... for during the thirteen years of our reign, praise the Lord, nobody has defeated us in battle...



Soldiers from the age of Gábor Bethlen

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Preface

... for during the thirteen years of our reign, praise the Lord, nobody has deafeated us in battle...

A letter from Gábor Bethlen to Péter Pázmány, 30 November, 1620

400 years ago, on 23 October, 1613, the Kolozsvar parliament elected Gábor Bethlen as Prince of Transylvania, whose reign is often considered the beginning of the golden era of Transylvania. Gábor Bethlen was successful as a leader uniting peoples, a patron of arts, a politician and also as a General in the tumultuous seventeenth century Europe. With the anniversary approaching, a couple of us - a group of friends, reenactors, archaeologists and historians well versed in the military traditions of the period - decided to honour the occasion by publishing a complimentary book describing soldiers and tactics during the era of Gábor Bethlen.

The book exposes the same topics which we focus on as reenactors: it is meant to be a survey of the everyday life of soldiers living at the beginning of the seventeenth century. As reenactors we approach the period from the individual's point of view rather than a comprehensive overview on political history or military strategies. Our research sheds light on details which bring large scale events closer to the individual perspective making them easier to understand and identify with.

The book is titled Soldiers of the Era of Gábor Bethlen. In the first half we focus on the lifestyle of soldiers in the first three decades of the seventeenth century, and in the second part we take a closer look at soldiers from contemporary Hungarian and imperial armies, who were friends or foes of Bethlen during his campaigns. The reader will get an idea of how soldiers of the time lived and thought of the world, and a visual overview of soldiers of various ranks. In order to ensure accuracy, which is one of our main goals, each character, piece of clothing and equipment is based on several contemporary sources and historical facts.

This e-book is a result of a year's work of over twenty people. Our goal was to compile an easy to understand document accessible to everyone. Therefore, we decided to publish it exclusively in electronic form. It is an officially registered book and the intellectual property of the authors, but is free to reproduce and use for educational an scientific purposes. To achieve the broadest possible distribution we insist that any reproduction and redistribution be free of charge.

We hope that the book will be a compelling read and a useful addition to studies tackling the political and military history of the era.

The authors

THE ARMIES

Hungary in the early 17th century

1600. middle of February. The Turks of Gyula castle took advantage of the severe winter and launched an unexpected attack on the palisades on the frozen moor of Sarkad, massacring its defenders and residents. The ambush was just one of the many similar insignificant clashes that followed, which, compared to the major military events of that period did not draw much attention. The hajdús took back the palisades quickly enough, the residents returned from their hideouts, but the settlement was burned down again three times in the following two decades. At the beginning of the new century life at the frontiers was very similar to life during war.

The dawning of the seventeenth century did not

promise to be any more peaceful than the previous one; and Hungary, as the battlefield of two clashing superpowers, was indeed to see further conflicts. This was when the Long War (1591-1606), also called "Fifteen Years War" between the Hungarian Habsburg royalty and the Ottoman Turks occupying the middle of Hungary took place. Hungary, and Transylvania wishing to shake off the Ottoman yoke, were waiting for the Habsburgs to expel the Ottomans, who proved to be a tough enemy at the time. Hungarian soldiers joined the imperial army, vast armies clashed, castles were lost and won, and the war caused immense damage—yet the Ottomans were able to hold their areas firmly, although at least could not expand their territories further.



Hand-drawn German map of the Carpathian Basin (Green: Transylvania, Pink: Hungary, Yellow: Ottoman Empire)

Transylvania also saw more of the destruction than the protection it had hoped for from the Emperor. The Habsburgs made many enemies due to religious and social differences during these turbulent times. When the power struggle with the Ottomans reached an impasse, István Bocskai led an uprising against the Habsburgs in 1605-1606. Winning over the hajdús-experienced veterans of the Ottoman wars-to his cause, he no longer expected deliverance from the Habsburgs but instead turned on them, striking a deal with the Ottomans. The young Gábor Bethlen gained his first military experiences in this period.

However, despite the treaties signed in Vienna and Zsitvatorok in 1606, the Habsburgs did not accept the division of the country and the autonomy of Transylvania, and the battles continued. Thus a decade later Gábor Bethlen, now Prince of Transylvania (1613-1629), did what Bocskai had done before him: he opposed the Habsburgs in the great European conflict, the Thirty Years War (1618-1648) as an ally of the protestant forces. A favourable political situation and the support of the Ottoman Empire gave him grounds to entertain bright prospects.



Drawing of the Komárom fort from the beginning of the seventeenth century

Gábor Bethlen liked to go into battle, and I heard him say: if only someone took care of the accounts, recruitment, and provisioning—apart from these aspects he was happy to manage battles including all the difficulties, and would never want to stay at home in peace but would go to war all his life. He took great pleasure in inspecting his troops, commanding them, and held a good soldier in high esteem; had many cannons cast, numerous forts built...

Autobiography of János Kemény, 1657-1658

Although the division of power was not in Bethlen's favour, he was successful against the Habsburgs three times (1619-21, 1623, 1626). Hungarian units and castles-veterans of the Ottoman wars-joined him one after the other. After taking over the Hungarian Kingdom for a short period, he was elected king by the noble orders. He even reached Vienna with his military campaigns, earning lasting fame for the Hungarian and Transylvanian troops of the era.

> Politics often created contradictory and intriguing situations. Enemies turned into allies, and allies into enemies in a short time. A contemporary soldier could not see beyond the surface, he merely lived his life in a rather dangerous world. Every significant political event of an era covers untold histories of everyday lives. Thus behind military episodes there were the simple lives of commoners and soldiers as well, although they are not mentioned often in the chronicles. Soldiers at the beginning of the seventeenth century might have been oblivious to the political tactics of the powerful, yet shaped the history of our country as unnamed participants of military events. [BZ]

Gábor Bethlen (1580-1629)

I n 1593, a thirteen year old noble boy joined the service of Zsigmond Báthory as a squire to pursue an officership—a common career path for contemporary young aristocrats. He came from noble lineage, but his ancestors were not wealthy; the last lands of his family had been requisitioned by the Prince. Therefore, it was only his own merit that could secure him a bright future.

Fate took him beyond a rank of captain of the guard or castle. After two turbulent decades he became Prince of Transylvania. He was Gábor Bethlen, considered one of the greatest Hungarian sover-

eigns. For him, it was a difficult road to the Transylvanian throne. He served four Princes as a squire, officer, consultant, and general, both in battles and diplomatic missions. He gained rank and land, but lost all of it when he had to flee, twice, to Ottoman territory due to internal conflicts.

The experience he gained during his adventurous life, and his judge of character, made him an excellent leader. He was known for his patience, good judgement, instinctive diplomatic skills, and will of steel. He was elevated twice as a candidate for Principality. First, he declined in order to give way to "the last Báthory" (Gábor Báthory), but when Báthory led Transvlvania to the brink of destitution and attempted to kill Bethlen, too, he accepted the offer. In 1613, at the age of 33, he became Prince of Transylvania with Ottoman support.

As a politician he realised that the small Transylvanian Principality-situated right between the Habsburgs and Ottomans who quarrelled over Hungarian territories-could gain more freedom as a vassal for the Ottomans in the given situation. It gave him the opportunity to work towards his long-term goals: the Hungarian throne and separation from the Ottomans.

While even the ethnically homogenous countries of Europe were torn with internal religious, ethnical, and political strifes, Transylvania, which was multi-ethnic and multi-confessional, was peaceful during Bethlen's reign. The Prince achieved and maintained a balance unprecedented even in Europe while securing the rights of all nations, classes, and religious groups. He himself was Protestant, like the

Timeline 1580-1606

1580	- Gábor Bethlen is born on Marosillye
	- Francis Drake returns from his journey around the world
1591	- Beginning of the Long War between the Habsburgs and Ottomans
1593	- Gábor Bethlen joins the Court of Prince Zsigmond in Gyulafe-
	hérvár
	- Henry IV (1572-1610) King of France converts to Catholicism
1596	- The most important battle of the Long War: Mehmed III defeats
	the troops led by Prince Maximilian at Mezőkeresztes
1602	- King Rudolph appoints General Basta as Governor of Transylva-
	nia; Gábor Bethlen supports the Prince in the war against Basta
	- Founding of the Dutch East-Indian Company
1603	- Prince Mózes Székely falls in the battle against Radul, Voivode of
	Havasalföld; Gábor Bethlen flees to Ottoman territory
	- Elizabeth I (1558-1603), Queen of England dies. She is succeeded
	by James I (1603-1625) on the throne. Beginning of the Stuart era.
1604	- Beginnig of the anti-Habsburg revolutions led by Bocskai;
	Bethlen supports him.
	- Astronomer Johannes Kepler observes a supernova.
1605	
	- Battle of Kircholm, Polish victory over Sweden
	- First edition of Don Quijote is published in Madrid
1606	
	peror Rudolph I; Bocskai facilitates a peace agreement between the
	Viennese and Ottoman courts at Zsitvatorok.
	- Guy Fawkes and his co-consnirators in the Gunnowder Plot are

tried and executed in England.

majority of the Transylvanian population, but respected other religions as well. Protestant preachers were given collective noble privileges. The Jesuits, who had been expelled from Transylvania earlier, and whose education system Bethlen held in high regard, were now re-invited and allowed to open schools.

Although he received no formal education, he recognised the value of learning and acquired considerable knowledge by himself. He even took books to his campaigns; he read the Bible sixteen times, and was well versed in theology, learnt Latin, and spoke Turkish fluently. He invited foreign scholars and artists to his court, supported schools and printers, and provided a fellowship for talented students to enable them to study abroad.

Bethlen also reformed the revenue system of Transylvania. In wartime as much as two thirds of the income was spent on the military, but he always kept Transylvania free from warfare, allowing his country to flourish in peace. For almost half a century, from the beginning of Gábor Bethlen's reign, no foreign troops set foot on Transylvanian soil. [BZ]

Timeline 1607-1617

- 1607 Gábor Bethlen is arrested during the internal struggles in Transylvania.
 Founding of Jamestown, the first permanent English settlement in America.
- 1608 Gábor Báthory is elected Prince of Transylvania (1608-1613); Bethlen becomes his consultant, then Captain of the Court Troops.
 - The Protestant Union is established in the Holy Roman Empire.
- 1609 Bethlen is promoted Lord Lieutenant of Hunyad county.
 - The Catholic League is established in the Holy Roman Empire.
 - Galilei presents his first telescope in Venice.
- 1612 Gábor Bethlen openly opposes Báthory and flees to Ottoman territory again.
 - Emperor Rudolph II dies in Prague and is succeeded by Matthias II (1612-1619).
- 1613 Gábor Bethlen, enjoying the support of the Ottomans, is elected Prince of Transylvania (1613-1629) at the Kolozsvár parliament.
 - Michael I (1613-1645), the first Romanov becomes Tsar of Russia.
- 1616 Gábor Bethlen hands over Lippa to the Ottomans in exchange for their support.
 William Shakespeare dies

The warlike Prince

 ${f T}$ he warring monarchs rarely led their troops on the battlefield personally in the Thirty Years War. Gábor Bethlen was not averse to the solder's life with all its dangers and hardships. He was raised to be a soldier and took part in arduous campaigns as a child. He was wounded several times in his youth, mainly by the Turks and Tatars. He had broken bones, his sinews cut-injuries that restricted his movement for the rest of his life. However, despite all the dangers and harms he faced, it was eventually disease that brought him down. He took

part in a total of 34 battles. By the time he became Prince and commander, he led by example as a seasoned veteran.

In 1620, during the siege of Hainburg Castle, the Hungarian artillery proved to be inefficient, so Bethlen ordered a charge. He himself was so close to the attacking hajdús that he was almost shot to death—as he wrote in his letter, "the bullet went through my hair". At the blockade of Fülek, 1621, the cannon shots from the castle reached Bethlen's camp. He personally led the digging of the ditches and installation of the cannons in the middle of enemy fire all night.

In 1623 at Bogdány, they set up camp too close to the enemy lines, and the musketeers shot the tent, in which Bethlen was eating, from afar. While his entourage begged him to relocate, he would not have his lunch interrupted, and others not whishing to appear as cowards, everyone remained seated. Eventually the lunch ended well; the blindfire did not hit anyone, and only a loaf of bread was shot off a table.

Yet another siege took place in 1623 at Hodolin, where the enemy dug themselves in their camp. The two camps clashed constantly, and Bethlen himself surveyed the enemy trenches. One of the captains of the Imperials, who had been captured and set free by Bethlen earlier, recognized him, and ordered the artillerymen to target him with cannons. After a few shots it became obvious to Bethlen that he was targeted-one of his men's sword and horse were hit. He refused to retreat though, saying that "Whoever heard such a thing as a Prince or King hit by a cannon?", and continued the inspection in person, circling the Imperial structures.

His sense of judgement did not fail him even in the midst of danger. In 1623, crossing a bridge on the Morva river, his horse

tripped and threw him off into the water. His servant rescued him, for which he was rewarded with riches and rank. The incident was believed to be a bad omen, but the calm behaviour of the Prince helped to prevent panic.

Timeline 1618-1629

- 1618 The Thirty Years War begins with the uprising of the Czech nobles.
- 1619 Gábor Bethlen joins the Czech nobility in their revolution against the Habsburgs, begins his first Hungarian campaign, and occupies Pozsony (Bratislava).
 - Emperor Ferdinand II accesses the throne (1619-1637)
- 1620 Bethlen becomes King at the Besztercebánya (Banska Bistrica) parliament elects but refuses to wear the crown.
 - The Battle of White Mountain; the Protestant Czech-Moravian-Silesian army, reinforced with Transylvanian troops, suffers defeat.
 - The Mayflower reaches North America.
- 1621 Bethlen's most significant victory at Érsekújvár. Peace agreement at Nikolsburg between Gábor Bethlen and Ferdinand II.
 - The leaders of the Czech revolution are executed in Prague. The Spanish-Dutch truce expires, war breaks out again, and Holland joins the Thirty Years War.
 - The battle of Khotyn; Polish-Lithuanian-Cossack troops defeat the army of Sultan Osman II.
- 1623 Bethlen's second campaign against Ferdinand II.
- 1624 Second Treaty of Vienna between Bethlen and Ferdinand II. - Cardinal Richelieu is appointed chief minister in France.
- 1625 England, Denmark, and Holland sign the Treaty of The Hague against the Habsburgs, Gábor Bethlen also joins in.
 - Denmark enters the Thirty Years War.
- 1626 Third Hungarian campaign of Gábor Bethlen; the Prince joins the Protestant Danish-English-Dutch Westminster alliance.
 Charles I ascends to the English throne.
 - New Amsterdam (later New York) is established by Dutch settlers in America.
- 1629 Gábor Bethlen dies
 - The Treaty of Lübeck, end of the Danish leg of the Thirty Years War.
 - Gustavus Adolphus II, King of Sweden defeats the Polish; the Treaty of Altmark; end of the Polish-Swedish war

In addition to leading by example, he was also a careful and thorough general. He never allowed the enemy to dictate the circumstances of the battle. Due to the agility of his armies he was always able to pick a place and time for the clashes where his traditional Hungarian troops were at advantage.

Hungarian troops

significant amount of soldiers served at Hungarian castles as mercenaries of the Habsburg rulers. Raising further units was the responsibility of Hungarian nobles. Due to the constant threat from the Turks, lords protected their lands with their own units, which in Hungary meant more than just private guards-they were a formidable private army. Noble counties and towns also raised troops by recruiting gentry or local mercenaries, for example hajdús. This kind of military organization may have seemed obsolete, but in fact was rather typical of Eastern Europe at the time. It was crucial to establish who and on what terms can provide armies for battles against the Ottomans or for the anti-Habsburg campaigns of Bocskai and Bethlen. This period saw free soldiers, the hajdús, becoming a significant factor whose captains and towns in Bihar were an attractive points of contact for anyone recruiting units against the Ot-

tomans or the Emperor. Traditionally the armies of the Principality of Transylvania were mainly organised for territorial defense. All classes and ethnicities (Saxons, Hungar-

ians, Székelys, Romanians) took part in raising an army, but the troops of Transylvania basically employed the same tactics and branches, and were shaped under similar circumstances as those of the neighbouring Hungarian Kingdom. The small state could barely afford receiving large number of foreign mercenaries, or development. The Transylvanian army rarely ever ventured beyond the border, and when it did so, it was strictly for their financial gain. Therefore the troops of Bocskai and Bethlen engaged in Hungarian campaigns mainly consisted of Hungarian units and hajdús from Bihar.

...the Germans and Walloons reported that they had never seen people so bold, so careless about death. Bodies fell one onto another, some brought down by a bullet, others by a stone, or a beam, or firearms, all of which were abunthe castle. dant in When twenty-five was swept off at once, twenty-five appeared in their place in the same instant.

The hajdús of Bocskai attack Szatmár, 1605; István Szamosközi: Historical remnants 1542-1608 Hussar's helmet with characteristic nose-, faceand neck guards. The black finish is a result of linseed oil treatment.

C ontemporary Hungarian and Transylvanian armies provided organized training for selected royal troops, for example the Transylvanian blue trabants. The rest of the soldiers were trained locally in military camps or castles. While hajdú mercenaries fighting the Ottomans at border castles

> were considered experienced, the skills of the temporary Saxon, Székely or Hungarian county units varied. Due to the difference in level of expertise Hungarian troops had less discipline in battle than western armies who were trained more or less uniformly. The lack of orderly ranged units capable of fighting in closed formation was the weak point of Hungarian forces. For this reason, Bethlen-like every other Prince of Transylvania-accepted western soldiers recruited by protestant German allies, mainly

marksmen, but also artillerists and cavalrymen, into his armies.

For Bocskai and Bethlen the most useful units and officers were those who had served in the imperial units, were familiar with the latest western tac-

Hajdú ambush and hussar charge

ungarian armies consisted mainly of light infantry units using radically different tactics from those adopted by Western European troops. These tactics were not less developed, only different, so much so that hajdús, and especially hussars were exemplars of this kind of warfare throughout Europe. The western style deploying closed formation, and the eastern style light attacks and raids both had their advantages and drawbacks. Combining the two distinct fighting styles proved effective

against the Turks, but only leadership skills and the ability to use circumstances to their advantage decided who gained the upper hand when they faced each other during the anti-Habsburg wars. The Hungarian army was exceptionally good in raiding.

Hungarian infantry was comprised of armed marksmen known as trabants or hajdús. There were no pikemen in Hungarian troops, and even among the poorest Transylvanian Székely commoner units spears were considered necessity weapons. The pike called "long German lance" or "Lancknet foot soldier's lance"-and the strict formation required by its use-was so far from Hungarian warfare that Miklós Zrínyi thought it impossible that the Hungarian foot hajdús could ever be forced to use pikes.

Hungarian fighters evaded enemy fire by falling to the ground or taking cover. This went against accepted practice for Western soldiers who were forbidden to fall out of line even under heavy fire. However, underestimating the hajdús could be a serious mistake. They often ambushed their enemies, assaulting them at night or luring them into traps. For a Hungarian infantry open field battles against and a second an orderly, western unit was more fatal, because the Eastern European infantry did not excel

at reloading quickly and in a synchronized manner.

tics and able to take advantage of the weaknesses of the imperials. Hajdús in their units were mainly veterans of the Long War, who earlier had been organized into separate units and equipped with modern firearms by the imperials. [BZ]

During the firing of the Turk howitzers the Hungarian infantry got down on the ground, completely evading the attack; then all of them got back up on their feet and began to fight and shoot.

> Battle at Tura, 1594; Chronicles by Máté Sepsi Laczkó, 1521-1624

The Hungarian cavalier of the era, whether hus-📕 sar or hajdú horseman, fought as light cavalry and also with lance and sabre. Some of the Hungarian horsemen were equipped with firearms, although their tactics were not built around their use-a rifle or carbine could not deliver a precise shot further than 25-50 m (80-165 ft) anyway.

Light horsemen also excelled at raiding and preparing ambushes, but on the Hungarian battlefield hussars were also deployed as battle cavalry where their swift attacks could decide the outcome of the battle.

A lance attack was executed with weapons pointing forward, the riders relying on the speed of their mounts, accelerating gradually and galloping at full speed on the last 60 m (200 ft). It was crucial that the charge did not lose momentum. The attack was most effective when executed in a wide, two-line formation, or even from several directions, allowing the greatest possible number of lances to

> A favourite weapon of Hungarian soldiers: the axe

hit a target.

A cavalry unit charging as fast as 40 km/h (25 mph) could quickly take out undefended marksmen, artillerymen, or unprepared horsemen; but the attackers could be stopped by a moat, ditch, or shrubs, and they could not break through a

Wheel-lock pistol. The spark is generated by a rotating steel wheel and a pyrite pushed against it.

group of pikemen either. If the initial charge was successful at scattering the en-

emy, the chase was an easy matter. However, they found themselves in a difficult situation if the first attack was disrupted. "It is like a summer shower: when it rains, it pours, but is over soon"—was the opinion of imperial commander Basta about Hungarian cavalry attacks. In addition, a horseman was rather reluctant to dismount and even a command or the promise of extra wages or reward could hardly persuade them to take part in battles on foot or attack a fortification.

3.) A brigade shall consist of horsemen, and it shall be the largest unit. 4.) Sides shall be taken by seasoned cavalry. 5.) Firearms in the middle and on the sides. 6.) A large army will not do, as they cannot navigate fast enough. However, large armies are required against the Turks more than any other nation, as they come in vast numbers.

Gábor Haller: Organizing armies, 1644

Hungarian armies also included artillery. Hungarian nobles, towns, and Transylvanian princes allocated resources to keep this expensive branch-Bocskai also had German artillerymen. In Transylvania, the cost of transporting cannons was traditionally covered by Saxon priests. Gábor Bethlen took no more than 20 guns with him to his Hungarian campaigns. An indepen-

dent unit had no more than 3-4 guns, and rarely gathered more than a dozen cannons at one spot, save for sieges. Cannons were called "old shooting weapons" at the time in Hungary, and were classified based on the weight of the projectile as basilisk, *karthaun* (cannon), falcon, falconet, *tarack*, and *siska*. Handheld firearms were called "tiny shooting weapons". Since every cannon was uniquely crafted, it was customary to give it a name, usually the names of animals. Smaller cannons were named after birds, whereas bigger ones were adorned with coats of arms and mottos. Residents were notified of enemy attacks by a mortar or "signal cannon" shot. [BZ]

Gunpowder flask for cannons. As with the musket, powder poured into the ignition hole was ignited with a smouldering slow match.

The Imperial Army

Due to the Habsburgs of Austria reigning over several countries and enjoying the support of the Spanish branch of the dynasty as well, the Emperor's "German" mercenaries fighting in Hungary were of a rather mixed composition. The Western regiment enlisted Italian, French, Walloon, Czech, Spanish and even Irish soldiers. Hungarians, Serbs, Croatians, Polish and cossack auxiliary units joined the Habsburg army.

The imperial army wasn't a standing army in the modern sense - such a thing did not exist in Europe at that time. It mainly consisted of regiments provided by military entrepreneurs, in addition to

soldiers of the estates of the realm and Eastern-European mercenaries. Leveraging treasury funds and official license, the entrepreneurs were able to recruit and set up entire armies, and train them with the help of mercenary officers. If the army met the required standards, the soldier's pay was provided by the treasury. Since entrepreneurs worked for profit, this system was open to abuse just like the loot. However, it was still the golden era of recruiters. The most notable figure was Wallenstein, the famous general of the Thirty Years War who appeared at the Hungarian theatre of war in 1626, remaining unsuccessful against Gábor Bethlen.

> Pointy burgundian helmet, bottom view, showing the wad-filled linen lining

You hear such things as 'you Italian capon, you rogue, cake and beer swilling Czech, you German pig, you Hungarian traitor', and so on. For this reason brawls and altercations are common. At a siege or assault one scorns the other. Therefore it is prudent not to recruit various nationalities- Germans and Hungarians are enough, their infantry and cavalry are unsurpassed.

Memorandum of Nikolaus Gabelmann to archduke Matthias, 1595

I n theory, about ten battalions of 300 soldiers made up a regiment in the infantry, and four or five 100-250 person unit made a cavalry regiment, but in practice these numbers varied.

The armies were trained uniformly in order to enable them to fight effectively in the formations used in contemporary tactics. This period was the basis of later modern military training methods. The entire unit had to practice the slow loading of the musket or the usage of heavy pike in sync on command, and learn to change into different formations well. It as took painstaking work to discipline war horses

to move orderly and endure the noise of firearms. [BZ]

Countermarch and caracole

ercenary armies deployed in Hungarian wars by the Habsburg Empire differed little in terms of equipment and management from units fighting in western Europe at that time. Experienced generals of the imperial army were familiar with the latest western tactics and adopted them for campaigns in Hungary shortly after they were introduced on the Western European battlefields.

Veteran mercenaries of the western wars transferring to Hungarian armies were to experience that both the opponents' tactics (Ottomans or anti-Habsburg Hungarian units) and the circumstances of battle differed significantly from what they were accustomed to in Western Europe. They had to get used to a more agile enemy who often attacked from ambush, but who could not withstand an attack executed in formation. In addition, it was harder to gather provisions for the troops due to the sporadic placement of Hungarian villages. These dissimilarities could be advantageous as well as disadvantageous for the imperials.

A western infantry consisted of pikemen, halberdiers, and soldiers trained for close combat, as well as musketeers and arquebusiers. Cuirassiers and carbiners formed the cavalry. The newly introduced dragoons were mounted infantry musketeers, who fight as infantrymen in battle.

The imperials' Eastern European light infantry (hajdús) or light cavalry (hussars, Croatians, cossacks) fought with their unique, characteristic tactics and weapons. However, the imperial generals sometimes endeavoured to equip them with modern firearms and organize them into standalone units.

And you say: the Turks did not hold ground, and the infantry is moving slowly. I say if the enemy is running, the battle is won: chase them with the cavalry and do not disrupt the well-practiced formation of the infantry. If they turn back, face them as before, so that their lances do not reach the pikes of the mercenaries—the trick lies in handling these well—and the musketeers, if placed well, will not be harmed but be able to fire continuously. For me a well laid out infantry formation is worth as much as four thousand horsemen...

> Nikolaus Gabelmann: Memoir for Prince Matthias, 1594

estern troops typically fought in formations which they were to hold at any cost. Pikemen in closed formation could hinder any cavalry unit, and musketeers were also most effective in organized ranks. This of course meant that their formation was static. The closed lines could only move slowly, if at all, and the group was a good target for any ranged weapon, even for a cannon. Formations of the western infantry-and cavalry as well-were designed to utilize maximum firepower. Handheld firearms of the era were not too precise, and the average soldier was not a sharpshooter either. For this reason it was better to fire a volley at a group from a shorter range rather than target individuals. Pikemen were primarily employed to defend musketeers.



The most advanced firing method of the period, the countermarch, was introduced in the Low Countries. It utilized the effectiveness of contemporary firearms relatively well. To perform a countermarch the first row of musketeers fired first, and then moved to the side along the formation or back one rank through the openings and started to reload their weapons. During this time the second row, now at front, fired, then retreated, making way for the following line, and so on. This provided a continuous rotation of five ranks firing for about a minute, and allowed the lines advancing from back to front enough time to reload. The described situation was of course

ideal—not everything went so smoothly during battle. This manoeuvre could be executed while standing or marching forward or backward slowly, but it obviously required strict discipline from the soldiers and constant direction from the officers. Near the musketeers stood the dense, huge square of pikemen, with the flag in the middle, ready to defend the shooters. *Tercio*, the famous formation originating from Spain and often adopted by the imperial armies also relied on the mutual support of pikemen and musketeers.

Bandolier, a baldric for carrying gunpowder. One wooden cartridge held enough powder for one shot. ...thus Basta appeared in person, and the armies clashed violently; but Basta send more and more units which stood their ground against the lancers charge; finally when his own army appeared, and the lancers were gone, the soldiers could not withstand the fire, so the bridge was taken...

The battle of Goroszló, 1601; Memoirs of Ferenc Marosvásárhelyi Nagy Szabó, 1653-1658

> C avalry had a secondary role compared to infantry in western armies. Their main weapons were also firearms, mostly pistols and carbines. One of their manoeuvres, the *caracole*, was based on changing rows and continuous firing. During this type of attack they charged at the enemy at gallop, opening fire, then turned to the side making way for the following rank. If they engaged in close combat they fired only when they had managed to get well into enemy lines. With their short barrelled guns they could shoot at short range only, but at this distance the enemy was reluctant to play the role of a still target face.

> **)** annons at this time were very expensive, therefore even the imperial army had just a few of them. Rarely ever were more than a dozen guns lined up for a battle. Larger cannons were too cumbersome to use during battle, whereas the smaller ones were not capable of doing enough damage and were useless against walls. Artillery units were really only indispensable for sieges. Cannons were classified by the weight of the cannonball-1 to 60 lbs (0.56-33.5 kg)-under various names (Karthaun, Schlange, falconet, etc.). The ball was most often a solid iron ball. Groups could be targeted by a chained ball or a canister containing several smaller pellets, but these were effective in close quarters only. Mortars were also used at sieges, capable of sending a bigger bomb-as heavy as 200 pounds (90 kg)-along a steep trajectory. [BZ]

EVERYDAY LIFE

Money, money and money

G eneral Montecuccoli (among others) was credited with saying that three things are required for war: money, money, and money. However, it was

a heavy burden for all monarchs to provide wages for the armies. The Habsburg imperial treasury accumulated stellar debts during the Hungarian and European wars. Newly recruited troops heading to camp were sometimes paid а few months advance, but it was more typical for a soldier to get his meagre payment with significant delay. It took some time for the payment to reach a camp or cas-

We would be unpaid for fifty or sixty months during Emperor Rudolph's reign, and even now, under His Highness, our payment is twenty, sometimes twenty-five months behind.

A petition by the castles of Tokaj, Ónod, Szendrő, Kálló and Szatmár, 1616

tle, provided that it was not intercepted by enemy raiders on the way. It follows that generals constantly owed a couple months' or even years' stipend to their recruits—this was considered and accepted as part of military life. hajdús, Hungarians and even German and Walloon soldiers joining Bethlen and Bocskai had been unpaid by the Emperor for a long time, and unpaid soldiers often became deserters.



H ungarian and western soldiers alike fought in exchange for money. Since wages were higher abroad, Hungarians often joined western armies as

> mercenaries in foreign wars. However, the majority of a traditional Transylvanian army was required to fight at their own cost in the territory of the Principality. In the Hungarian theatre there was a difference between the wages of western and Hungarian mercenaries, that of the westerners being somewhat higher. Payments also differed by branch and rank as well. Cavalrymen earned more-as they had to provide for their horses-and an ensign or musi-

cian was paid twice as much as a private. In Transylvania the selected elite units had a higher monthly allowance, whereas pikemen in imperial regiments earned more than marksmen, as a way of compensating for the more dangerous role. At the early seventeenth century a Hungarian horseman would get 3-4 forints, an infantryman 2-3 forints, a cavalry lieutenant 20-25 forints, and a captain 200-400 forints depending on the size of his unit. A single imperial cuirassier earned as much as five Hungar-

ian cavalrymen. However, Bocskai and Bethlen would also grant increased stipend to their

own German soldiers-Bethlen gave 5 forints to a German infantryman, and 9-10 forints to a German cavalryman. Field officers, engineers, cannon masters were entitled to the highest wages as they had to provide for their entourage as well, and captains of castles also paid their spies from their own pockets. Marauders would sometimes also join the armies; despite not being paid it was still worth it for the loot. In this period an average Hungarian infantryman would earn roughly as much as a contemporary mason or carpenter apprentice; a lieutenant in the infantry slightly more than a master of the same trades. **P** ayrolls listed stipends in Hungarian or in the slightly less valuable Rhenish forints. Both were virtual units used for calculation, as forint coins were not issued at the time. The corresponding value was converted to and paid in silver coins, that is, thalers, garas (Groschen), or dénárs. Significantly less gold coins-ducats and guldens-were in circulation. A ducat was worth 2-2.5 forints around 1619, a thaler was equivalent to 1.25-1.5 forints, and 1 forint was exchanged for 33 garas or 100 dénars. Inflation due to war and the release of inferior silver coins soon became a problem. A soldier's money pouch could contain a surprisingly varied range of currencies received as wages or plunder that passed through many hands across many countries.

A soldier's wage was not high and when not wasted on drinks it was usually used to replace clothing, provisions, or equipment. Between 1622 and 1625 a loaf of bread would 20 dénárs and 4-10 dénárs were charged for one pound of pork meat. Two pints of old wine cost 20 dénárs; 2 forints 40 dénárs for a ewe, 1-3 forints for a pair of boots. 3-4.5 forints was an average price for a simple sword or broadsword. Imperial soldiers received a complimentary cape from the treasury, whereas Hungarian soldiers serving at castles were given a roll of baize enough for "a cape" (which meant an entire outfit at the time) in addition to their wages. This was worth about half a year's payment. One set of garments was supposed to last for a year. In addition to the fabric they received, officers of higher ranks preferred customized outfits according to what they could afford. In western armies it was customary to reduce a soldier's payment with the price of the weapons provided by the treasury. [BZ]

Pillagers

S ince wages were almost always late and military logistics were not too effective, it was often

more convenient for armies to simply take what they needed from wherever they happened to be stationed—either from the enemy or from the civil population. This kind of irregular income amounted to a significant proportion of their total earnings, and was relied on almost as much as the actual payment they were entitled to.

Goods pillaged from the enemy were considered "honest profit" at the time. During the prolonged Ottoman-Hungarian conflicts it was customary for the victors to take all valuables from the defeated party, a habit not unlike western traditions. Since contemporary soldiers car-

ried all their wealth on them, it was par for the course to loot the fallen and the captives, and plunder the enemy camp thoroughly. Camp followers also took part in the pillaging without scruple. Important captives were released in exchange for ransom or other hostages. The more valuable objects were sent to the monarch. In Hungary it was customary to sell the

...and where they were appointed, none of them ordered their units there, not one Hungarian soldier fought there. Instead, they ran off, I tell you not even a third of them were present, the entire unit were off plundering the devil knows where... not ten Hungarians fell in that battle...

From a letter by Gábor Bethlen, 1620

rest of the loot in military fairs. Part of the income went to relatives of the fallen. Many valuables were given up for "auction", sometimes well below their normal price. Ádám Batthyány, fleeing from the battle of Rakamaz in 1630, left behind his 900 thaler horse which was sold initially for 25 and subsequently 40 forints by the trabants, and later bought by the vice general for 200 thaler. In vain did Batthyányi send a messenger with a counteroffer; but

alas, he never got his beloved mount back.

D espite the strictest forms of punishment, it was impossible in any contemporary army to put an end to the offenses against civilians. Villages dreaded the troops, who demanded food, money, fodder, and shelter as they were passing through.



They thoroughly plundered the area which in turn could cause famine and epidemics. Peasants in the army's way went into hiding if they could, while city elders tried to avert atrocities by paying large amounts of money to the troops even if they were fighting on their own side. A prudent general tried to keep order, prohibit pillaging and compensate for any damage if he wanted to win the support of the civilian population. Threats were very effective: most of the military commands of period pertained to keeping order and inflicting punishments. The camp executioner escorting the army was rarely ever idle either. At the siege of Győr in 1598, a Spanish soldier learned that his French comrade found hidden Turkish gold in the castle. He killed the French out of envy, a deed for which he was sentenced to death by decapitation by the courtmartial.

It was customary to reward soldiers for a success-

ful siege and capture of enemy castles with a free-forall that lasted for days. This was the greatest disaster that could possibly happen to a settlement. Eyewitness chronicles recording the atrocities probably did not exaggerate. Beszterce, after heroic resistance, made a deal with the besieger General Basta. However, despite the command prohibiting it, the Walloon mercenaries began to plunder and even killed many of their own officers. The general could only keep order by executing some of his own soldiers in public.

Pillaging caused a lot of problems including declining morale and discipline, which could easily lead to real losses and even defeats. For example, in 1597, German plundering musketeers holding matches when looking for loot accidentally stumbled upon the gunpowder storage of the captured Pápa castle, which led to a great explosion.

Hajdús and imperial Walloon soldiers were infamous plunderers. Nothing escaped their attention when it came to looting. In 1605, as they were pillaging the lower parts of Sopron, one of the hajdú bandits even took care to remove the lead pipes of the organ of the ransacked church. His deed was not inspired by musical interest—he merely wanted to melt them for bullets. [BZ]

The soldiers left nothing untouched, opened and robbed even the graves, turned everything over and searched everywhere where they thought something could be hidden. They even searched the cesspits, and took all the grains and wine and other provisions from the people, and left nothing for them, completely ignoring their pleas and entreaties...

Soldiers plundering at Segesvár, 1601; György Krauss: Description of all military and other things that happened between 1599 and 1606 in Erdély

Outfit

A lthough uniforms were not yet popular in the early modern era, outfits bearing national characteristics were quite common. Sometimes soldiers received footwear or baize as part of their pay,

but their customized outfit did not qualify as uniforms.

Clothing items were considered valuable by every social class. Wills, dowries, inventories all list clothing items and raw textile materials. Soldiers obviously did not use the most expensive materials, but they aimed to have their outfits made of good quality fabric. Baize made of wool was a widely used material in this period. It came in various quali... I sent a large amount of linen to Szakóca, but the women there, oblivious to the Hungarian patterns and following the German custom of long-sleeved, close-fitting shirts and no underwear, made such tight pants that I could barely mount my horse in them...

> Autobiography of János Kemény, 1657-1658

ties ranging from the cheapest Polish baize to the most expensive Flemish and English imports. The more affluent had their outfits made of velvet, taffeta, or various kinds of brocade, all imported from foreign countries.

Hungarian soldiers typically wore dolmans, whereas western mercenaries are often depicted in outfits showing the influence of contemporary Spanish trends. The Spanish design popular in Western Europe also reached German-speaking areas in Hungary. Thanks to this the trend spread, and it is not uncommon for a contemporary pattern book to contain designs for western style coats under the titles doublet (korcovány) and coat. Soldiers of various Western European nationalities could be easily distinguished from Hungarian soldiers based on their clothing. Those coming from abroad showed great interest in Hungarian fashion as Hungarian outfits differed significantly from Western European. Several descriptions and depictions present the "Hungarian attire".

 ${f T}$ he dolman was a typical Hungarian male outfit in the sixteenth and seventeenth centuries, with sleeves often tight, closed with buttons or clasps at the hand. A characteristic elongated cuff

> called "dog's ear" came in various shapes and covered the back of the hand. The dolman was fastened with a belt around the waist. Belts were made with various techniques; for example, knotted net belts, and later rope belts and sashes made of strips of textile. The front of the dolman closed with buttons, but there were no button holes on the opposite side. Instead, string hoops were sewn in the lining to fasten the buttons. Buttons were made by jewelcrafters or specialized button makers. Metal buttons were mostly cast from pewter, and buttons with hoops and precious stone inlays were also available for the wealthier. Knitted buttons were not Hungarian specialties. Wooden dies covered with silk or metal threads

were manufactured all around Europe, but some designs are characteristic of Hungary. We often find large, elongated, egg-shaped buttons on the dolman of our nobles. The design is also mentioned in descriptions by button maker guilds, therefore it was most likely quite popular among men.

Western soldiers preferred the doublet which often had removable sleeves and, as was the case in Hungary, it was made of a wide range of materials. Its front closed with textile-covered or knit buttons. Slits were popular decorations, showing part of the

shirt underneath.

Typical period buttons: - buttons cast from copper and pewter - button made of threads over a wooden bead - textile button The mente was worn over a dolman and resembled it in shape, the difference being that while the dolman was sometimes worn alone, a mente was never worn without a dolman. In addisleeves varied tion. mente greatly, from slit sleeves to short, knee- or ankle-length "winged" versions. Western soldiers wore a vest over the jerkin, but, as they never wore a mente without a dolman, they also never wore a vest without a jerkin.

Price lists from contemporary tailors always mention

trousers as well. Hungarian pants were tight, closed around the leg or ankles with buttons or hidden hooks and eyelets. Although modern elastic fabrics did not exist at the time, trouser legs could be tightened by way of such fasteners. Trousers were made of baize and were tailored after size. To serve urgent demands tailors also sold ready-made pieces of clothing at fairs. Followers of the Western trend wore knee-length, loose pants and tight, knitted or sewn stockings.

Shirts made of more delicate fabric were worn as a base layer. Sources often mention flax, linen, or widely used Turkish linen shirts. Nobles often wore silk shirts. Contrary to popular misconception, underwear was worn under the trousers: it was a widely used piece of clothing in the era. János Kemény, who took part in Gábor Bethlen's Hungarian campaigns at the age of sixteen, mentions that he had failed to pack enough underwear and was forced to wear trousers without them. Due to inadequate hygiene he soon suffered from lice.

Turkish-cut boots with iron heels

[...] and you demand unreasonable prices, two forints for a pair of sandals, and 56 dénárs for a pair of shoes. Your Lordship should remember that His Majesty wages a war for your own protection, and reconsider taxing him to such extent. One forint for a pair of sandals and 33 dénárs for a pair of shoes should very well suffice. Your Lordship should also make sure that when the sandals and shoes are shipped and delivered, they are relayed to the carriages.

A letter from the Chamber of Szepes to the town of Lőcse, about footwear to be shipped for Gábor Bethlen's troops, 1621

> **¬** ootwear also came in various shapes and sizes. Hungarian boots resembling the Turkish heelless design were very popular until the end of the seventeenth century. Small horseshoe-shaped iron pieces were pegged under the heels to aid walking. Slippers with or without heels also had Turkish origins and were made for men and women as well. Contemporary paintings often depict men wearing leather foot wraps and leather slippers. The combination of these two items resulted in shorter boots laced on the side, which were found in several gravesites including Sárospatak and Gyulafehérvár. It is a common misconception that men wore only boots at the time. On the contrary, various types of shoes are documented in pictures and finds. Shoes made of leather or textiles were called cipellő ("shoelet"). Miklós Bethlen complains in his autobiography that one night, as he was travelling in England, his velvet shoes, or cipellős, got completely soaked. The bocskor, a type of leather slip-on shoe fastened with leather straps

around the ankle, was very popular among peasants, hajdús, and fashion conscious students. The latter tended to wear more elaborate types, which were often scolded by religious leaders. Hungarian and western mercenaries alike wore shoes as well as boots, depending on their rank and means. [ZO]

On the road, in camp

A lthough Hungary did not enjoy real peace at the beginning of the seventeenth century, soldiers did not spend too much time on the actual battlefield, facing the enemy in the heat of battle. They spent most of their time in castles, at uneventful garrisons, and camps.

Campaigns normally waged from spring onwards when the indispensable carthorses and mounts of the troops had ample amount of grass to graze on. Armies were

utterly exhausted by winter, and retired to winter accommodation even if they were still required to stand by. This meant taking up quarters in nearby towns and villages. Battles sometimes continued in the winter, too, but it was extremely fatiguing for both soldiers and animals. János Kemény writes in his memoir about how strenuous it was to retreat in the winter of 1623. Traversing the deep snow was draining, and it was so cold that a messenger froze to death while sitting on his horse. Another sentinel came to a similar gruesome end at his post. 35 years later, János Kemény still recalled these details vividly.

F rom a soldier's point of view a campaign meant mostly marching. Save light cavalry, troops advanced rather slowly. Due to the limitations of contemporary reconnaissance, information gathering, and unreliable (false) reports, a significant amount of time was spent on scouting for the enemy and adjusting routes. Marching may have looked like a monotonous task, but in fact was a tremendous ordeal. Troops set off on a campaign sometimes had to cover immense distances in trackless areas, which was made all the more challenging by river cross-

However, the cavalry did not want to obey the command: some of them refused to march with the carts, others did not want to lag behind by half a mile, and some even opposed the slow march itself—in other words, all of them wanted to do as they pleased. They said they would not be the guardians of the foot soldiers forever, and refused to walk behind the infantry, saying that being last in line would result in them getting a bad quarter, which would be disadvantageous for them and their horses.

March of the imperial army, 1604 Count Barbiano's report of the Bocskai uprising, 1605 ings, rain, mud, extreme hot or cold weather, let alone the enemy. Larger corps were almost as big as a moving town. Including the folks following them, the headcount was comparable to that of a contemporary settlement. They took as many necessities and rations as the rules and circumstances allowed, including livestock and cart. Western mercenaries were accompanied to camp by their families, reflecting the concurrent perception of fighting as being just another occupation, although bit more dangerous and onerous.

Sandals of a Hungarian foot soldier,

worn by continuous marching

A lthough supply wagons followed the troops, soldiers carried their weapons, clothing, valuable loots, and even part of their rations on them. Alternatively, a couple of them could team up to share a cart or draught animal, and at least one servant to oversee it. Marching order was planned by officers and directly affected the soldiers. For example, those at the very end of the line were suffocating from all the dust stirred up by those in front of them, or got stuck in the kneaded mud. Typically, a daily march lasted from dawn to early afternoon, and ended with the troops setting up camp in a preselected area. Camping was also regulated in both the imperial and Hun-

garian armies. Every unit had its own separate section. There was a designated area for the market, which was accessible for civilians as well. Practice and training also took place in the camp. Soldiers slept in tents during the summer, and shacks were erected during wintertime. Bigger camps also had moats built around them for additional defense. Western troops were particularly good at reinforcing campsites.

Simple soldier's tent

Order had to be upheld in camp as well. Each important area-for example, distributing supplies and rations, and patrol duty-was overseen by its appointed officer. Life at camp no doubt also had its unwritten rules. János Kemény, who served as a valet for Gábor Bethlen during his campaigns, was instantly robbed of his messenger bag and better clothes, which he had no choice but to buy back from the veterans. [BZ]

Nourishment and prófunt

B ring ample provisions, fodder, and some wine for the captains", wrote one of Gábor Bethlen's officers to Szepes county in 1626. He did not fail to add that if all this was not sent soon, the army would be obliged to take it for themselves, which may cause some inconvenience for the county. This was how an official, peaceful procurement process was conducted at the time. The civilian population closest in proximity to the army's centre of opera-

tion was charged with contributing to the troops' expenses by way of providing food and transporting it to camp. A Hungarian county unit was also supposed to enter camp with supply carts containing provisions. In theory, civilians were entitled to compensation if soldiers took or bought more rations than the amount stipulated by law. However, in practice it was wiser not to apply for a reimbursement in such cases. Wheat and flour, or thousands of baked loaves were the most important staples, distributed as daily rations called *prófunt*. A single bushel of flour made 60 loaves or 6 large pieces of "old bread", which was sufficient for about twenty people for a day. The troops were also given pigs, cows, calves, ewes and poultry as livestock. As an example, in 1620, Gábor Bethlen's army calculated with one cow or three pigs a week for 100 men.

...they didn't bring ample food with them, especially the infantry. They were starving, therefore I couldn't lead them any further. I thought to myself, a malnourished army is a defeated army indeed.

A letter from Gábor Bethlen to Ferenc Rhédey, 1616

Naturally, camp followers such as servants, stablemen, carters, craftsmen, and in the case of western soldiers even their families had to be provided for.

Since water was often contaminated and unsuitable for drinking at the time, civilians and soldiers preferred to consume wine or beer instead. A list of provisions sent from Brasov in 1616 included flour, butter, vinegar, millet, rice, dried vegetables, and even the very expensive black pepper. Troops also received oat and hay for their horses.

When not deterred by enemy raiders and ban-

dits, local merchants and civilians

could also sell their wares at the camp market. It was the court-martial's task to ensure that they received fixed and fair prices for their goods, thus encouraging them to take part in supplying the army with foodstuff. Western armies also had victuallers who followed the troops and provided food and additional supplies. Provisioning processes were not that different in Hungarian and western armies, but the more agile Hungarian cavalry was more effective in raiding for supplies.

Take a roasted capon, a clove of garlic, smash it or cut it finely, and put it in delicious sour brown sauce. While still warm, open the capon, and put it on a plate immediately so as to prevent its juice from running, pour the warm juice on it, add ground black pepper, and serve. It is often served with garlic that is smashed in mortar, diluted with wine vinegar, and then poured over the hot capon. Soldiers at camp prepare it the same way, especially the Hungarian lords.

> From the book of the Archbishop of Mainz' cook, 1581

Differences between officers and foot soldiers showed in their dining habits as well. While officers took glassware to camp, a common soldier had to make do with a simple leather flask.

S oldiers prepared their own food. When accommodated by civilians, their hosts were expected to prepare their meals. Officers and nobles received a significantly better treatment than common soldiers, who in turn were more resourceful in gathering additional supplies to compensate for inadequate fare. In addition, if the army came across ripe wheat they harvested it themselves, and utilized intact mills if they had a chance. If provisions were late, famine ensued, followed by rebellion and fleeing. "A stomach has no master, only servants", wrote Miklós Zrínyi.

Contemporary troops could not take too much food with them for logistical reasons, and therefore they always depended on external supplies. Soldiers could carry about five days' provisions, or in the case of cavalrymen, even fodder, and they also had wagons at their disposal. Despite that, it was unwise to wander too far from the areas that provided resources, or from the stocks and secured supply routes. Starvation quickly took its toll if the troops stayed at ransacked areas too long, or if supply lines were cut off by the enemy. Garrisons of besieged castles were also prone to famine when their stocks became depleted. The events at Tokaj castle in 1616 were a grim example of how far food-deprived soldiers had to go in order to survive. The famished German defenders ate their horses first, and then proceeded to devour all the animals in the castle, including dogs and mice, and even resorted to cooked animal skins and boots before surrendering. [BZ]

Injuries, diseases

Prior to formal medical education, various physicians, specialists, and quacks were on hand to heal the sick. The majority of them fell into two groups: doctors with theoretical knowledge, and

surgeons who were skilled at curing the "various diseases" of the body. The latter group also included bathmakers and barbers, occupations which later produced independent surgeons. Surgery was considered a craft rather than a science, which is reflected in the word 'chirurgeon', meaning someone working with their hands. France and Italy were exceptions, where anatomy and surgery were closely linked from as early as the fif-

... about 140 are wounded. Ferencz Zoltán, your lieutenant, was shot in the thigh. Geréb András has a large wound on his head, caused by a cossack's sword. Péter Balon and Lőrincz Nagy infantry lieutenants were shot but will pull through, and 27 of the bluecoats are injured...

Casualties of the battle of Strasnicza, 1621; Letter from Gábor Bethlen to Imre Thurzó, 1621

when he ran out of cauterizing oil, accidentally discovered that wounds were healing faster if they were not allowed to fester but treated with his unguents. He was the first one to employ ligature, the act of cutting off circulation as opposed to cauterization when amputating limbs. This practice was less painful for the patient, and also contributed to further improvements in medi-

teenth century. Surgeons were held in lower esteem than academic doctors, although their practical knowledge inspired many innovations and discoveries. Practice also meant that there were huge differences between the knowledge and treatments applied by different surgeons.

In tending to the medical needs of the army, the army surgeon (Feldscherer in German, meaning "field barber") was in an inferior position compared to the army doctor-that is, if the troops had a surgeon at all. Contemporary sources report a severe lack of medical assistants, and not even the imperial armies brought enough surgeons to the country at the turn of the sixteenth and seventeenth century. Consequently, barber-surgeons were held in high esteem in Hungary, and even lords and monarchs trusted them more than doctors. It was customary for a surgeon to practice as a member of the bathmakers' or barbers' guild during peace. At war, the city or the monarch had the right to order them to the battlefield as army surgeons to treat the wounded. They were entitled to remuneration for their service.

even designed prosthetic limbs. Surgeons rarely took on chest or abdominal surgeries, but they trepanned more serious head wounds. The patient was not administered painkillers or anaesthetics, as pain was considered a necessary part of the process. Soporifics and narcotics were more popular with folk healers.

cal treatments. Some surgeons skilled in amputation

Often it was not the wound itself but infections that posed a real danger. Old and new diseases both took their toll on civilians and soldiers alike. To the well-known bubonic plague was added a new major epidemic, syphilis, which was imported from the New World. It was also called French disease of francúz in Hungarian. Foreigners unfamiliar with the natural conditions in Hungary often suffered from typhus (morbus hungaricus). [SK]

C ontemporary surgeons faced complex tasks. Besides attending to wounds, they also prepared salves, bandages, and treated the diseases of eyes and teeth as specialists. Serious wounds caused by

Gunshot

firearms were also a chal-

lenge surgeons had to face.

thought poisonous, and ul-

ceration a natural part of

the healing process. Ini-

tially these wounds were

cauterized according to

Arabic practice. However,

Ambroise Paré (1510-1590),

wounds

were

Papist mercenaries, Calvinist hajdús

R eligion was an essential part of life for people and soldiers of the time. It was important for a warrior as someone constantly facing danger and death to hear that he was fighting for the good cause and God protected him. Reinforcing this message was the lot of priests living in military camps who

preached regularly, said mass, led psalm singing – all of which was intended to boost morale, discipline and sense of unity. Blasphemy in camp was severely punished. However, in the heat of battle soldiers easily forgot lofty doctrines, and often the civil population was the victim of their abuses inspired by religious zeal or a desire to pillage.

Western and Middle Eu-

rope at the time was divided into states of either protestant (Calvinist, Lutheran) or Catholic majority and leadership. At the beginning of the seventeenth century the majority of Hungarian population followed either of the protestant doctrines. The anti-reformation movement launched by the Habsburgs to end this division caused tension which was partly the basis of Bocskai's and Bethlen's campaign against the Habsburgs. However, contem-

porary Hungary still did not experience a real religious war. No mass executions, inquisitions, or persecution comparable to that of Western Europe took place. **S** everal Western European wars, including the then starting Thirty Years War, was based on the ideology of political strife that sprung from religious conflicts. Following various religious doctrines did not only provide basis for theological disputes, but for monarchs and even nobles it also

As when in crowded, vast armies, when bullets and arrows pour down like rain, that you are not hit by a rascal, but the one behind you or next to you falls instead, is not the result of your own brawn or bravery but the grace of God...

> Péter Pázmány: On the duties of Christian soldiers, 1636

meant assuming a certain political standpoint which produced opponents and allies. Soldiers of the imperial and the royalist Croatian armies were Catholics whereas the majority of Hungarian hajdús were protestants. Bethlens' western merceneries and the Saxons of Transylvania were protestants, whereas among the Seklers there were both protestants and Catholics. Resettled hajdús enjoyed freedom of religion

as part of their privileges which protected them from serfdom. The Serb hajdús, the Wallachian armies and the imperials' cossack mercenaries were orthodox Christians.

Gábor Bethlen, a committed protestant leader, wanted to endorse the lenient confessional policy of the Principality of Transylvania during his campaigns, designed to win the support of the Catholic

> Hungarian population and lords with religious tolerance. [BZ]

A simple wooden cross of a soldier

Superstitions, omens

The world view of people of the early modern era was shaped by religion but was also heavily influenced by superstitions, contemporary folk tales of miracles; helpful or harmful practices, and various beliefs. People of the time considered the arcane just as real as the physical world around them. Recall how many witch trials were conducted in contemporary Europe, including Hungary. People of the seventeenth century believed in the existence of evil wraiths, specters, and werewolves in Western European myth were also thought to be as real as strigoi in Balkan folklore. A It was widely thought that General Dampierre, who had long been fighting in the Hungarian theatre of war, could not be killed by a bullet. He was shot on the head by a Turk at Temesvár, but lived - in fact, the General was saved by his helmet. His reputation as being invincible was not in the least affected by the fact that he was actually killed by gunfire by soldiers of Gábor Bethlen in 1620. Contemporary chronicler Krauss recorded a rumour that a soldier could only kill Dampierre, who was said to be "invulnerable ... as bullets would not kill him", because he loaded his gun with a silver button taken off his dolman.

As we were leaving Várad, the horse under me tumbled in slow trot, the one that was bestowed upon me by a prince; and the base of the flagpole splintered, which is also said to be a bad omen; but God would have it that even this journey ended well, although by good fortune.

János Kemény perceives premonitory signs when riding to battle, 1626; Autobiography of János Kemény, 1657-58

It was also common among nobles as well as peasants to believe that lucky charms had the power to fend off harm and protect from diseases. Animal claws and fangs in settings were frequently attributed protective powers. Magical healing stones or spells, and, bizarrely enough, even a piece of a noose or clothing of a hanged man was thought to avert danger. Soldiers, who often faced death, were keen to put their trust in such supernatural protection. This explains why a thaler bearing the image of St. George, widely believed to safeguard its owner from bullets, was so popular among German soldiers of the seventeenth century. One of these St. George coins would worth even 20-30 thalers. When battle wounds became infected—which happened often—fighters blamed their opponents for using cursed bullets or weapons and practicing dark arts.

Soldiers of the early modern period, just like soldiers of other ages, took every sign as a harbinger portending the outcome of the upcoming battle, a conviction which had very real effect on

morale. When the Wallonian defenders of Szatmár admitted defeat in 1605, they reported having seen the cannons, firing for the first time, explode and tear off the arm of the cannoneer, and suddenly each and every one of them felt that the castle was going to be lost. When in 1621 Gábor Bethlen found out that a cannon exploded in Fülek, the castle under his siege, and the armies of a lord who turned on him were hit by lightning, he took these turn of events as favourable signs. In his book Miklós Zrínyi urged commanders of the period to interpret every sign as a good omen in order to boost morale. [BZ]

SOLDIERS

Captain

noble pays his tax in blood - this mediaeval tradition was still popular in the seventeenth century, and fighting was still considered a most worthy occupation for aristocrats. Nobles involved in military affairs played a significant role in Hungary, too. Officers in a Hungarian army came from noble families, although higher officer ranks and titles could be earned with merit as well. A meticulous supreme commander took military experience as well as lineage into account when selecting officers. Gábor Bethlen also promoted 'excellent managers, valiant captains' to lead his armies.

Long brocade dolman decorated with copper buttons

This officer is wearing a – short-sleeved long mente over his dolman

In addition to decorative buttons and braids, the mente is trimmed with wolf fur

The officer is wearing a then popular pair of yellow boots, which resembles the western style in its shape

Hungarian officers preferred to wield an ornate war axe as an indicator of rank

The smallest tactical unit of a seventeenth century Hungarian army was the 500 strong battalion, led by the captain, who had gained his rank by promotion, and reported to the major and general. A captain had 5-10 lieutenants or viovodes at his disposal in the 50-100 men units, as well as drummers, standard bearers, and a child or valet, in other words a page.

In a royal army, captains were appointed by the leadership. Free hajdú mercenaries, however, elected captains from their own ranks, who negotiated on behalf of their unit and decided which army

to join. Most of them were experienced commanders, seasoned in battle, and could be charged with leading independent operations, managing larger troops, or recruitment. Popular hajdú captains attracted many people under a standard. Some of them- partly in order to boost their renown-raised as many as 1000-1500 soldiers in their ranks. [BZ]

...my lord should always appoint a captain from their ranks, a soldier who values honour, and command him upon death that he does not hire vagrants...

> Bethlen's orders about appointing hajdú captains; Gábor Bethlen's letter to Ferenc Rhédey, 1619

Hauptmann

The captain (Hauptmann, Capitaine) was head of the company, the smallest military and organizational unit of western armies. The name is derived from the word Haupt or caput, meaning head. Captains were chosen and appointed by colonels during recruitment. The first and second companies of the regiment were led by the colonel and his deputy, respectively.



The captain organized and directed the daily lives of the company between battles. His deputy in reference to military matters was the lieutenant (Leutenampt), while sergeants (Feldweibel) assisted with deploying units and distributing rations. He also had a scribe, a flag-bearer, a quartermaster, an in-

terpreter, a cook, a *captaine-des-armes*, a couple of drummers and whistlers and bodyguards at his disposal. However, his entourage was not always this extensive. His immediate company normally consisted of three or four people. During battle the captain stayed with his unit as the immediate subordinate of the colonel. His tasks included giving direct commands; and he moved right in front of or behind his unit. [NA]

Officer's sash

indicating

rank

Captain Joachimus Bek was also inseparable from the bastion and fought like any other common soldier. Corporal Bartholomeus urged him to retreat and save his life so as not to increase the loss they had already suffered, but he would not heed any warning.

Imperials defending Szatmár, 1605; István Szamosközy: Historical remnants 1542-1608

Fähnrich

O ince the earliest days of war the flag has been **O** one of the most significant symbols: as long as the banner was in place, unity prevailed. It follows that the smallest military unit, the Fahne, the equivalent of the English company, gets its name from the German word for flag. Like the rest of the army, this unit also had officer corps. The ensign-officer of the lowest rank-served here. Flag-bearers, like all other officers, were recruited and appointed by the colonel (Obrist). They earned twice as much as a common soldier, but they had to provide for their servants as well. Ensigns of the infantry were often sons of impoverished noble families who could not afford applying to the more prestigious cavalry branch.

Velvet gloves -

The flag-bearer wears two layers of doublets. The outfit is made of delicate fabric, but the laces on the shirt and the small tin buttons are its only adornments. The flag-bearer took his place in the middle or right in front of his unit and held the banner in place as a symbol of unity and as a reference point in battle. They were expected at all costs to prevent the enemy from capturing the flag. [NA]

> On the third day [...] they attempted to take the lower castle, but our soldiers held them back, putting up a good fight and killing and wounding many. That is when the ensign of my own unit died an honourable and heroic death, enduring to the very end.

Imperials defending Szepes Castle against the hajdús of Bocskai, 1604 Count Barbiano's report, 1605

Habsburg eagle on the front, Virgin Mary with Child on the back, emblazoned on St. Andrew's Cross—these are the three most typical charges appearing on the banners of imperial units of the time.

Standard bearer

S tandard bearer was a prestigious rank in the Hungarian army. It commanded high regard, higher wages, but also involved higher degree of danger. Hungarian flag bearers earned as much or more than musicians, sometimes even more than officers (about 4-5 forints), but in return they were expected to display great courage.



Large infantry standard bearing the arms of Gábor Bethlen. Standards were provided by the monarch or the community supplying the troops. Typically made of exquisite fabric, these were large and colourful pieces adorned with the usual symbols, arms, and mottos of the period.

One third of the sabre was double-edged

The colour guard wields traditional Hungarian infantry weapons: a sabre, an axe, and a short barrel musket

oss of a standard, or colour was an utmost disgrace; its capture a great victory. During sieges, taking a standard to the ramparts was considered an outstanding heroic feat. Contemporary military reports described victories with the number and quality of flags captured. The flag was a reference point, a beacon for the unit, and as such, highly sought after by the enemy; therefore standard bearers were in constant danger in battles. They were prohibited from retreating or dropping the standard, because such an action could endanger the entire unit. Such offences could be punished with death by the commander who was charged with keeping order. Even though holding the colours made wielding a weapon difficult, securing the standard was of utmost importance, they were often defended by a colour guard: experienced and reliable soldiers. [BZ]

And I said, as I was carrying the standard of the prince: my lord, let my head fall if I don't carry your colours honourably; but I'm holding it in one hand, and the bridle in the other, I'm unable to defend myself: therefore, I beseech my lord to exert his influence and order defenders to the flag.

> Standard bearers and defenders of the Prince, 1626 Memoirs of János Kemény, 1650-53

Foot voivode

P oivodes headed fifty or 100 footsoldiers. The equivalent of this rank in the cavalry was the lieutenant, but in Eastern Hungary officers of the hajdús on foot were also called lieutenants. Vicevoivodes or vicelieutenants served as deputy lieutenants, right above corporals in the hierarchy and reporting to the first lieutenant or first voivode. Lieutenants obtained their rank by appointment or confirmation. Capable men were required for this job, as keeping the unruly hajdús in order was not always an easy task. Mace or battle axe was their symbol of command, and they earned three or four times as much as

Felt cap decorated with feathers of birds of prey

Battle axe

a common soldier.

Dolman adorned with silver buttons, fastened with a sash around the waist

Blue baize trousers — with tight legs

Tall narrow boot with laces on the side

Western European ieutenants or voivodes were not basket-hilted sabre necessarily nobles. For officers of lower ranks it was more important to be able and whereas skillful, for higher ranks noble lineage gained more emphasis. Therefore Hungarian armies had enough subordinates but were short on experienced superiors due to the lack of institutional officer training. Noble young men served as pages to commanders of higher rank before they were eligible for officer duties. A soldier had to start from the lowest rank and gradually climb up in the hierarchy to get to the top echelons and become voivode or lieutenant. However, during the process he gained valuable experience which made him an indispensable commander. [BZ]

- The soldier wears a doublet over his dolman

Above all else, Captains and Voivodes must be devoted, valiant men, swearing loyalty to His Highness and keeping their subordinates in strong and strict order.

Hungarian military rules from the beginning of the seventeenth century

Gemeine Befehlich

W estern European infantry tactics relied heavily on large, closed formations, occasionally counting as many as 3-4000 people. Arranging the movement of such a vast army was a considerable organisational challenge, therefore officers (hohe Befehlich) and non-commissioned officers (gemeine Befehlich) made up one tenth of the army. Junior non-commissioned officers were inferior to non-commissioned officers in the hierarchy. Their job was to support the work of their immediate superiors.

Each company had two or three sergeants (Feldweibel, chargeant), which was the highest non-commissioned officer rank. Their single task on the battlefield was to arrange and maintain the formation of the unit, and to serve as a tactical reference point. During setting up camp it fell to them to organise patrol, and, if there was no quartermaster, to designate camp sites as well. In terms of responsibility and wages there was no difference between the sergeants of a unit, but if there was no quartermaster, one of them had to take care of his duties, too.

They admire the feats of an Italian called Bartholomeus Caporal [...] He was busting around constantly and would never leave the tower assigned to him, he was shooting and slashing them valiantly; finally he thrust many through the planks with a halberd and threw one onto the other.

Imperials defending Szatmár, 1605; István Szamosközi: Historical remnants, 1542-1608 **C** orporal was the next rank inferior to the sergeant. Three or four corporals were in charge of administrative tasks within the company. The unit was divided between them equally, and they had to register each and every soldier by name. Each corporal had a deputy who would substitute for him in his absence. The corporal responsible for older soldiers exempt from patrol duty had a special role—he and his 10-12 men were responsible for guarding the standard. [SZS]

This sergeant is wearing a simple long doublet, trunk hose, and linen shirt underneath

Non-commissioned officers usually carried a shorter polearm: semi-pike, halberd, sometimes a boar-spear Sash indicating rank

> Short, broadbladed sword

Knitted woollen stockings

Drummer

M usicians serving in the infantry were called hangász ("sound-makers"). This title distinguished them from artists who played in bands. Sound-makers commanded and instructed the armies with whistles, trumpets, and drum signals. They worked together with the standard bearer and served under the officer commanding the unit. Types of instruments used differed by branches. Trumpets and kettledrums were

popular with the cavalry, while the infantry preferred Turkish pipes or *tárogató*, pipes, and drums. Losing an instrument was considered shameful, capturing one a great victory.

> Marching drum with snares fastened on the bottom

> > Slippers worn with leather footwraps

S everal contemporary sources detail the tasks of a drummer. He was to follow commands diligently at all times, and when instructed, announce a command effective immediately. Drummers therefore had to have a clear, strong voice. They also served as ambassadors sent to the enemy, trusted and charged with the task of conveying no more and no less than they were commanded to disclose. In addition to their own whistle and drum signals, familiarity with signals of other allies or enemies was also crucial. Being the first to know about the enemy's movement, their skills and knowledge were compensated with special privileges, for example, exemption from whipping. [BI]

Kettledrums were always used in pairs, one of lower and the other one of higher pitch



I recognised this as a good sign and the will of God, therefore I quit writing and sent in a trusted drummer instead, sending a message to the captain that he should not sacrifice his good Christian allies in vain but resign the castle...

> The captain of Castle Szerencs is warned to capitulate, 1644; Memoirs of János Kemény, 1657-58
Piper

Hungarian pipers were well-known not only in Hungary but in Western Europe too, in the sixteenth century. Pipers were also known as whistlers, although whistles were used as standalone instruments as well. Characteristics of Hungarian pipe music are clearly traceable in the earliest written sheets such as Ungarischer Tantz, Hayducky, Ungarescha published in the sixteenth century. The pipe was a fashionable instrument at the time not only in Hungary but all around Eu-

> rope as well, and as such, claimed a prestigious place in military music. The pipe was used in Hungarian military music until the end of the seventeenth century, when it went out of use as a "non-military instrument".

W estern countries preferred the straight, tapered pipe schalmei which had six frontal holes and one hole for the little finger. The doubletongue whistle was equipped with a mouth rest on smaller instruments. In this regard it was similar to the Turkish pipe or tárogató that was popular in Hungary due to its strong sound that came in handy on the battlefield. Interestingly, the Hungarian terms for musicians-dobosz (drummer), szyposz, dudziarz (piper)-along with many other Hungarian

words, gradually assimilated into the Polish language. [BI]

Whittled piece resembling a goat's head with a mirror on its forehead

The "sound-maker" wears a chainmail shirt over his dolman, which was relatively rare worn by infantry by the beginning of the seventeenth century

Goatskin bag 🗉

Pipe piece for playing tunes

Red, white and green braid. These three colours were introduced as decorative elements in the sixteenth century

Drone, providing a continuous sound that is two octaves lower than the main tune

Schalmei and Turkish pipe

My lord shall order a piper to the infantry, because he makes an army complete.

> Bocskai István's missive to János Petki, 1606

Free hajdú

F ree hajdús were armed cattle herders sometimes recruited as mercenaries. By the seventeenth century hajdús were much more like soldiers; only their name referred to their earlier occupation. Although their military customs may have seemed unorthodox to westerners, they

proved to be extremely useful as irregular infantry. Executing ambushes was their strong suit, where their unusual tactics were extremely effective against regular troops. However, they were easily dispersed in the open by a cavarly charge, volley or cannon attack. As light infantry, they were able to use difficult terrains to their advantage and scale the walls of the besieged castles. When charging, they gave a hajdú cry resembling a wolf's howl. What they lacked in equipment they made up for in determination increased by their infamous desire to plunder. Their behaviour confirmed that sometimes there was little difference between an irregular soldier and a bandit at the time.

> The soldier wears a makeshift fur coat over his long dolman and a sash around his waist.

Nothing upsets them more than my not letting them pillage and plunder like they used to.

Gábor Bethlen's opinion of the hajdús; A letter from Bethlen to Ferenc Rhédey, 1616 Looted cavalry pistol with flint lock, considered new technology at the beginning of the seventeenth century

A rms of the hajdús were complemented with the traditional Hungarian sabre and an axe which was used both as a tool and a weapon. Both were employed in hand to hand combat. The end of the sabre was pointy enough to make it useable as a thrusting weapon, and a skillful swordsman could even hack off his opponent's head or hand with it. Hajdús used a short musket provided by their employers or obtained from somewhere else, and their varied equipment was a telltale sign of their fluid wages. [BZ]

Head of an axe attached to a pistol. Such combined weapons were seen only occasionally on the battlefields.

> Sabre with brass fittings and broken guard. The straps are also decorated with brass.

Pikenier

S oldiers specializing in close combat were indispensable for a Western army at the beginning of the seventeenth century; therefore two fifth of the soldiers were equipped with pikes.

The pike was a 3,5-5,5 m (3.2-5.4 yard) long polearm made of ash, complete with a metal head that came in various shapes and sizes. The shaft was

often reinforced with iron straps in order to attach the head more firmly.

Due to its length the pike was unsuitable in hand-to-hand combat. This kind of weapon was used only in closed formation. A skilled pikeman mastered about twenty manoeuvres to handle his weapon well. Soldiers in the first row held their pikes horizontally, attacking their opponents at the neck or abdomen. Those behind the front line positioned the pikes above those in front of them, waiting for an opportunity to engage in combat. When fending off cavalry attacks, the end of the pike was pushed into and set firmly in the ground, its point aimed at the chest of the horses. The pike was held with the left hand, leaving the right one free to unsheath a smaller weapon worn on the side.

P ikemen typically wore plate armour, with a few exceptions. Ideally, their equipment consisted of a helmet, gorget, breastplate, pauldrons and tasset. Some of these pieces were often missing. [SZS]

When you encounter a footsoldier digging himself in even just a little, how do you attack him with a horse? If he only has a pike and is in formation, like a hedgehog, how do you hurt him? Even if you charge, you cannot drive your horse against such a terribly dense crowd, because it will fear them more than your spur.

> Miklós Zrínyi: A valiant commander, 1650-1653

— Pauldrons

Top: Iron straps at-

taching the head to the

serving as a distractor,

drawing attention away

from the point

Comb morion

shaft. Bottom: A small flag

Thrusting-cutting sword

Garter indicating alliance. Lacking uniforms, fighters on the same side tended to wear similar colours to avoid confusion

Rondaschierer

I n a battlefield dominated by muskets and pikes, a sword-and-shield fighter may have seemed obsolete, but at the beginning of the seventeenth century these type of soldiers were still employed, albeit in small numbers compared to other branches.

A heavy round shield (*Rundschild*) of 17-33 lbs (8-15 kg) was the most prominent piece of their equipment, hence the name *Rondaschierer*. The iron buckler, just like other pieces of heavy armour, was tried with a test shot. Rondaschierers wielded either a broadsword or a narrow rapier, which may have seemed fragile compared to a sabre but in fact was a

dangerous weapon suited for quick stabs, capable of causing a deep, bleeding wound that was hard to treat with contemporary medical methods.

Comb morion

A The role of sword-and-shield type soldiers in Western European battles was to deflect the pikes in the front row with their shields, approach them, and finally finish them with their swords. It also fell to them to defend the flag and the ensign. Sometimes non-commissioned officers were equipped similarly. Although basic sword fighting skills were part of Western European culture at the time, and to some extent even part of everyday civil life, an average marksman or pikeman rarely ever used a sword in addition to his main weapon. A skilled swordsman could easily gain advantage

against them at close quarters. Soldiers, officers and nobles who used swords as main weapon were considered seasoned swordsmen. Affluent nobles had the advantage

of being able to afford training from masters of western schools. [BZ]

Round iron shield showing marks of tests shots

This soldier is a wealthier one: the top layer of his clothes are made of silk, and his shirt is adorned with delicate lace collar and cuffs

Laminated tasset If you have a company of 300 men, consisting of 100 pikemen, 160 musketeers, 20 halberdiers and 20 with shield, or pikemen instead of halberdiers, making 120 pikemen, 160 musketeers and 20 with shield, as I consider the ones with shield more useful than halberdiers.

> Johann Jacob von Wallhausen: Kriegskunst zu Fuß, 1615.

For foot soldiers the spur was merely a decoration on the boots

Hussar

L ight cavalry tactics were perfected by Hungarian cavalry during the Ottoman wars. Battle tactics mainly relied on highly valued hussars who formed a significant part of the army. Hussars were outstanding raiders and scouts, and were capable of grinding down a less agile enemy unit with their ambushes and "swarming" tactics, avoiding a bigger battle.

Moving fast, they popped up where they were

least expected, cut off the enemy's supplies and ambushed smaller units left behind by the main army. They were quite useful in battles, too, being nimble enough to execute powerful attacks from unexpected directions. However, they could not withstand prolonged fights or volley fire.

They preferred to show off their skills as virtuoso swordsmen against similar light cavalrymen-Turks, Tatars, Cossacks-rather than the western infantry soldiers who proved to be challenging targets with their firepower and closed pikemen-musketeer formations.

Although lances were disposable weapons, some of them sported decorative colours

..."...and they had to clash so violently, my Lord, that they could not spare two hundred lances—all of the weapons were broken, and they had to resort to swords.

Hungarian cavalry charge at Zólyom, 1621 A letter from István Eghri to Bethlen

D espite the imperial military leadership's efforts to supply Hungarian and Croatian light cavalries with carbines as early as the beginning of the seventeenth century, the old-fashioned (and cheap) lance and Hungarian sabre remained the most typical and widely used weapons. Using the lance required great skill, but the 4m (13 feet) long weapon was capable of piercing through the enemy with a single thrust during a charge. Since the power

of the impact shattered the polearm, thousands of reserve lances had to be carried by wagons following the army. Fully equipped hussars sported a helmet, chainmail hauberk, cuirass, and vambraces. [BZ]

> This hussar is wearing a chainmail hauberk under his laminated cuirass

 Lobstertailed hussar helmet

The Turkish-style broadsword was usually fastened under the saddle

> Sabre with adorned sheath

. War hammer

Hajdú cavalryman

lthough the majority of hajdús served as infantry and were widely known as such, contemporary Hungarian armies also had hajdú cavalrymen. They were light cavalry, similar to the regular Hungarian cavalry units, but they mostly excelled at raids and were not considered elite units. Imperial General Dampierre, still busy fighting the Ottomans, organized them into carbine-wielding cavalry units, after the fashion of the Croatian carbineers. They were just as warlike and eager to plunder as the hajdú infantry. Their equipment was also of similarly varied origin: some of them had carbines, left over from the imperial service; but most only used lances in cavalry service, as they could simply not afford anything better.

At the beginning of the seventeenth century many princes and nobles in Transylvania made efforts to reinforce their private troops by populating their estates with hajdús. Hajdús settled in this way owed military service to their employers, and many of them are mentioned as cavalrymen in contemporary sources. They were to be outfitted according to their master's expectations: one source stipulates that they should be equipped "not as some lowly hajdús but as proper soldiers". Hajdús that were not settled in this way remained free mercenaries, sometimes joining infamous "free troops" living off the war. [BZ]

...they are obligated to defend the country and its wealth, support us in all our military endeavours, answer our and our descendants' call to arms, and to keep good and horses, lances and other excellent equipment suitable for war.

Letter of settlement of the hajdús in Majtény, 1611

Cavalrymen by this time did not use shields, but often wore Turkish-style vambraces that protected the rein-holding and the sword-wielding arm against slashes.

The long dolman is made of brocade, but the rest of the soldier's outfit is less glamorous.

> Simple chain shirt.

The sheath and accessories of the sabre completely lacks decoration.

Carbiner

Wheel-lock carbine with carved bone inlays

A fter the battle of Pavia in 1525 the necessity of cavalry on the battlefield was no longer certain. It was proven that a full frontal mounted charge, even when executed by the

strongest heavy cavalry, could be unsuccessful against an infantry equipped with pole- and firearms, a force that could not be dispersed by a stampede but who could also cause significant damage with their ranged weapons. It made sense to equip the riders with firearms as well, in order to keep the enemy under fire until their formation was broken. Although this method did not work well due to inadequate firepower compared to the infantry, soldiers wearing some plate armour and equipped with swords, wheel-lock muskets and also carbines were typical of the era. Many of them were of noble lineage, experts with their weapons and trained for group attacks. They were capable of charging swiftly and, when outnumbered (as in the case of the battle against the Ottoman sipahis) of safely retreating to the infantry. By the Carbine middle of the seventeenth worn on a century their fighting baldric style had changed: the western cavalry switched to ending charges in close Thrusting-cutting combat, where swords and pistols were both sword of Venetian origin: a schiavona employed. [MB]

Blackened helmet with face-, noseand neck guard ...as the reinforcement of Auersperg arrived the battle was renewed, the drums and trumpets roared and rattled, and for a while victory was not certain, so those mounted arquebusiers started to shoot the Turks on the sides.

Battle at Sziszek, 1593; History of the Hungarians by Miklós Istvánffy, 1622.

Long sleeved buff coat

Riding boots

Pistol in saddle holster. Usually there was one on each side of the saddle, ready to shoot. The pocket contained spare paper cartridges.

Dragoner

D ragoons were mounted infantry, who used their horses for faster marching but participated in combat as shot infantry. In this way they combined cavalry marching speed with infantry firepower where quick reinforcement was needed. They wore infantry dress and were armed with short barrelled infantry muskets. As valuable trained war horses were provided for "real" cavalry, at the beginning dragoons had to make do with the most unworthy skinny, sumpter or draught horses. At the same time their riding skills and horse tack were rather inferior. If they were forced into cavalry combat - especially against Hungarian

or Turkish cavalry - they could soon find themselves in trouble. Even these low-grade horses helped soldiers a lot because they carried them and their baggage, thus helping to find food, accommodation (and plunder, of course) faster than the rest of the infantry.

The soldier's dress represents the common western attire: sleeved doublet, shirt with wide collar, linen stockings and trunk-hose decorated with sewn stripes.

, Musket sling

Wide rim felt hat

with spare match

reeled around it

Due to the lack of cavalry boots, spurs are strapped on the shoes

The fine grain gunpowder used for priming was poured from the priming flask into the pan at the breech

W estern commanders aspired to utilising

them partly also as cavalry, hence their training and equipment was improved: better horses, lighter muskets and cavalry boots were allotted, but they got no armour. Due to their adaptability later they became really versatile, and were always sent quickly where there was trouble. They were expected to take part in skirmishing as light infantry, rampart defence, firefight, as well as performing cavalry tasks: scouting, supply escort, reconnaissance, food procurement. Over time, roles of dragoons and cavalry carbiners became rather similar, yet dragoons were classified as infantry for a long time. Because of their usefulness, mercenary dragoons appeared also in the Transylvanian army in smaller groups. [BZ]

> The worst horse which can be straddled and has minor value should be given to him, so that not much loss should ensue from losing or leaving it.

> > Johann Jacob von Wallhausen: Kriegskunst zu Pferd, 1616.

Red trabant

The Szeklers deployed considerable forces to the army of the Principality of Transylvania: the wealthy *lófós* (primipili) served as cavalry, while common Szeklers performed infantry duty. Red trabants formed the Szekler infantry, and were selected from common Szeklers. According to contemporary practice (similarly to several other military branches) they were named after the specified colour of their garment. As no uniforms existed at the time, this specification was rather a sort of recommendation. Besides elite blue trabants of the court, who were kept continuously on duty, enrolled Szekler red trabants also participated in Bethlen's campaigns.

The dolman of the trabant has the specified red colour, but according to historical data their trousers could have a different colour.

> • A wooden or metal ramrod was used to compact the gunpowder poured into the barrel.

Wooden powder flasks in open and closed position. The soldier was able to find the closed – that is full – boxes on his bandolier relying on touch.

R ed trabants had to answer the call of the prince armed with a long gun and a sabre. Earlier all common Szeklers possessed the privilege and obligation of soldiering in return for tax exemption, but red trabants received it al-

ready as a personal privilege. The preservation of this privilege depended on their individual military merit. They could lose their status if they proved to be unworthy on the battlefield. They warred only periodically, yet their preparation was supervised by their lieutenants also in peacetime. Red trabants were not trained on the same level as the blue trabants of the prince, however, they represented significant shot infantry force in Transylvanian circumstances. The prince protected the privileges of the red trabants, aspired to increase their numbers and in his letters he wrote appreciatively about his trabants' endurance on the battlefield. [BZ]

Short barrelled arquebus were popular firearms of the Szekler infantry. ...infantrymen should don a red cape and appear so when ordered to combat, all lieutenants and corporals should inspect their subordinates in this respect...

Bocskai's direction to János Petki concerning Szekler troops, 1605

Schütze

which was essentially based on shot units - became increasingly effective. Consequently soldiers and their weapons began to specialise.

All relatively lightweight long guns that did not require a fork rest were designated as arquebus (also referred to as Schützenrohr or caliver). They exhibited great variety regarding barrel length, calibre, firing mechanism, stock design, further diversified by regional and manufacturerrelated variances. This weapon - lighter than muskets - usually had a maximum weight of 3 to 4 kg. Due to its shorter barrel and smaller calibre both its range and destructive power were inferior to muskets. At the same time it could be loaded faster than muskets. If instead of matchlock it was equipped with the more expensive and sophisticated - hence rare - wheel-lock, it could be kept fire ready for a longer time.

Considering shot troops, I do not think much of them as it is no great matter to fire a gun and any peasant can do it in these days. But keeping discipline and to wield the gun in such a way that he can shoot ten, while the other who attacks fiercely, fires only one, this I say is the prime of art of war.

Memoirs of Nikolaus Gabelmann, dedicated to Matthias of Austria, 1594 S hot units using arquebus performed the "general shot troops" role in the west. Due to their weapons being lighter than muskets they could fight as skirmishing light shot troops, but could also manoeuvre in close formations similarly to musketeers. [BZ]

> Every soldier carried a kit containing flint, tinder and steel in order to light the match

Identity of soldiers was sometimes marked with the colour of feathers stuck in their hats

The smouldering of the match was sustained by blowing

The soldier wears a slashed sleeve baize doublet and a striped hose, the latter being particularly popular among soldiers in this period.

The soldier's boots wore considerably during marching

Haiduck shot infantry

C ontemporary Hungarian armed forces were not an exception to the overall European progress: their infantry was shot infantry, although with several local peculiarities compared to western shot troops. Every haiduck and trabant aspired to acquire some sort of long gun at first, and Hungarian commanders demanded that at enlistments the recruited infantrymen should own "a proper cape and gun" with "ample powder and balls".



 \mathbf{I} n absence of standardisation the origin and calibre of the weapons did not matter, but usability and reliability were essential. The matchlock arquebus fully satisfied these requirements as it was very robust, and if the mechanism broke down, it could be easily repaired despite the limited local industrial background.

Hungarian haiduck shot infantry - similarly to Eastern European light infantry in general - used their guns in a fashion which vastly differed from western practice. Due to their ambush tactics they preferred light, short-barrelled arquebus and tried to compensate the smaller range and

accuracy of their weapons by taking advantage of the terrain and shooting from cover or entrenchment. They did not endure lengthy firefights in open field and tried to avoid it by defilading. They could move faster with their shorter weapons, employing their proverbial agility. [BZ]

> Box used to store paper cartridges, hung on the soldier's belt

Though they offered to acquire infantry guns in Prague, yet still I urged and urge today in my letter your lord chancellor to procure as many as possible, both wheel and match arquebus...

Thurzó Imre's letter, 1620

Musketier

A t the beginning of the 17th century western regiments were composed of at least 60% shot troops. Shot units provided the real strength of West-European armies and musketeers had the most powerful long guns among them.

The musket was a weapon with a longer barrel and larger calibre than average rifles. It was only possible to aim it with a fork rest. Its shot was effective from a longer distance and proved to be fatal even if it hit just a limb.

The wide rim hat also protected the soldier's eyes from the flames that flared up from the priming pan

Smouldering match

Every soldier carried gunpowder enough for 9 to 15 shots in wooden flasks

> waited for them in my favourable position and did great harm to them with my musketeers. When I saw them in bewilderment, I charged them and I guess at least 1200 of them remained on the battlefield... Myself, I think, will not have more than 30 dead and there are no officers among them.

The enemy being de-

termined to attack me, I

T he higher performance of the 4 to 7 kg heavy weapon compromised its handling properties

as even well trained soldiers were able to load it rel-

atively slowly. Synchronised loading was very im-

portant because it enabled shot infantry to fire si-

multaneous and fast volleys. Thus standardised

training and rigorous discipline were essential; individual movements of loading were ingrained in

the soldiers so that they were able to perform it in

the confusion of the battlefield. During priming and loading the soldier had to hold the smouldering match in one hand (it was also important to attend to the

match so that it would not be extinguished)

while he and his nearby companions car-

ried a large amount of gunpowder on them-

selves in various powder containers. [BZ]

Battle at Lakompak, 1620; General Dampierre's letter to Ferdinand II, 1620

Trunkhose was a typical garment of western soldiers. Contemporary Hungarians called it "German sleazy hose" Fork rest .

Hackbut gunner

The hackbut was a tpyical weapon of the period used for the defense of fortified places. Contemporary castle inventories list hundreds of them. It was widely used to defend towns, castles, fortified

guns were constructed of hackbuts lined up on a

platform mounted on a carriage. The 15-20kg

persons to handle a gun such as this. With a couple of rotating

teams continuous firing could be

weapon was too cumbersome to deploy on the battlefield, but it was all the more effective when used from cover. It usually took two or three

ensured.

churches where it played the role of the most effective firearm of defense. Its name is derived from the iron appendage attached to the barrel, "hake" or hook, that was used to hook the gun in a solid piece of wall before firing to diminish its recoil. It came in many shapes and sizes, with matchlock or wheel-lock system. Older as well as newer Hungarian, Czech, Italian, German pieces were used. Organ

The wife of Ferenc Betz defends the Boszita castle against the tatars, protecting and holding it, shooting at them herself with the hackbuts.

1599, Chronicles of Máté Sepsi Lackzó, 1521-1624

espite its flimsy appearance the hackbut was a dangerous weapon. Due to its larger load and longer barrel it was able to fire a shot from further and more accurately than handheld firearms. Offi-

> cers of the attackers, artillerymen, or sappers were its main targets. It was loaded with gunpowder used for cannons, and fired mostly balls, sometimes bullets or pellets. The 20-25 mm ball easily penetrated the palisades of the besiegers, or even several people at once. [BZ]

> > Hook attached to the barrel

Slowmatch used for ignition

A fork attached to the bottom was used to mount the hackbut on a stand

Matchlock

Various battle axes were also popular handheld weapons among Hungarian soldiers.

The knee-length dolman was made of baize and has silver buttons. The gunner wears a red sash around his waist.

> Sandal footwear worn over feet wrapped in cloth

Gunner

Ramrod

A The use of artillery was an evolving aspect of warfare in the seventeenth century. Guns were most useful during sieges, placed behind field fortifications-fuelling the continuous competition between designers of fortifications, defenders, and artillerymen-but failed to meet expectations in the open field. Even though an entire group of soldiers could be eliminated with just one shot, reloading was slow, and moving the gun was cumbersome. Lighter cannons were introduced around this time,

but typically they were rare, and due to this they rarely ever could influence the outcome of the battle. Cannons were very expensive, expert gunners were few and commanded high wages. More affluent nobles had guns cast, but only monarchs could afford an entire set of cannons, as their treasury allowed.

The assistant gunner, being a civil contractor, does no wear any weapon on his belt

rtillerymen or gunners were knowledgeable in various areas in addition to the handling of cannons. Aiming methods were limited by the ballistic technologies of the era, but they also knew how to cast cannons, produce gunpowder, bombs, and they also conducted their unit when it came to transporting and repairing the expensive equipment or setting up cannon positions. Battering walls required expertise in architecture and engineering. Since formal training was not available for artillerymen, they had to master all these skills through practice, usually as an apprentice of a seasoned gunner. Artillery units also employed carpenters, smiths, trench workers and wagoners as well. [BZ]

Gunner's tools: wormer, sponge, and scraper

...the first fortification at the German camp is made high up like a castle. The rest are on ground level, with 32 cannons in three rows. The smaller ones launch 35-pound balls, the second type 40-pound balls, the third type 45-pound and the fourth type 95-pound cannon balls...

Imperial artillery at the siege of Érsekújvár; a report to Gábor Bethlen, 1621

Trench worker

The introduction of artillery had a profound effect on military tactics, especially on sieges and the defence of castles. To the common soldier it meant that siege tools that were previously considered adequate were now obliterated by the defenders. Pickaxes and spades quickly became key tools, as attackers could only hope to approach the defence close enough to deploy artillery if they entrenched themselves under the walls. Failing to do that could result in significant casualties. A suitable ditch- and moat system provided excellent defence against the castle's artillery units, and also offered redoubts and safe gathering points for the soldiers. However, setting them up required expertise, and most importantly, a lot of time and a large

> workforce. A reluctant soldier ordered to work on the trenches was a typical sight at that period.

> > Clay grenades were the easiest type of explosive to make. The shrapnel filling was ignited with gunpowder enclosed in the wooden stopper.

Measuring rope use for marking camp fortification locations. Each unit is marked with a small copper ring on the string.

U sually the first thing to do at a siege was to build a moat around the camp. Then the siege works had to be built; sometimes the entire fortification was protected by reinforced batteries and redoubts from all sides (contravallation). From this trench the soldiers were able to approach the enemy walls, planting more batteries at suitable places, until they reached the moat of the castle. The artillery

> battery was dug in on the outer bank of the moat. Mines placed under the walls were also launched from here. Once a breach was open and blown up, the infantry charged in. In addition to the usual weapons, explosive devices were widely used by both the attackers and defenders. Typical examples include clay, glass, and cast iron grenades. [MB]

The soldier wears only a shirt for work, but he keeps his dagger close

— Linen stockings

Avoid delay with the Germans, for with time they burrow themselves in trenches, and it takes great effort to get them out of there.

Gábor Bethlen's opinion in the war council, 1619; Chronicles by Máté Sepsi Laczkó, 1521-1624

Engineer

 \mathcal{D} esigning and executing sieges, building forts and fortifications required versatile, educated personnel. Initially artisans rather than soldiers were commissioned with such tasks. However, their expertise soon made them indispensable in armies.

> Theodolite, the most important tool for surveying sites

Drawing board with compass, protractors, ruler (alidade), and drawing paper for the draft

struction of castles, which required knowledge in areas such as surveying, masonry, wood- and metalworking, construction of

n engineer's main task was to lead the con-

...for this purpose he should design a solid model to scale or a drawing, and present his idea with that, and then we can discuss it and take action.

Baldigara on Megliorini's criticism; Ottavio Bladigara's mimssive to Archduke Ernest, 1583 bridges, waterworks and machinery. An engineer's interest was likely to extend beyond these areas and he often got involved in designing the most effective method of defence and attack, thus venturing into military, artillery, and organisational fields. He often honed his skills through self-study, following a master, and was interested in diverse crafts. He may also have learned to draw from a painter and studied mathematics from an

astronomer, thus widening the scope of his interests. He was fascinated by mechanics, measuring and drawing tools, printing, optics, geometry, mining, smelting, music, fireworks, economics, astronomy, ship building and navigation.

Due to their wide range of knowledge and skills they gained a significant role not only in preparing military manoeuvres (construction, organising, surveying), but also in executing them, especially during sieges, either as attackers or defenders. Knowledgeable engineers were held in high esteem, and may even have given instructions to captains or military councils. When not occupied with military affairs, they took part in civilian constructions of bridges, roads, and mills. [MB]

The engineer wears a simple, durable outfit and boots suitable for on-site work, but his higher social standing is indicated by a lace collar

Tross

amp folks, called *Tross*, were inseparable from a ✓ western army at the beginning of the seventeenth century. Following the troops was dangerous, as the camp was prone not only to diseases and enemy attacks, but also to civilians who wanted to take revenge on the army. Despite all this, soldiers were often escorted by their wives and children. What's more, many children were conceived and born during campaigns. In addition to the families of the soldiers, many civilians joined the camp hoping to make a living by serving the fighters. The number of victuallers, various masters, servants and prostitutes often equalled the number of fighters. They also lead fat stock necessary for feeding the soldiers. Each regiment had an officer, Hurenweibel, appointed to keep order among the folks at camp.

A wife of a soldier did not have an easy life. It was her task to cook and do the laundry for both of them, and she also carried their belongings. This usually consisted of their sets of clothing, shoes, some pots and rations. In addition to all this, the woman carried part of the loot, and babies-all on foot, unless they were able to afford a pack-horse. A German soldier's diary tells us how, during ransacking a town, a woman was tending to the wounds of her husband, and even joined the raid in his stead after the battle. [SZS]

Basket wattled of hazel sticks

This woman wears a woollen petticoat and velvet doublet over linen undergarments. The girl's shirt and skirt are covered with a little coat that follows the cut of an adult's.

In the meanwhile, János Pecz arrived at Diószeg with the Silesian Germans, where the hajdús attacked them and cut them all down including their children and whores, who were great in numbers. Only a few of them managed to flee into Várad. Taking wives, children, carters, and all and sundry into account, their number exceeded 3000.

Battle between Álmosd and Diószeg, 1604; István Szamosközi: Historical remnants, 1542-1608

Afterword

A military report, committed to paper four hundred years ago; an old engraving of a castle, soldiers fighting in the foreground. A dolman, piece of a noble inheritance. A rusty axe, fragmented by a blow to an ancient wall; discharged musket ball, broken sabre blade, turned up with the soil by the plough. The barely legible scribble of a chronicler: "Warning: the enemy is at Balavásár, burning, killing, cutting, Jesus save us!". Silver coins hastily hidden in the ground, never claimed by their original owner...

Mementos of a time gone by, splinters of a colourful, vivacious world and its struggles. Each source gives us a glimpse of life from the period. Detached for the period as we are, they afford us an opportunity to comprehend the time, but never to fully understand it.

Four centuries - eight lifetimes - is a long time. Many changes have taken place in the interim years; kingdoms rose and fell, and country borders were fluid. Even the landscape changed: rivers were diverted, forests became smaller, towns and villages are different from what they used to be - only their names remain the same. Old castles stand as silent witnesses of bloody wars of a by-

gone era, the trenches of military camps have been eradicated by years of ploughing; and the battlefields as well as the unmarked graves are long forgotten. Objects and weapons from the period are now in museums or have been lost in time, just like the warriors, whose battles now we only view as dates of glorious or maybe painful recollections of historical events.

Sometimes the actions and decisions of a bygone era are judged too quickly by posterity. From the convenient distance of several hundred years we often fail to realise how little we actually know about the "supporting actors" of our history and the world they lived in and shaped their choices. Without them our present world would not be what it is today. [BZ]

May a casket or the wide blue yonder be my shroud If honour is with me in my last hour, May I be devoured by the raven or the wolf, Always the sky above, and the ground below.

Miklós Zrínyi: Time and Fame, 1653

Seal with Gábor Bethlen's regal coat of arms

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