian and Belarusian borders, one of the studied Polish border communities in Suwałki Gap has been labelled by some national and international media as 'the most dangerous place on earth.'[27] Secondly, findings of the empirical research on the role of community resilience and its specific dimensions of agency and human values, which is a unique and original combination of elements in response to crisis and an interesting research topic *per se*, may contribute to the existing research and discourse on civilian resilience potential in disaster preparedness.

Theoretical background
Community resilience

Recently, resilience has been a very popular concept present in various scientific discourses,[28] which may signal the need for further study on the function of resilience. In the light of various interdependencies, complex and uncertain times, and new forms of unpredictable threats faced by modern societies, resilience may be the answer.[29] Resilience is defined, among others, as the ability of people to organise themselves in different environments and groups, such as organisations, nations, or communities to sustain and enhance their well-being when coping with challenges.[30] According to Peter A. Hall and Michelè Lamont, resilience also encompasses the ability of people to cope with various types of contingencies – a phenomenon that is mostly present in research on ecology, developmental psychology, and the response to disasters.[31] Another more progressive interpretation of resilience is that it is not only a synonym

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25 Rast M.C. et al. 2019, 1–19.

26 van der Veer L. 2020, 368–387.

27 Karnitschnig M. 2022.

28 Ögtem-Young Ö. 2018, 1–13.

29 Boin A. et al. 2010, 1–12.

30 Rast M.C. et al. 2019, 1–19.

31 Hall P.A., Lamont M. 2012, 1–31.

for robustness and persistency that helps keep the same structure or identity of the system while experiencing change or disturbance, but also a catalyst for change so that groups of people, systems, or processes can renew or evolve or start something new. Social resilience, which depends on the ability of communities to respond collectively to disturbances or disruptions, is especially vital. Hence, in such response, it is worth reflecting on the nature of key dimensions of resilience and social systems, among others, agency and core values.[32]

Agency as a community resilience dimension

According to Christian Welzel and Ronald Inglehart, agency is a specifically human ability which enhances adaptability on both individual and collective levels, while a sense of agency – also referred to as the locus of control – is synonymous with the power to act on purpose.[33] The potential of this core dimension of community resilience is that it enables humans to learn and to choose purposefully.[34] As actions and activities play a significant role in responses to crises, especially in emergent spontaneous volunteering, humans' aptitude to exercise agency allows them to make decisions in their lives.[35] Furthermore, in reaction to crises, specifically on the local level, attention is given to the role of agency exercised by various actors involved in refugee reception. Also, the contribution of civil society in this area is highlighted.[36] During emergencies, social relations (often informal), common interests, beliefs, and identities motivate and mobilise people towards actions, which is usually a spontaneous decision.[37] The role and potential of the agency is encapsulated in the concept of 'participatory society' apparently consisting of agentive actors exercising 'active citizenship', which, in turn, fosters individual responsibility.[38]

Human values as a community resilience dimension

Values are an underlying feature of humans.[39] Key theorists in different disciplines highlighted the role of people's key values in understanding and predicting their conduct, decisions, and actions.[40] Values are guiding posts that help humans choose and

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32 Folke C. et al. 2010, 1–9.

33 Welzel C., Inglehart R. 2010, 43–63.

34 R Boyd R., Richardson P.J. 2005, 287–309.

35 van der Veer L. 2020, 368–387.

36 Glorius B. et al. 2019, 19–30.

37 Boersma K. et al. 2018, 728–742.

38 van der Veer L. 2020, 368–387.

39 Verplanken B., Holland R. 2002, 434–447.

40 Rohan M.J. 2000, 255–277.

evaluate actions and events.[41] In social sciences, values are regarded as a key motivator of human action and behaviour as people aspire to think and act independently. Conceivably, some distinct values can be a moral or ethical foundation for human conduct. At the same time, certain values may be activated through confrontation with specific situations or information. As the values respond to the needs and options present in their environment, it could be presumed that in most cases specific values must be activated to make an impact.[42] It is noteworthy that, since values could be viewed as essential truths about the most expected outcome of human conduct, the crucial aspect is the activation of motivation and not the activation itself.[43] Since human societies adapt, organise, and orientate themselves by following patterns on an individual micro level,[44] eventually, whole societies may change – if a change has taken place in the individuals – through values or behaviours transmitted in a bottom-up manner.[45] Consequently, a sufficient number of micro-level individual changes can create a macro-level trend which then introduces a social change.[46]

Methodology

To achieve the objective of this study, i.e., to explore the role of community resilience and core dimensions of community resilience (namely agency and human values in response to the refugee crisis caused by the Russian invasion of Ukraine on February 24, 2022) and see if those dimensions helped to build and enhance community resilience to crisis and uncertainty, the author has analysed two cases of responses to refugee crisis in two Polish border communities in two corners of Poland – one in the northeast, in Suwałki, in the borderland area often referred to as Suwałki Gap, and the second in the southeast, in Biecz, known as 'Little Kraków.'

This article is based on the empirical data collected during research conducted from the beginning of March 2023 till the end of April 2023 in the two above-mentioned Polish border communities in Suwałki and Biecz during a field trip.[47] Qualitative interviews were conducted on-site in Poland with informants from three interview groups of volunteers, community members, and municipality officials (employees of the municipality and subordinate units) who were privately or professionally involved in helping Ukrainian refugees arriving in Poland. The sources of insights

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41 Schwartz S.H. 1992, 1–65.

42 Welzel C., Inglehart R. 2010, 43–63.

43 Kilburn H.W. 2009, 868–885.

44 Dunbar R. et al. 1999, 1–14.

45 Barber N. 2007, 123–148.

46 Welzel C., Inglehart R. 2010, 43–63.

47 This research, including the interview guide, has been approved by the Research Ethics Commission of Kaunas University of Technology confirming that the project does not contradict the general principles of research ethics – protocol No. M4–2023–03.

presented in this article are the answers given by 6 informants from each interview group, 3 from Suwałki and 3 from Biecz, which have been transcribed, coded into sub-categories and main themes, and interpreted by applying a qualitative analysis.[48]

The interview guide questions were directly related to the topic of community resilience and its core dimensions – agency and human values. In the case of the agency, the question asked in two interview groups of community members and volunteers was, 'Did you take any action on your own to support Ukrainian refugees arriving in Poland?' and in the municipality interview group, was 'Could you describe the actions and initiatives of the municipality in response to Ukrainian refugees coming to Suwałki/Biecz?' In the case of human values, the question asked in two interview groups of community members and volunteers was 'Why did you decide to support Ukrainian refugees?' and in the case of the municipality interview group was 'Why did the municipality decide to support Ukrainian refugees?'.

A limitation of this article is that it presents interpreted findings only about two core dimensions of community resilience, namely agency and human values, out of other dimensions of community resilience, as this particular study is part of a larger doctoral dissertation research project.[49]

Results

The results of the qualitative analysis indicate that at the very onset of the invasion, members in both Polish border communities clearly understood who the aggressor and defender were in the Russia-Ukraine conflict. One of the volunteers answered that 'It does not matter if he brought a zloty or brought a chicken or a kilo of sugar, this is a man who realises who the aggressor is, yes, in this war.'[50] This strong awareness was a motivation that led to the activation[51] of values on an individual macro-level[52] – guiding posts that helped informants choose and evaluate actions and events.[53] One of the activated values was compassion, as informants in all three interview groups sympathised with Ukrainian citizens and, in an act of solidarity, got actively involved in helping and supporting Ukrainian refugees arriving in Poland. Quite often, those actions were based on spontaneous decisions to help. As for all the informants,

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48 For the purpose of the analysis, the informants in all three interview groups were coded as B_INF1 for a volunteer representing case area Biecz, S_INF1, a volunteer representing case area Suwałki, and respectively community members were coded as B_INF2 and S_INF2 and B_INF3 and S_INF3 for informants in the municipality group.

49 As part of the same doctoral research project, the article (Bełdyga N. 2023) was prepared, which examines the crisis on the Polish-Ukrainian border through the lens of community resilience dimensions of agency and mobilized resources.

50 Answer provided by interviewee B_INF1.

51 Kilburn H.W. 2009, 868–885.

52 Welzel C., Inglehart R. 2010, 43–63.

53 Schwartz S.H. 1992, 1–65.

it was simply a need of the heart and a human reaction to show kindness and purely be humane towards people fleeing their homeland seeking safety and security. Another important factor and a signpost guiding the informants in their response to the crisis was the value of mutuality, i.e., the hope that should they find themselves in need, somebody would help them too. As one of the community members put it, she decided to support Ukrainian refugees because 'Well I would like someone to help me.'[54] The study's findings also reveal the role of the value of citizenship exercised by agentive actors of the 'participation society'[55] in the reception of Ukrainian refugees in both Polish border communities. This motive to act and respond to the crisis was explained by an informant from the municipality interview group, 'If something happens and affects our residents, it is impossible for the local government not to appear. I can't imagine such a local government.'[56]

Results show that in the case of the potential of agency as the core dimension of community resilience, although it was a natural and spontaneous reaction followed by an instant decision to act to help Ukrainian citizens, the informants chose to do so purposefully.[57] Agency was exercised on both individual and collective, bottom-up and top-down levels, out of human duty and responsibility. As one of the informants described it, 'My first thought was to help people, yet I just didn't know how and where to find them.'[58]

Discussion

Whether on Lesbos, in Budapest, Amsterdam, Suwałki or in Biecz, the response to the sudden, massive and dramatic arrival of displaced people forced to seek safety and security outside their homelands was similar in relation to the citizens' motives that activated much of the same values and in consequence led to the spontaneous yet purposeful decisions to act and get involved in providing help and support for refugees arriving at their countries in an act of solidarity. Although citizens responded to the refugee crisis in various ways, the emerging pattern of response to a sudden disruption, such as a refugee crisis, may be a sign of the untapped resilience potential of citizens as non-state actors, which can be enhanced not only by core dimensions of community resilience, such as among others agency or human values but also other core dimensions. Such empirically obtained knowledge about the resilience potential of civilians may be further developed and used in civil crisis preparedness

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54 Answer provided by interviewee B_INF2.

55 van der Veer L. 2020, 368–387.

56 Answer provided by interviewee S_INF3.

57 Boyd R., Richardson P.J. 2005, 287–309.

58 Answer provided by interviewee S_INF2.

by state actors in charge of contingency planning. Hence, it is essential to research other core dimensions of community resilience by examining cases of responses from the most affected actors.

Conclusions

In light of the current multifaceted refugee crisis faced by the EU countries, it is crucial to continue further research about the cases of responses to such emergencies, specifically the reactions of the most affected responders. The results of the empirical study on the analysed cases of the Polish border communities' responses to the refugee crisis caused by the Russian invasion of Ukraine on February 24, may contribute to the existing research and discourse on the role and impact of citizens and communities' resilience potential in disaster response and preparedness.

References

Archival sources

B_INF1–3. Author's private archive. Interviews with individuals assisting Ukrainian refugees in Biecz

S_INF1–3. Author's private archive. Interviews with individuals assisting Ukrainian refugees in Suwałki

Published works

Attinà F. 2016. *Migration Drivers, the EU External Migration Policy and Crisis Management Romanian*. "Journal of European Affairs". 16(4), 15–31.

Baban F., Rygiel K. 2017. *Living with Others: Fostering Radical Cosmopolitanism Through Citizenship Politics in Berlin*. "Ethics & Global Politics" 10(1), 98–116.

Barber N. 2007. *Evolutionary Explanations for Societal Differences and Historical Change in Violent Crime and Single Parenthood*. "Cross-Cultural Research" 41(2), 123–148.

Bellamy A. 2015. *The Responsibility to Protect Turns Ten*. "Ethics & International Affairs" 29(2), 161–185.

Bełdyga N. 2023. *The Role of Community Resilience Dimensions of Agency and Resources in Community Resilience to Crises and Uncertainty in Polish Border Communities*. "European Integration Studies" 17, 71–82.

Boersma K., Kraiukhina A., Larruina R., Lehota Z., Nury E.O. 2018. *A Port in a Storm: Spontaneous Volunteering and Grassroots Movements in Amsterdam. A Resilient Approach to The (European) Refugee Crisis*. "Social Policy & Administration" 53(4), 728–742.

Boin A., Comfort L.K., Demchak C. 2010. *The Rise of Resilience*. In: *Designing Resilience: Preparing for Extreme Events*. (eds), L.K. Comfort, A. Boin, C. Demchak. Pittsburgh, 1–12.

Bousiou A. 2024. *Solidarity and Contestation: Local Refugee Reception Practices At the South-Eastern EU Border Islands*. "Journal of Immigrant & Refugee Studies" 22(1) 84–97.

Boyd R., Richardson P.J. 2005. *How Microevolutionary Processes Give Rise to History*. In: *The Origin and Evolution of Cultures*. (eds), R. Boyd, P.J. Richardson. New York, 287–309.

Dunbar R., Knight C., Power C. 1999. *An Evolutionary Approach to Human Culture*. In: *The Evolution of Culture*. (eds), R. Dunbar, C. Knight, C. Power. New Brunswick, 1–14.

Feischmidt M., Zakarias I. 2019. *Politics of Care and Compassion: Civic Help for Refugees and Its Political Implications in Hungary – A Mixed-Methods Approach*. In: *Refugee Protection and Civil Society in Europe*. (eds), M. Feischmidt, L. Pries, C. Cantat. Cham, 59–99.

Folke C., Carpenter S.R., Walker B., Scheffer M., Chapin T., Rockström J. 2010. *Resilience Thinking: Integrating Resilience, Adaptability and Transformability*. "Ecology and Society" 15(4). http://www.ecologyandsociety.org/vol15/iss4/art20/. Available on-line: September 29, 2023.

Fotaki M. 2022. *Solidarity in crisis? Community Responses to Refugees and Forced Migrants In The Greek Islands*. "Organization" 29(2), 295–323.

Glorius B., Oesch L., Nienaber B., Doomernik J. 2019. *Refugee Reception within a Common European Asylum System: Looking at Convergences and Divergences Through a Local-to-Local Comparison*. "Erdkunde" 73(1), 19–29.

Goroya E., Dhala K., Hayes L. 2015. *Volunteers Help Refugees Survive While Europe's Leaders Still Search For Solutions*. https://www.amnesty.org/en/latest/campaigns/2015/09/volunteers-help-refugees-survive-while-europes-leaders-still-search-for-solutions/. Available on-line: September 29, 2023.

Hall P.A., Lamont M. 2012. *Introduction*. In: *Social Resilience in the Neoliberal Era*. (eds), P.A. Hall, M. Lamont. Cambridge, 1–32.

Kallius A., Monterescu D., Rajaram P.K. 2016. *Immobilizing mobility: Border Ethnography, Illiberal Democracy, and the Politics of the „Refugee Crisis" in Hungary*. "American Ethnologist" 43(1), 25–37.

Karnitschnig, M. 2022. *The Most Dangerous Place on Earth*. "Politico". https://www.politico.eu/article/suwalki-gap-russia-war-nato-lithuania-poland-border/. Available on-line: September 30, 2023.

Kilburn H.W. 2009. *Personal Values and Public Opinion*. "Social Science Quarterly" 90(4), 868–885.

Ögtem-Young, Ö. 2018. *Faith Resilience: Everyday Experiences*. "Societies" 8(10), 1–13.

Panebianco S. 2016. *The Mare Nostrum Operation and the SAR Approach: The Italian Response to Address the Mediterranean Migration Crisis*. "EUMedEA Online Working Paper Series" 3, 1–31.

Panebianco S., Fontana I. 2018. *When Responsibility to Protect 'Hits Home': the Refugee Crisis and the EU Uesponse*. "Third World Quarterly" 39(1), 1–17.

Rast M.C., Ghorashi H. 2018. *Dancing with 'the Other': Challenges and Opportunities of Deepening Democracy through Participatory Spaces for Refugees*. „Social Inclusion" 6(1), 188–198.

Rast M.C., Younes Y., Smets P., Ghorashi H. 2019. *The Resilience Potential of Different Refugee Reception Approaches Taken during the 'Refugee Crisis' in Amsterdam.* "Current Sociology" 68(7), 1–19.

Rohan M.J. 2000. *A Rose by Any Name? The Values Construct.* "Personality and Social Psychology Review" 4(3), 255–277.

Schwartz S.H. 1992. *Universals in the Content and Structure of Values: Theoretical Advances and Empirical Tests in 20 Countries.* "Advances in Experimental Social Psychology" 25, 1–65.

Szabó Z.P., Vollhardt J.R., Mészáros N. 2020. *Through the Lens of History: The Effects of Beliefs About Historical Victimization on Responses to Refugees.* "International Journal of Intercultural Relations" 74, 94–114.

van der Veer L. 2020. *Residents' Responses To Refugee Reception: The Cracks and Continuities Between Care and Control.* "Ethnic and Racial Studies" 43(16), 368–387.

Verplanken B., Holland R. 2002. *Motivated decision making: Effects of Activation and Self-Centrality of Values on Choices and Behavior.* "Journal of Personality and Social Psychology" 82(3), 434–447.

Welzel C., Inglehart R. 2010. *Agency, Values, and Well-Being: A Human Development Model.* "Social Indicators Research" 97(1), 43–63.

Youkhana E., Sutter O. 2017. *Perspectives on the European Border Regime: Mobilization, Contestation and the Role of Civil Society.* "Social Inclusion" 5(3), 1–6.

Yulia Ivashko
Kyiv National University of Construction and Architecture
e-mail: yulia-ivashko@ukr.net
https://orcid.org/0000-0003-4525-9182

Aneta Pawłowska
University of Lodz
e-mail: aneta.pawlowska@uni.lodz.pl
https://orcid.org/0000-0003-2847-4403

Serhii Belinskyi
Knights of the First Winter Campaign 28th Separated Mechanized Brigade
(Armed Forces of Ukraine)
e-mail: serhii_belinskyi@meta.ua
https://orcid.org/0000-0003-2359-2507

Andrii Dmytrenko
National University Yuri Kondratyuk Poltava Polytechnic
e-mail: ab.Dmytrenko_AU@nupp.edu.ua
https://orcid.org/0000-0003-4757-5218

Conveying the Tragedy of War Through Unconventional Photography Methods

Summary: This article analyses the specificity of conveying the tragedy of war through artistic photography. Comparing photos from the Vietnam War and the contemporary Russian-Ukrainian war illustrates how the range of figurative means has expanded. Photography of the Vietnam War had a narrow range of topics and limited methods of conveying content. In contrast, Ukrainian frontline photography is more diverse, with unconventional techniques emerging in military artistic photography. Many romantic photographs depicting landscapes and animals have surfaced, and the role of symbolism in photographic images has increased. This article aims to highlight the differences between past and present frontline photography while emphasising the greater symbolism and hidden meaning present in contemporary photography, as the tragedy of war resonates with the viewer through indirect allusions.

Keywords: tragedy of war, Ukraine, artistic photography, unconventional techniques

> No longer can we consider what the artist does to be a self-contained
> activity, mysteriously inspired from above, unrelated and unrelatable
> to other human activities.
>
> Rudolf Arnheim[1]

Traditionally, the techniques of reportage photography or techniques of art photography that are close to them are used to depict the tragedy of war. The development of photography allowed a wider documentation of the events of the war, which is demonstrated by the modern Russian-Ukrainian war. However, if you compare photos from the time of the Russian-Ukrainian war with photos from the time of the war in Vietnam, they are significantly different. In comparison with the events of the war in Vietnam – primarily because most of the photos are of Americans who fought on foreign territory (Fig. 1, 2). On the other hand, in Ukraine, there are a large number of photos made by the military and civilians themselves, who are defending their land from invaders. Photos from the war in Vietnam are mostly black and white, and photos from the Russian-Ukrainian war are mostly colour – black and white only to convey a tragic story as much as possible. It should also be added that traditional photographic methods require developing an image on photographic paper and presenting it to a magazine or gallery wall. Nowadays, with the use of digital media (both cameras and smartphones), photographers can publish their entire series on the Internet and add content such as audio or video. This speed of creation and its dissemination has a significant impact on the perception of the visual side of modern warfare conflict. When comparing American photography from the Vietnam War with contemporary photographs from the war in Ukraine, more significant differences are apparent.

Most of the pictures of American photographers are mainly of soldiers, whether on the march or in battle, even wounded. The second group of photos shows the interrogations and murders of local people. Photographs from the time of the Russian-Ukrainian war also have subjects related to the military and scenes of dead civilians but the images of the military have more humanity and patriotism, as people are fighting for their land. It can be said that in modern conditions, the range of artistic military photography and methods of conveying subjects are more developed. The nomenclature of plots also expanded. These are battle scenes with soldiers (Fig. 3), military portraits (Fig. 4), destroyed buildings (Fig. 5), military equipment, landscapes, civilian life, death scenes, symbolic military attributes, and photos with animals.[2]

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1 Arnheim R. 1969, 5.

2 Belinskyi S. 2023, 15–35.

Fig. 1. American soldier of 'Tunnel Rats' in Vietnam (Source: https://vsi.reactor.cc/post/4441090)

Fig. 2. American soldiers in Vietnam
(Source: https://www.nationalww2museum.org/war/articles/vietnam-war)

Fig. 3.
Machine gunner. Bakhmut
(Photo: Belinskyi S. 2023)

Fig. 4.
Neer Bakhmut
(Photo: Belinskyi S. 2023)

Fig. 5.
Kramatorsk, ruins
(Photo: Belinskyi S. 2023)

So, it can be argued that the tragic image of war was romanticized to some extent, which was not the case in the Vietnam War photography. The plane of the frame, the plot became deeper in terms of content and methods of plot transmission, and the transmission of the human factor became an important component. This is primarily due to the fact that these photos were taken by the defenders, not the occupiers.

At the same time, genres of photography, such as landscape and animalism, which are unconventional for depicting war, affect the viewer's deep emotions. It is on this principle that traditional Japanese artworks, which transmit certain emotions through indirect means. Fascination with the culture and philosophy of Ancient Japan by one of the authors of the article, a military officer, led to the appearance of a series of wartime photographs based on the idea of 'transmitting the world without people' – a landscape or an image of animals.

Through the prism of the European worldview, he used the following principles:
- convention and symbolism, when everyone in his way perceives the image and, accordingly, everyone invents his own
- maximum brevity, which opens the field for 'artist-spectator' co-creation
- incompleteness, leaving a part of the image 'out of frame' for the viewer's imagination
- indirect allusions, when one phenomenon refers to a hidden second phenomenon
- transmission of the artist's own emotions through nature and living beings

The years of the Russian-Ukrainian war led to the emergence of the modern genre of military art – artistic photography, poetry, paintings, music and songs. As the experience of history shows, such processes were generally characteristic of times of war, when artistic inspiration, embodied, 'splashed' in works, became a certain outlet for both civilians and military personnel. Homer's *Iliad* and haiku works written by *sakimori* (防人) warriors-guards of Ancient Japan in the 7th–10th centuries are characteristic examples of literary celebration of the tragic events of war. *Sakimori* guarded the lands of Western Japan (the islands of Kyushu, Iki, and Tsushima) from the invasion of the army of the Chinese Tang dynasty. They left their contribution to ancient Japanese literature, in particular, in the anthology of Japanese poetry *Manyoshu* – the so-called 'Sakimori songs' (防人歌, *sakimori-no-uta*), the theme of which was longing for the homeland and soldier's life.

As it turned out, similar techniques have become relevant in the presentation of the tragedy of the Russian-Ukrainian war, as they use similar means of influencing the viewer's psyche. This is conventionality and symbolism, when the image is perceived by everyone in their way and, accordingly, everyone invents his own; maximum laconicism, which opens the field for co-creation 'artist-spectator'; incompleteness, leaving a part of the image 'out of frame' for the viewer's imagination. Techniques of indirect allusions are used when one phenomenon refers to a hidden second phenomenon and the transfer through nature and living creatures of the artist's own emotions.

One of the authors of the article, Serhiy Belinsky, admires the culture and philosophy of Japan, so he subconsciously used the principles inherent in traditional Japanese art in depicting the horrors of war, but through the prism of the European worldview.

The study aimed to analyze how the author conveys the tragedy of war and his perception of war through these genres, which are not the main traditional ones for expressing war themes.

To achieve the goal, the following tasks were defined:

– to separate from the general photographic works those that represent the genres of landscape and animalism;
– determine the list of figurative techniques used in them;
– outline the most common techniques.

Such an unusual approach to photography of traditional genres during the Russian-Ukrainian war made it difficult to select the source base, as it is used for the first time to some extent. In particular, scientific sources were developed in the following directions:

– specialised sources on art photography techniques[3]
– publications in which the problem of artistic criteria is raised[4]
– sources that highlight the aspect of style formation
– scientometric sources that highlight the tragedy of the Russian-Ukrainian war

The main concepts in the research analysis of photographic works

The basic research methods were the tenets of the iconological method defined by Erwin Panofsky,[5] whereby the artwork is suspended in a broader cultural context and the method of Rudolf Arnheim's psychology of perception.[6] In the second case, the importance of understanding how the human eye organises perceived material concerning the psychological conditions of the human brain is crucial. Arnheim pointed out that when we see and feel certain properties of a work of art, we often do not know how to translate them into words. He saw the reason for this not so much in the use of language but in the inability to translate values perceived by sight into appropriate categories. The researcher noted that language cannot perform the task directly, as it is not a direct route to interacting with reality: 'that visual things cannot be conveyed by verbal language.'[7] In this sense, the descriptive language of an artwork only

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3 Peterson B. 2017; Biver S. et al. 2022.

4 Gryglewski P. et al. 2020, 57–88; Gryglewski P. et al. 2021, 168–190; Orlenko M., Ivashko Y. 2019, 171–190; Pawłowska A. 2019, 137–151; Sztabiński G. 2019, 19–35; Sztabińska P. 2010a, 91–108; Sztabińska P. 2010b, 81–90; Sztabińska P. 2014, 45–56.

5 Panofsky E. 1939.

6 Among others: Arnheim R. 1969; Arnheim R. 1979; Arnheim R. 1986.

7 Arnheim R. 1974, 5.

provides names for what we have seen, heard, or thought. Referring to the concepts of Panofsky and Arnheim, it can be considered that visual perception is not based on observation alone, as it is shaped by physiological, cognitive, and cultural patterns, acting as limiting rules. Therefore, it is legitimate to look for inspiration in the art of Japanese woodcuts for Serhiy Belinsky's war photography.

General scientific methods of defining features, art analysis such as system-structural analysis and comparative analysis were also used to formulate the research problems,[8] each of which performed a specific task, which made it possible to finally group the images according to their common features, which facilitated their comparison; and allowed the integrity of the photographic image to be broken down into distinct hierarchical components and to trace the specificity of photography at the level of compositional features and individual component-images; The method of comparative analysis, therefore, made it possible to compare artistic techniques in photographs of the same genre and of different genres, identifying between them what they have in common and what differs.

Transformation of landscape and animalism genres in war photography

The landscape genre in art photography is quite widespread, but in war photography, it has its specificity, as evidenced by the examples of photographs from the time of the Russian-Ukrainian war.

The photo fixation method provided a basis for analyzing this genre during the Russian-Ukrainian war.

With the help of the method of defining features, the possible criteria were identified, according to which photos can be divided into separate groups and analyzed within these groups. In particular, methods of conveying the atmosphere of war through day and night landscapes were analyzed (Fig. 6–13).

Certain conclusions can be obtained by comparing the compositional techniques of day and night landscape photographs.

Daytime photographs use a pastel colour scheme, often with a large expanse of sky, often emphasizing blooming nature rather than technology, with buildings, small figures of animals, and people as complementary accents. If you analyze photography techniques, the principle of constructing a frame plane with a displacement of the accent element with the dominant mass is widely used, most often to the right, less often to the left or in the centre. In daytime landscapes, there is no sharp 'light-shadow' contrast, and the genre itself acquires signs of the psychological impression of 'tragic lyricism.'

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8 Żychowska M. et al. 2022, 273–297.

Fig. 6–13. Day views of Eastern Ukraine (Photo: Belinskyi S. 2023)

Instead, the way of conveying the atmosphere of war in night landscapes is fundamentally different. If the dominant impression of daytime photographs is tragic lyricism, then in the case of night photographs, the theme of fire as a symbol of death is dominant. To create the impression of maximum tension, contrasting colours are used with the dominance of bright saturated colours, most often opposite in colour spectrum (warm-cold colours). Emphasis on nature in daytime landscapes is replaced by an emphasis on technology, nature acts as a dark secondary background. In night photographs, the number of elements is limited, there are no buildings or animals, and the main thing is the contrast of 'light and shadow' with the theme of the fire of military equipment firing. If we talk about the compositional techniques of photography,

then, in this case, the principle of constructing the frame plane is used with the displacement of the accent element – military equipment – to the extreme right or left corner with the main line of fire outlined, or from the lower right corner to the upper left, or from the lower left corner in the upper right, which contributes to creating the impression of maximum mental tension, danger.

Among war photography, the technique is the main plot component of the night photography frame. In night photographs with battle scenes, a diagonal line of fire is clearly visible, which gives the frame expression.

A separate group of night photos consists of the last two photos without images of equipment. 'In feigned captivity' and 'Red maples' are night landscapes of front-line Kramatorsk, which embody a hidden meaning and in their hidden essence are closest to Japanese poetry - they symbolize the numerous victims due to the bloody colour of the maples and the psychological tension and fatigue of the defenders who they feel in the branches, which seem to reach for the light of the lantern, the image of the invaders. These two photographs are a reflection of the subconscious, they convey the feeling of war through indirect allusions.

The genre of animalism also became popular in war photography. According to Serhii Belinskyi, communication with animals helps to preserve humanity and relieve psychological stress. In such photos, the emphasis is on animals, sometimes animals are depicted in their natural environment, and animals are presented as the personification of good defenceless creatures that lost their usual life due to war often used the technique of depicting the animal in close-up when the eyes are visible. Most often, the image of the animal occupies most of the frame, but in some cases, the animal is smaller to show it in a military environment, against the background of a car, thereby expressing the opposition of defenselessness and war. In such photographs, images of fire and bright flashes are not used, but everything is aimed at creating a psychological impression of 'tragic lyricism.'

Thus, the work of a modern press officer differs from the work of photojournalists during the Vietnam War.[9] First and foremost, it is important to note that during the Vietnam War, American soldiers found themselves in a country that was foreign to them both socially and culturally, surrounded by a hostile natural environment and under constant threat of enemy attacks. The tension that accompanied these conditions is evident in the photographs taken by U.S. Army photographers, which are exclusively reportage in nature. On the other hand, when a press officer or photographer films the events of the war on his territory, the psychological impression of perceiving the images of the war will be different. That is why the photos of Ukrainian photographers have not only a reporter and journalistic component but also an artistic aspect. A press officer's tasks are quite diverse: they facilitate communication

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9 To see more: Adams A., Buell H. 2008, 11–15.

with the media, accompany journalists on assignments, act as a guide, bodyguard, and translator simultaneously, and organise meetings with fighters as well as photo shoots. In addition, the press officer ensures communication between combat units and prepares materials for the Internet page. Since the press officers are professional photographers, even documentary photos often acquire the characteristics of artistic photography. In addition to official photos and videos, a fund of photos subject to the rules of creative photography is being created for the brigade's pages.

Traditionally, artistic photography uses techniques to convey dynamism to achieve a certain effect, such as diagonals, objects associated with movement (types of transport), and moving creatures. If we compare day and night landscape photos with animalistic photos, it is noticeable that in night photos dynamism is maximally emphasized due to diagonal lines (parts of military equipment, direction of fire, light-colour contrast), on the other hand, in daytime landscape photos dynamism is less noticeable and photos with the image of animals are completely static.

Similarly, these three types of photographs can be analyzed by the effects of creating the impression of spatiality, where the techniques of image planning, empty background, focus, and accentuation of objects with light-shadow and colour ratios are used. In the case of day and night landscape photographs, the technique of planning and the space of the sky is actively used; on the other hand, in photographs of animals, spatiality does not have such importance; the emphasis is placed on the central figure of the animal.

Another aspect worth analyzing is the emotional component of photographs. The greater effect of 'tragic lyricism' of daytime landscape and animalistic photographs is achieved due to the absence of a contrasting combination of colours, a similar or pastel colour scheme, and the absence of colour combinations associated with danger (red-black, orange-black, orange-ultramarine). The scale of different images plays an important role. It is emphasized that the dominant scale of images of military equipment in night photographs symbolizes that modern war is artillery, while the dominant scale of animals in photographs presents them as objects of love and humanity, which people often lack.

Common to all three types of photography is what is associated with traditional Japanese culture,[10] namely the indirect transfer of the artist's emotions through other images, in this case not through people, but through nature, inanimate objects, and animals; the transformation of a specific real object (tank, cannon, landscape, animal) into a certain symbol – of modern war, human tragedy or the opposition of the kindness of defenceless animals to human malice and animal cruelty, people and animals seem to switch places; absence of oversaturation with unnecessary elements, only those components are present that are sufficient to create a certain meaningful message.

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10 To see more: Orlenko M. et al. 2021, 1003–1009; Orlenko M. et al. 2020, 499–501.

Fig. 14–21. Night landscapes of Eastern Ukraine (Photo: Belinskyi S. 2023)

The peculiarity is dynamism as a transfer of the effect of the heat of war and static as a personification of the unchanging values of the world (in this case, through blooming landscapes or animals). In some cases, a part of the main image is deliberately placed outside the frame (a tank, a cow's body, part of a car) to create the effect of the viewer's guesswork, 'finishing' the picture.

Sometimes, the photos were supplemented with a text similar to Japanese poetry *haiku*, for example:
– Homeless
– Cow's
– Sad eyes

Sometimes, in photographs of animals, a person becomes secondary, in the background, or generally as a silhouetted reflection in a mirror. A real dog, a ghostly person...

Here, it is worth noting the growing role of inanimate objects, namely formidable military equipment, for creating a certain emotional content and image of war. Thus, in night landscape photographs, the emphasis is shifted from nature (although it is a landscape genre) to military equipment in a natural environment. Thus, it creates a special kind of traditional wartime landscape photography.

If we analyze the landscape photography of peacetime and wartime, in wartime such photographs hardly depict people, even silhouettes, their place is taken by military equipment, dugouts covered with poppies, etc.

An important role is the lines, which reveal the main element of the frame and give the photograph a hidden meaning.

Conclusions

The modern Russian-Ukrainian war in the images of photography differs from the photos of the Vietnam War. The difference lies in the very nature of these two wars, the war in Vietnam, and the Russian-Ukrainian war. Since American photographers covering the Vietnam War found themselves in a foreign and hostile environment, constantly under threat, their images reflect this reality.[11] Rather than capturing an appreciation for the landscape or architecture, their photographs focus on propaganda or reportage. Instead, along with reportage photography during the Russian-Ukrainian war, the genre of military artistic photography developed, which contains features of reportage photography but is built on the laws and techniques of artistic photography.

Fig. 22. *'Red and White Plum Blossoms'* by O. Kōrin (18th century, MOA Museum in Atami, Japan)

11 Adams A., Buell H. 2008, 41.

Fig. 23. Blooming landscapes around Bakhmut. (Photo: Belinskyi S. 2023)

Fig. 24. Red Momiji maple on Mount Kōya, against the background of Grand Central Pagoda – Kongobu-ji Kompon Daito (Photo: J.M. Jullot; source: https://uk.wikipedia.org/wiki/Момідзіґарі#/media/Файл:%20RedTree@Daito2012.jpg)

Fig. 25. Red maples of Kramatorsk
(Photo: Belinskyi S. 2023)

Photographs of the Vietnam War are more limited in plot and imagery, while the palette of techniques of modern war photography is much wider. This is because a large number of artists are fighting now and bringing their perception of the tragedy of war to their works. Sometimes, the basis of such military photo creativity can be quite unusual, the source for them can even be Eastern cultures, such as poems of *sakimori* warriors, *haiku* poetry, engravings, and screens. Of course, these photos do not repeat Japanese models, but they creatively transform these principles according to the European mentality, which is explained by the photographer's long-term fascination with the art of the East.[12]

Direct analogies can be felt between Ogata Kōrin's screen 'Red and White Plum Tree' (Fig. 22) and the photograph that arose under its influence and based on which the author also wrote a haiku (Fig. 23). Similarly, the photos of red maples in Kramatorsk in Donbas are a direct allusion to the traditional Japanese holiday *momijigari* (紅葉狩) or *momiji* (紅葉) – a holiday of admiring the red leaves of the Japanese maple (Fig. 24, 25).

Thus, here we can talk about the figurative transformation of Japanese iconic images through the war photographer's perception of the image of war. The photographer was inspired by a traditional Japanese holiday, but in his interpretation, the red maples in front of the military vehicle acquire a fundamentally different, tragic symbolism. In Japan, this red colour symbolizes the autumn festival, but in the military context, it primarily symbolizes sacrifice, and the many fallen bright red leaves seem to turn into symbols of the souls of fallen heroes whose lives were cut short by war. The impression of constant tension and danger is also created by the presence of a military vehicle.

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12 To see more: Ivashko Y. et al. 2020, 78–79.

References

Published works

Adams E., Buell H. 2028. *Eddie Adams Vietnam.* New York.

Arnheim R. 1969. *Visual Thinking.* Los Angeles–London.

Arnheim R. 1974. *Art and Visual Perception. A Psychology of the Creative Eye. The New Version.* Los Angeles–London.

Arnheim R. 1979. *Toward a Psychology of Art.* Los Angeles–London.

Arnheim R. 1986. *New Essays on the Psychology of Art.* Los Angeles–London.

Belinskyi S., Dmytreno A., Ivashko Y., Pawłowska A. 2023. *The Faces of War in Ukraine. War Devastation and Reconstruction Cencepts.* In: *Oblicza Wojny* 6, (eds), T. Grabarczyk, J. Kita, M. Pogońska-Pol, M. Voloshchuk. Łódź, 15–35

Biver S., Fuqua P., Hunter F., Reid R. 2022. *Światło w fotografii. Magia i nauka.* Łódź.

Gryglewski P., Ivashko Y., Chernyshev D., Chang P., Dmytrenko A. 2020. *Art as a Message Realized Through Various Means of Artistic Expression.* "Art Inquiry. Recherches sur les arts" 22(29), 57–88.

Gryglewski P., Chernyshev D., Kashchenko O., Shilo A., Ivashko Y., Dmytrenko A., Ivashko O. 2021. *Between Practice and Theory. Comments on the Specificity of Art History and Art Education in Poland and Ukraine.* "Art Inquiry. Recherches sur les arts" 22(29), 168–190.

Ivashko Y., Kuśnierz-Krupa D., Chang P. 2020. *History of Origin and Development, Compositional and Morphological Features of Park Pavilions in Ancient China.* "Landscape Architecture and Art" 15(15), 78–85.

Jullot J.M. *Red Momiji Maple on Mount Kōya, Against the Background of Grand Central Pagoda.* In: *Momidzihari* (*Момідзігарі*) https://uk.wikipedia.org/wiki/Момідзігарі#/media/Файл:RedTree@Daito2012.jpg/. Accessed on-line October 7, 2024.

Orlenko M., Ivashko Y. 2019. *The Concept of Art and Works of Art in the Theory of Art and in the Restoration Industry.* "Art Inquiry. Recherches sur les arts" 21(28), 171–190.

Orlenko M., Dyomin M., Ivashko Y., Dmytrenko A., Chang P. 2020. *Rational and Aesthetic Principles of Form-making in Traditional Chinese Architecture as the Basis of Restoration Activities.* "International Journal of Conservation Science" 11(2), 499–512.

Orlenko M., Ivashko Y., Chang P., Ding Y., Krupa M., Kuśnierz K., Sandu I.G. 2021. *The Specificity of the Restoration and Monument Protective Measures for the Preservation of Historical Chinese Gardens.* "International Journal of Conservation Science" 12(3), 1003–1026.

Panofsky E. 1939. *Studies in Iconology: Humanistic Themes in the Art of the Renaissance.* New York.

Pawłowska A. 2019. *What is History of Art in the 20th and 21st century? A Few Theoretical Problems.* "West Bohemian Historical Review" 9(2), 137–151.

Peterson B. 2017. *Kolor bez tajemnic. Kolor, kompozycja i ekspozycja w tworzeniu żywych zdjęć.*

Sztabińska P. 2010a. *The Minimalist Allergy to Art.* "Art Inquiry. Recherches sur les arts" 12(21), 91–108.

Sztabińska P. 2010b. *Zmiany relacji między artystą, dziełem a odbiorcą w sztuce współczesnej.* "Sztuka i filozofia" 36, 81–90.

Sztabińska P. 2014. *Contemporary Artist and the Notion of Center and Periphery*. "Art Inquiry. Recherches sur les arts" 16, 45–56.

Sztabiński G. 2019. *Why Do We Need the Term 'Art'?*. "Art Inquiry. Recherches sur les arts" 21(30), 19–35.

Żychowska M., Sandu I., Ivashko Y., Dmytrenko A., Ivashko O., Morklyanyk O. 2022. *Style as a Reflection of Ideology of the Authorities*. "Art Inquiry. Recherches sur les arts" 24(33), 273–297.

Andrij Kharuk
Hetman Petro Sahaidachnyi National Army Academy
e-mail: andrij.kharuk@gmail.com
https://orcid.org/0000-0003-3459-1657

Ukraine's Air Defence in the Russian-Ukrainian War (2022–2024):
Progress in Regression

Summary: Russia's full-scale aggression against Ukraine, which began on February 24, 2022, posed serious challenges to the Ukrainian air defence system. Its traditional instruments – long- and medium-range anti-aircraft missile systems (S-300, Buk-M1) and fighter aircraft (MiG-29, Su-27) – did not always prove effective in the new conditions. It was necessary to repel mass attacks from cruise missiles which were characterised by having a small deflection area and the ability to fly at low-altitude targets. In September 2022, the Russians started to use numerous attack drones called Shaheds, which meant that the Ukrainian air defence had to adapt quickly to the new threat. In order to combat these missiles, mobile fire groups with machine guns and MANPADS on pickup trucks began to be used, which quickly advanced towards the enemy attack. The equipment used by these mobile fire groups was gradually improved. One example was from the Czech Republic, where Viktor sets were created. These consisted of twin-barrelled machine guns from the 1940s combined with thermal imaging cameras and mounted on pick-up trucks. German FlakPz Gepard self-propelled anti-aircraft guns transferred by partner countries also proved very effective. In NATO countries, this equipment was considered obsolete in the 1990s, but between 2022–2024 in Ukraine, it effectively destroyed UAVs and cruise missiles. Light training and sports aircraft, provisionally armed with machine guns and using tactics from World War I, have been successfully used to fight unmanned aerial vehicles. These examples show that even in regression, as highlighted by a return to air defence measures from previous decades, progress can be made to adapt to new threats from the air. This article aims to present the unconventional air defence measures used by the Armed Forces of Ukraine to eliminate the threat posed by Russian aerial attack assets.

Keywords: Russian-Ukrainian war, air defence, anti-aircraft missile system, anti-aircraft artillery system, fighter aircraft

The aggression of the Russian Federation against Ukraine, which escalated to full-scale war on February 24, 2022, became the first full-scale war in Europe since World War II, involving the use of all types of weaponry (except nuclear). Ukraine's defence forces had to confront a significantly larger and stronger adversary, often resorting to unconventional and unexpected measures. This is particularly evident in air defence. This article aims to present the unconventional air defence measures used by the Armed Forces of Ukraine to eliminate the threat posed by Russian aerial attack assets. Photos and audiovisual materials confirm the use of various combat equipment that before this war, was previously considered obsolete. However, under the conditions of large-scale aerial warfare, accompanied by Russia's deployment of a wide range of offensive measures, these weapons demonstrate unexpected effectiveness. A phenomenon is being witnessed that can be described as 'progress through regression' – where outdated air defence systems, operating within a modern informational battlefield, prove effective against advanced air attack methods. This article analyses the use of unconventional technical and tactical means in Ukraine's air defence, developed in response to the challenges posed by Russia's full-scale aggression.

The issue of employing the aforementioned air defence methods has not yet become the subject of academic research or publications. Military archives containing relevant documentation from 2022–2024 are not yet accessible to researchers. Therefore, the primary sources used in this study are media articles and social media material, which illustrate the deployment of outdated air defence systems and their integration into the modern theatre of war.

Before the Full-Scale Aggression

On the eve of Russia's full-scale aggression, Ukraine possessed a fairly robust air defence system. In addition to five tactical aviation brigades equipped with fighter aircraft (though their actual strength was significantly below authorised levels), the system included approximately 250 long-range S-300 surface-to-air missile (SAM) launchers and 72 Buk-M1 medium-range SAM launchers.[1] There was also a corresponding network of radar stations and an automated air defence command system. By design, the structure and armament of Ukraine's air defence system were suited to the requirements of the Cold War era – focused on intercepting traditional targets such as combat jets. From 1991 onwards, the system underwent no qualitative changes; instead, outdated systems (S-75, S-125, S-200) were decommissioned. Significant efforts to strengthen air defence capabilities began only after 2014, following Russia's annexation of Crimea and the onset of the war in the Donbas. Unfortunately, these efforts were conducted under conditions of chronic financial shortages.

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1 MB 2022, 213.

A comprehensive modernisation program for the Air Force was proposed only in 2020, and even then, it was presented not as a binding document but as the 'Air Force Vision 2035'. This document realistically assessed the primary threat posed by the Russian Federation, identifying its Aerospace Forces as the main carrier of combat potential. Based on this assessment, the procurement of 36 to 40 medium-range SAM systems (such as NASAMS or similar systems) was designated a priority, intended to be implemented between 2020 and 2025. The purchase of new combat aircraft – foreign-made 4++ generation fighters (Saab JAS-39E/F Gripen, F-16 Block 70/72, or others) – in quantities of 72 to 108 units was scheduled for 2025 to 2030. However, a smaller batch of such fighters (6 to 12 units) was proposed for purchase between 2023 and 2025 to initiate personnel training on the new aircraft.[2] None of these proposed measures were implemented before Russia's full-scale invasion. Only a small number of MiG-29 and Su-27 fighter jets were modernised, and even then, the scope of these upgrades was minimal. Since 2014, efforts have been made to gradually restore S-300V1 SAM systems to service, and work was undertaken to modernise the S-125 systems. However, the Kub SAM systems – also considered a means to bolster air defence, albeit quantitatively rather than qualitatively – could not be restored to operational readiness.[3]

New Challenges

The Ukrainian command had a fairly realistic assessment of the potential Russian aggression. For instance, on the first day of the 'United Efforts 2021' exercise ('Об'єднані зусилля 2021' – September 22–30), air defence units armed with S-300, S-125, Buk-M1, and Osa-AKM systems trained to repel a massive enemy missile and airstrike – precisely the scenario that the aggressor sought to implement on February 24, 2022. Simulations of hostile cruise missiles were conducted using Tu-141 and Tu-143 unmanned aerial vehicles (UAVs). MiG-29 and Su-27 fighter jets, as well as Su-25 attack aircraft, also operated in the air, simulating enemy air force activities.[4]

On February 24, 2022, Ukraine's air defence system faced its most serious challenge yet: repelling a massive missile and airstrike by the Russian Federation while simultaneously withdrawing its forces to avoid destruction. During the first 48 hours of combat, the enemy damaged nearly 75% of Ukraine's stationary air defence facilities, but only 10% of its mobile positions. On the first day, Ukraine's air defence system managed to intercept only 12–18% of incoming air attacks. That day, Russian tactical aviation conducted approximately 140 combat flights, striking targets up to 300 km deep.

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2 *Viziya* 2020, 27–29.

3 *S-300V1* 2027.

4 *V Ukrayini* 2021.

Most attacks were carried individually, with only 25% conducted in pairs or larger aircraft groups (a trend that persisted in the following months and years of the war; Russian aviation lacks the capability to conduct mass strikes even at the squadron level).[5] At the same time, Ukraine's ground-based air defence system and fighter aircraft, despite suffering significant losses, retained their combat capabilities. Meanwhile, Russia's military-political leadership failed to achieve its goal of a swift victory over Ukraine. The war then transitioned into a protracted phase, and due to significant losses, the Russian command was forced, starting in mid-March 2022, to substantially limit tactical aircraft flights to targets at tactical or operational depths.

In the following months, Russian forces shifted their focus to striking infrastructure deep within Ukraine and targeting Ukrainian cities, hoping to force Ukraine into capitulation. Air-launched cruise missiles (Kh-22, Kh-32, Kh-101, Kh-555) and sea-launched cruise missiles (Kalibr) became the primary means of attack. Ballistic missiles were used to a limited extent, including ground-launched (Iskander-M) and air-launched (Kinzhal) types.

From the autumn of 2022, the Russian aggressors increasingly relied on Iranian long-range strike UAVs (Shahed-131, Shahed-136).[6] This shift like air attack methods created the need to adapt Ukraine's air defence system to the new conditions.

Mobile Fire Groups

The distinctive features of Russian airstrikes on Ukrainian territory include:
 – relatively low speeds for most strike assets (the cruise speed of the Kh-101 cruise missile is about 700 km/h, while the Shahed-136 UAV travels at just 150–170 km/h)
 – low flight altitude of the strike assets (usually tens or hundreds of metres)
 – mass deployment (dozens, and sometimes over one hundred cruise missiles and UAVs in a single attack)

The specific nature of the equipment used by the Russian military highlighted above, determines the tactics used for counteraction. The low flight speed (and in the case of the Shaheds, the distinct engine sound, which has earned them the nickname 'flying mopeds') combined with low altitude facilitates the detection of cruise missiles and UAVs without the use of radar or other technical means. However, their low altitude complicates interception by traditional methods – fighter aircraft radars often struggle to detect small targets against the ground surface, and ground-based radars have blind zones at low altitudes (typically addressed by elevating radar antennas on tall masts, but this requires additional technical resources). Furthermore, anti-aircraft missile systems find striking targets at low altitudes particularly challenging.

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5 *Rik viyny* 2023, 253–254.

6 Charuk A. 2024, 212.

Low altitude and speed also make cruise missiles and UAVs vulnerable to small-calibre anti-aircraft guns, heavy machine guns and even standard small arms. This significantly reduces the cost of neutralising aerial targets since the cost of an anti-aircraft-guided missile is typically much higher than that of a Shahed. However, such anti-aircraft weapons have a short effective range, meaning they must be rapidly re-deployed to intercept air attacks. This necessity gave rise to the concept of mobile fire groups – small units typically comprising three or four different anti-aircraft weapons mounted on pickups or trucks. Upon receiving an air alert, these groups are directed towards the likely approach of cruise missiles or UAVs targeting an object.

The composition of mobile fire groups includes a wide range of firepower. Typical examples are DShKM 12.7 mm heavy machine guns mounted on pickups or twin 23 mm ZU-23–2 cannons (including Polish ZU-23–2CP and Finnish 23 ItK 61 models) mounted on several types of trucks. More unconventional setups also exist – for instance, one mobile fire group was observed armed with a mount featuring three DP-27 7.62 mm machine guns installed on a tripod (the central machine gun in its usual position, with the two side guns vertically mounted). This system was placed on a single-axle trailer, towed by a UAZ-452 van. The second category of weapons includes portable surface-to-air missile systems: Soviet Igla, U.S.-supplied Stingers and French Mistrals provided by Norway.[7]

Mobile fire groups have been established within various structures. Initially, they appeared in the Air Force – not only within anti-aircraft missile units but also in radiotechnical brigades. Similar groups were formed in territorial defence brigades, the Ukrainian National Guard – including both frontline brigades and battalions protecting critical state infrastructure such as nuclear power plants. The Ukrainian State Border Guard Service operates its mobile fire groups, and the river flotilla of the Ukrainian Navy in the Kyiv region employs its boats for this purpose.[8] Geographically, mobile fire groups are deployed across all regions of Ukraine (except, of course, those occupied by Russia), including the relatively remote and peaceful Zakarpattia region.[9]

The use of simple weapons by mobile fire groups allowed for effective targeting in good visibility conditions, but their efficiency sharply declined in poor visibility. Consequently, groups began to be equipped with searchlights. At night, the direction of an approaching Shahed was determined by sound, after which the target was illuminated with a searchlight and fired upon.

The next logical step was to develop an anti-aircraft system mounted on a pickup truck equipped with a thermal camera. One such system, the MR-2 Viktor, was created for Ukraine in the Czech Republic. It combines a twin-barrelled ZPU-2 14.5 mm heavy

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7 *Norvehiya* 2022.

8 Charuk A. 2024, 61–62.

9 *Protypovitryanu* 2023.

machine gun (1949 model) with a Toyota Land Cruiser 70 pickup, along with a collimator and thermal imaging sights. Its ammunition load consists of 600 rounds (300 ready for immediate use and 300 in reserve), and its effective firing range reaches 2 km.[10]

A vintage machine gun upgraded with contemporary sights and placed on a mobile platform has demonstrated its effectiveness in targeting low-altitude threats. In November 2022, Czech entrepreneur Dalibor Dédek initiated a campaign to raise 3.85 million USD for the production of 15 MR-2 Viktor systems. In February 2023, the Dutch government declared its plan to finance the creation of another 100 systems. The initial MR-2 systems were produced in March 2023.

Overall, additional equipment with thermal imaging sights has become a major focus for improving air defence equipment. The scale of such initiatives, conducted mainly through volunteer efforts, is impressive. The 'Technari' engineering group from Odesa developed a method for mounting thermal cameras on Igla, Stinger and other MANPADS launchers. In October 2023, the Serhiy Prytula Charitable Foundation announced the purchase of 100 Guide TK 431 and 150 Guide TK PRO 35 thermal cameras for MANPADS for 318,000 EUR. In February of the following year, the foundation reported that since early 2024, it had delivered 900 thermal imaging devices to units – 400 Guide TK631 sights and 500 Guide TK431 monoculars.[11]

Another significant project by the 'Technari' group was the Wally thermal sight, designed for the Strela-10 air defence system. While mobile fire groups do not use this system (no evidence was found during the research for this article), it remains a crucial air defence component for Ground Forces on the front line. Outfitting the Strela-10 with the Wally sight significantly improved its effectiveness against Russian UAVs.[12] As of early 2024, during six weeks of testing, the Wally prototype achieved five confirmed kills of Zala, Lancet and Supercam UAVs. This solution was rapidly scaled – by mid-July 2024, 40 Strela-10 vehicles had been equipped with Wally sights, with 10 more awaiting installation. At that time, Strela-10 systems equipped with Wally sights had already downed 14 Zala reconnaissance UAVs, which Russia frequently uses for targeting Iskander-M missiles.

Anti-Aircraft Artillery System: Gepard

The Russo-Ukrainian War unexpectedly highlighted the effectiveness of outdated air defence systems. A schoolbook example is the German FlakPz Gepard anti-aircraft artillery system (AAA). Developed in the early 1970s, it was retired from service in the Bundeswehr in 2010 due to defence budget cuts. After Russia's large-scale invasion of

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10 Mashchenko O. 2024.

11 *Fond Prytuly zakupyv* 2024.

12 *Fond Prytuly peredav* 2024.

Ukraine, the German government began supplying Gepards as part of military-technical assistance. The intention to deliver this type of weapon was first announced during the initial meeting of the contact group in the Ramstein format on April 26, 2022. The first batch of Gepards arrived in July, with subsequent deliveries occurring in small batches as these AAA systems were repaired from storage (Fig. 1). In total, Germany delivered 52 Gepards in 2022–2023.[13] In 2024, an additional 60 anti-aircraft systems arrived in a different configuration – former Dutch Gepards, which feature a different radar type. These systems were purchased by Jordan in 2013 and later acquired by the U.S. government in May 2023 for Ukraine. The 118 million USD contract included repairs in Jordan and delivery to Ukraine by the end of May 2024.

Fig. 1. Geprad in the marking of the Ukrainian Army. May 2023, Ukraine. (Source: Sofinov T. 2023)

The Gepards were first used on the frontline during the Ukrainian Kharkiv offensive in September 2022.[14] Some issues arose with ammunition supplies – by late October 2022, German Defence Minister Christine Lambrecht sent a letter to her Swiss counterpart, Viola Amherd, explaining that the anti-aircraft guns had been used so intensively that despite significant ammunition deliveries, a shortage had developed. The Gepard is equipped with Swiss-made 35 mm Oerlikon KDA cannons, for which ammunition production had ceased in Germany. Switzerland, due to its political stance, refused to supply ammunition (or any other military goods) to Ukraine.[15] Efforts to source ammunition even extended to countries as far away as Brazil, which also declined to sell rounds to Ukraine. The problem was finally resolved in early 2023 when

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13 *Zbroya rosiys'ko-ukrayins'koyi viyny* 2023, 194–199.

14 *Zenitni ustanovky 'Gepard'* 2022.

15 *Nimechchyna* 2022.

the German government signed a contract with Rheinmetall to resume production of 35 mm rounds for the Gepards.

Despite these challenges, since autumn 2022, the Gepard anti-aircraft artillery systems have been actively used both on the frontlines and within mobile fire groups protecting critical infrastructure. These systems have proven highly effective against drones and cruise missiles. Owing to their radar stations, Gepards can engage targets at night, and their targeting systems allow rapid switching between multiple targets. This capability was particularly valued in October 2022, when Russian forces attempted to overwhelm Ukrainian air defences with mass Shahed drone attacks.

In December 2023, a representative of the Ukrainian Air Force Command stated that among all air defence systems, the Gepard was the most effective in neutralising enemy drones, considering the cost-effectiveness ratio. As a result, the possibility of increasing their numbers in Ukraine's armed forces cannot be excluded. While the available stock of Gepards (the last of which was manufactured in 1980) is gradually depleting, some units are still available on the market – for example, the Belgian company OIP Land Systems has approximately 40 units in stock, acquired from the Belgian Ministry of Defence.

FrankenSAM Anti-Aircraft Missile Systems

Soviet-origin anti-aircraft missile systems have been and remain a crucial component of Ukraine's air defence. The supply of Western air defence systems – both modern (Patriot, NASAMS, IRIS-T, SAMP/T) and older generation ones (I-HAWK, Crotale, Aspide 2000) – has not fully met Ukraine's needs. Meanwhile, the capabilities of Ukraine's anti-aircraft missile units have significantly diminished throughout the ongoing war. This is not only due to the loss of systems (or their components such as launchers, radars, or command cabins) but also the inevitable depletion of Soviet-made missile stockpiles. To address this situation, the concept of integrating Western and Soviet anti-aircraft missile system components was proposed. The initiative was named FrankenSAM, encompassing several distinct projects.

The most well-known FrankenSAM project involves integrating RIM-7 Sea Sparrow and AIM-7 Sparrow missiles with the Buk-M1 anti-aircraft system. The U.S. government first announced its intention to supply RIM-7 missiles to Ukraine as part of a military aid package on January 6, 2023, followed by AIM-7 missiles on May 31, 2023. These announcements caused controversy, as no ground-based launchers for the missiles were included, and integrating AIM-7 missiles with Soviet-made fighter jets was impossible. Experts quickly speculated about the potential use of these missiles with the Buk-M1 systems.[16] The idea appeared feasible, especially since similar experiments

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16 Kozatskyi S. 2024.

had previously been conducted in the Czech Republic and Poland to integrate Sparrow missiles with the Kub system (the predecessor to the Buk-M1).

For a long time, progress on the FrankenSAM program was not disclosed. Ukraine's Air Force Command confirmed the integration of the Buk-M1 with the RIM-7 in November 2023, and on the night of January 17, 2024, the system shot down its first aerial target – a Shahed drone – at a significant range of 9 km.[17]

The second project within the FrankenSAM program, developed jointly by Ukrainian and American specialists, involves an anti-aircraft system using American short-range air-to-air AIM-9 Sidewinder missiles paired with a Ukrainian radar system. This project was first mentioned in October 2023, but no details regarding its deployment have been released so far.

The third project, also reported in October 2023, involves integrating Patriot missiles with the Soviet S-300 air defence system. Tests for this system were conducted in the United States at the White Sands Missile Range.[18]

Additionally, there are two systems that experts do not formally classify as part of the FrankenSAM program, though they are conceptually similar. The first is an improvised anti-aircraft missile system created by British specialists, using short-range AIM-132 ASRAAM air-to-air missiles. The system features a dual-missile launcher mounted on a three-axle SupaCat off-road vehicle, with additional missiles (possibly four) stored as spares. This system lacks a radar and instead uses an electro-optical targeting head mounted on a mast behind the vehicle's cabin. In this configuration, the system is effective against helicopters, drones and cruise missiles, but destroying aircraft would require external targeting data. The British government announced the delivery of such systems to Ukraine in early August 2023.[19]

Another example is the adaptation of the Osa-AKM anti-aircraft system to use R-73 air-to-air missiles. This was a workaround for the shortage of missiles for these air defence systems (an issue that had previously been addressed by attempting to purchase missiles from Middle Eastern countries). Instead of the six standard 9M33 missile containers on the Osa-AKM launcher, two R-73 missiles were mounted on open rails (APU-73 aircraft launchers). This configuration increased the range of target engagement from 9–10 km to 12 km but slightly reduced functionality. The 9M33 has a radar-guided warhead, while the R-73 has an infrared-guided warhead, meaning it can only target thermally contrasting objects (e.g., cruise missiles) but not Shahed drones with their low thermal signatures. The first images of the Osa-AKM with R-73 missiles appeared in November 2023, with a detailed description published in May 2024.[20]

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17 *Hibrydnyi ZRK* 2024.

18 *FrankenSAM* 2023.

19 Kharuk A. 2024a.

20 *U ZSU nareshti* 2024.

The 'ePPO' System

Prior to the widespread use of radar, air attack warning systems depended on an extensive network of ground-based observation posts linked via telephone lines to air defence control centres. The observers' eyes and ears were the sole means of detecting aerial targets. It may seem that, with the advent and continuous improvement of radar technology, this method has been relegated to history. However, in Ukraine, during the defence against Russian aggression, this approach has been revived at a qualitatively new level and is being successfully utilised. This is facilitated by a smartphone application called ePPO (єППО), developed by the 'Technari' group. The app enables users to send notifications concerning missiles and drones (UAVs) that have been sighted or heard. Based on these reports, ePPO's artificial intelligence calculates the most likely flight path of the aerial target, displays the trajectory on a map, and alerts other users of the app if their current location is dangerously close to the flight path, signalling a direct threat of an explosion nearby. Submitting a report is not anonymous – authorisation is required through the Diia electronic administration system, which minimises the chance of intentional false reports.[21]

The first version of the ePPO was launched on October 4, 2022. By October 22, the first successful interception of a Kalibr cruise missile was confirmed thanks to data received from three system users. The missile was flying at a low altitude and was difficult to detect with traditional methods due to the terrain. However, thanks to the ePPO users, a mobile fire team had enough time to shoot down the Kalibr using an Igla MANPADS. At that time, ePPO had approximately 100,000 users, and within a year, this number grew to 460,000.[22]

Substitute for Fighter Aircraft

The rapid development of unmanned aerial vehicles (UAVs), their growing capabilities and improved combat tactics have exacerbated the challenge of countering them. Unfortunately, Ukrainians have learned firsthand that the appearance of a Russian reconnaissance UAV, even dozens of kilometres from the front line, is often a precursor to a missile attack. Traditional methods of combating UAVs do not always perform well in this role – for example, classic fighter jets such as the MiG-29 and Su-27 were not designed to counter small, slow aerial targets. A turbo-propeller light attack and training aircraft, such as the globally popular A-29 Super Tucano, could better fulfil this role. However, Ukraine did not possess such aircraft and their acquisition was not a priority. However, a private initiative rescued the situation. The 'Civil Air Patrol',

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21 Korshak N. 2024.

22 Sul›din G. 2024.

an organisation of light aircraft owners, contributed its planes and crews to the effort. These sport and training aircraft are not equipped with built-in or external weapons, so drones are shot down by a second crew member using conventional firearms fired from the cockpit. This method is reminiscent of not the era of World War II but of the very beginnings of World War I when pilots of enemy aircraft exchanged fire using revolvers or rifles when they met in the air.

Implementing this concept required addressing several organisational challenges. One major issue was ensuring the safety of civilian aircraft operations in a warzone, preventing them from being targeted by friendly air defence systems. By the spring of 2024, the activities of the Civil Air Patrol in countering UAVs were not widely publicised. During the research for this article, only one reference was found which concerned the awarding of medals for 'The Liberation of the Kharkiv Oblast' to pilots of the Kharkiv Separatate Volunteer Aviation Unit of the Civil Air Patrol. The statement indicated that 'alongside soldiers of the 92nd Mechanised Brigade named after Otaman Koshevoi Ivan Sirko and the Special Operations Centre 'A' of the Security Service of Ukraine, eight aerial targets of the occupiers were destroyed'.[23] Based on this information, it is unclear whether these aerial targets were shot down by the aviation unit's crews or whether they merely alerted ground-based air defence systems.

Fig. 2. Yak-52 used to combat Russian drones. June 2024, Ukraine (Source: *Yakshcho odyn Yak-52.* 2024)

The first visual confirmation of a UAV being shot down by a Civil Air Patrol aircraft emerged on April 27, 2024, when a video was posted online showing the downing of an Orlan-10 UAV over Odesa by the crew of a Yak-52 (Fig. 2). The footage shows the drone descending by parachute while being circled by a Ukrainian aircraft. The shooter,

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23 *Tsyvil'nyy* 2023.

reportedly armed with an RPK-74 light machine gun, is seen in the rear cockpit of the Yak-52.[24] New unusual images of the Yak-52 fighter taken by a Russian UAV camera over the Mykolaiv Oblast – surfaced in June 2024. The aircraft's unique camouflage pattern is clearly visible. At the same time, a photo was posted on Facebook showing a fragment of this aircraft's fuselage decorated with aerial victory marks: two Zala UAVs, six Orlan-10s and two additional silhouettes accompanied by supplementary markings. The first is the distinctive twin-tail silhouette of an Iranian Mohajer-6 UAV, paired with an image of a bird. The second is an Orlan-10 with a thundercloud.[25] These likely represent incidents where the Yak-52 crew witnessed enemy UAVs being destroyed, but not by their direct involvement – such as a collision with a bird or being caught in a storm.

The Yak-52 is not the only type of light aircraft used (or intended to be used) for countering UAVs. In July 2024, Ukraine's Ministry of Defence's Main Intelligence Directorate released a training video in which a shooter armed with a Maliuk rifle fires at a drone target from the cockpit of an ultralight Aeroprakt A-22 aircraft.[26]

The examples analysed demonstrate that combining technology from previous eras with modern solutions can create effective and inexpensive air defence measures relatively quickly and easily. Most of these methods cannot be used against modern jet fighters – they are effective only against UAVs and cruise missiles. However, these are the main categories of aerial threats appearing over Ukrainian territory. The use of simple yet numerous measures prevents the 'saturation' effect in air defence, where the number of targets exceeds the system's capabilities. In conclusion, Ukraine's experience constitutes a significant chapter in the history of aerial warfare and serves as a valuable example for other armies in organising defences against mass aerial attacks.

References

Published works

Charuk [=Kharuk] A. 2024. *Ukraińska flotylla rzeczna: historia i działania bojowe.* "Nowa Technika Wojskowa" 8, 58–62.

Fond Prytuly peredav 2024. *Fond Prytuly peredav optychni vizyry do ZRK 'Stryla-10'.* https://mil.in.ua/uk/news/fond-prytuly-peredav-optychni-vizyry-do-zrk-strila-10. Available on-line: May 19, 2024.

Fond Prytuly zakupyv 2024. *Fond Prytuly zakupyv 500 teplovizoriv dlya PZRK.* https://mil.in.ua/uk/news/fond-prytuly-zakupyv-500-teplovizoriv-dlya-pzrk. Available on-line: May 19, 2024.

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24 *Yak-52* 2024.

25 *Yakshcho odyn Yak-52* 2024.

26 Sokolenko J. 2024.

FrankenSAM 2023. *FrankenSAM: amerykantsi intehruvaly rakety Patriot z radianskym ZRK*. https://mil.in.ua/uk/news/frankensam-amerykantsi-integruvaly-rakety-patriot-z-radyanskym-zrk. Available on-line: May 22, 2024.

Hibrydnyi ZRK 2024. *Hibrydnyi ZRK FrankenSAM u ZSU vpershe zbiv realnu tsil: blyzko pyaty vzhe rozhorntuto – Kamyshyn*. https://defence-ua.com/army_and_war/gibridnij_zrk_frankensam_vpershe_uspishno_vikoristano_zsu_blizko_pjati_vzhe_rozgornuto_kamishin-14160.html. Available on-line: May 22, 2024.

Kharuk A. 2024a. *Brytans'ka improvizatsiya dlya ukrayins'koyi PPO: AIM-132 na nazemniy puskoviy ustanovtsi*. https://mil.in.ua/uk/blogs/brytanska-improvizatsiya-dlya-ukrayinskoyi-ppo-aim-132-na-nazemnij-puskovij-ustanovtsi. Available on-line: May 22, 2024.

Kharuk A. 2024b. *Slabshyy proty syl'nishoho. Viyna v povitri – Pol'shcha 1939 i Ukrayina 2022*. In: *Oboronni viyny: Pol'shcha19 2022*. In: *Oboronni viiny: Polshcha 1939 – Ukraina 2022–2023*. Lviv.

Korshak N. 2024. *Tse ne ihrashka, tse – zbroya: yak pratsyuye rozroblenyy odesytamy zastosunok 'ePPO'*. https://suspilne.media/302116-ce-ne-igraska-ce-zbroa-ak-pracue-rozroblenij-odesitami-zastosunok-eppo. Available on-line: March 20, 2024.

Kozatskyi S. 2024. *AIM-7 Sparrow: iak tsi rakety posyliat protypovitrianu oboronu Ukrainy*. Available at: https://mil.in.ua/uk/articles/aim-7-sparrow-yak-tsi-rakety-posylyat-protypovitryanu-oboronu-ukrayiny. Available on-line: May 22, 2024.

Mashchenko O. 2024. *Zenitnyy kompleks MR-2 Viktor: ne prosto 'shche odna harmata' na shasi pikapa*. https://armyinform.com.ua/2023/11/03/zenitnyj-kompleks-mr-2-viktor-ne-prosto-shhe-odna-garmata-na-shasi-pikapa. Available on-line: April 11, 2024.

MB 2022. *The Military Balance 2022*. Abingdon 2022.

Nimechchyna 2022. *Nimechchyna prosyt' Shveytsariyu dozvolyty peredaty Ukrayini snaryady dlya 'Gepard'*. https://mil.in.ua/uk/news/nimechchyna-prosyt-shvejtsariyu-dozvolyty-peredaty-ukrayini-snaryady-dlya-gepard. Available on-line: March 26, 2024.

Norvehiya 2022. *Norvehiya peredast' Ukrayini PZRK Mistral*. https://mil.in.ua/uk/news/norvegiya-peredast-ukrayina-pzrk-mistral. Available on-line: April 10, 2024.

Protypovitryanu 2023. *Protypovitryanu oboronu Zakarpattya posylyly novoyu tekhnikoyu*. https://mil.in.ua/uk/news/protypovitryanu-oboronu-zakarpattya-posylyly-novoyu-tehnikoyu. Available on-line: April 10, 2024.

Rik viyny 2023. *Rik viyny za svobodu: Voyenno-istorychnyy narys rosiys'ko-ukrayins'koyi viyny (24.02.2020–24.02.2023) u chotyr'okh knyhakh. Knyha I*. Kyiv.

S-300V1 2027. *S-300V1 pomichena na puskakh zenitnykh raket na Khersonshchyni*. https://mil.in.ua/uk/s-300v1-pomichena-na-puskah-zenitnyh-raket-na-hersonschyni/. Available on-line: March 20, 2024.

Sofinov T. 2023. *Gepard: "Predator" of the Ukrainian air defence*. https://mil.in.ua/en/articles/gepard-predator-of-the-ukrainian-air-defense/. Available on-line: March 1, 2025.

Sokolenko J. 2024. *Ukrayintsi boryut'sya z rosiys'kymy BPLA starymy litakamy A-22 u styli Pershoyi svitovoyi*. https://www.unian.ua/weapons/ukrajinci-boryutsya-z-rosiyskimi-bpla-starimi-litakami-a-22-u-stili-pershoji-svitovoji-forbes-12690825.html. Available on-line: July 24, 2024.

Sul'din G. 2024. *Rik roboty ePPO*. https://mil.in.ua/uk/blogs/rik-roboty-yeppo. Available on-line: March 20, 2024.

Tsyvil'nyy 2023. *Tsyvil'nyy povitryanyy patrul' pryymaye bezposerednyu uchast' v oboroni nashoyi krayiny*. https://www.wing.com.ua/content/view/33992/39/. Available on-line: July 24, 2024.

U ZSU nareshti 2024. *U ZSU nareshti ofitsiyno pokazaly ZRK 'Osa' z novymy raketamy*. https://defence-ua.com/weapon_and_tech/u_zsu_nareshti_ofitsijno_pokazali_zrk_osa_z_novimi_raketami_video-15549.html. Available on-line: May 24, 2024.

V Ukrayini 2021. *V Ukrayini rozpochalosya navchannya 'Ob'yednani zusyllya – 2021'*. https://mil.in.ua/uk/news/v-ukrayini-rozpochalosya-navchannya-ob-yednani-zusyllya-2021. Available on-line: January 26, 2025.

Viziya 2035. Viziya Povitryanykh Syl 2035 (Візія Повітряних Сил 2035). Kyiv 2020.

Yak-52 2024. *Yak-52 zbyv rosiys'kyy rozviduval'nyy dron v nebi nad Odeshchynoyu*. https://mil.in.ua/uk/news/yak-52-zbyv-rosijskyj-rozviduvalnyj-dron-v-nebi-nad-odeshhynoyu. Available on-line: July 24, 2024.

Yakshcho odyn Yak-52 2024. *Yakshcho odyn Yak-52 vzhe zbyv visim 'Orlan-10' ta Zala, pro shcho tse nam hovoryt'*. https://defence-ua.com/news/jakscho_odin_jak_52_vzhe_zbiv_visim_orlan_10_ta_zala_pro_scho_tse_nam_govorit-15799.html. Available on-line: July 24, 2024.

Zbroia rosiisko-ukrainskoi viiny 2023. *Zbroya rosiys'ko-ukrayins'koyi viyny 2022–2023 rokiv: Dovidnyk-kataloh osnovnykh zrazkiv ozbroyennya ta viys'kovoyi tekhniky yaki zastosovuvalysya protyborchymy storonamy pid chas vidsichi shyrokomasshtabnoho vtorhnennya rf v Ukrayinu (24.02.2022–30.06.2023)*. Kyiv.

Zenitni ustanovky 'Gepard' 2022. *Zenitni ustanovky 'Gepard' pratsyuyut' na Kharkivshchyni*. https://mil.in.ua/uk/news/zenitni-ustanovky-gepard-pratsyuyut-na-harkivshhyni. Available on-line: March 26, 2024.