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Stendardo di Lepanto (1570), Lati A e B, Museo Diocesano di Gaeta. Wikimedia Commons. Lo stendardi fu dipinto a tempera su seta da Girolamo Siciolante da Sermoneta (1521-1575), su incarico del Cardinale Onorato Caetani. L'11 giugno 1570 fu benedetto da Papa Pio V nella Basilica di San Pietro e consegnato a Marcantonio II Colonna ponendolo al comando della flotta pontificia. Partito da Civitavecchia e giunto a Gaeta il 22 giugno 1571, Marcantonio Colonna, fece voto di consegnare lo stendardo al patrono della città qualora fosse tornato vincitore. Il 13 agosto Pio V fece consegnare un secondo stendardo della Lega a Don Giovanni d'Austria, comandante generale della flotta cristiana che, riunitasi a Messina, salpò il 24 agosto verso Lepanto. Durante la battaglia del 7 ottobre i due vessilli sventolarono rispettivamente sull'Ammiraglia e sulla Capitana pontificia e non furono mai centrati dal tiro nemico. Nelle stesse ore il papa ebbe la visione della vittoria e in ricordo rifinì l'Ave Maria nella forma attuale, aggiunse le Litanie lauretane alla recita del Rosario e l'appellativo mariano di Auxilium Christianorum e consacrò il 7 ottobre a Santa Maria delle Vittorie sull'Islam, celebrato con lo scampanio al mattino, a mezzogiorno e alla sera in ricordo della vittoria. Papa Gregorio XIII trasferì poi la festa alla prima domenica del mese di ottobre intitolandola alla Madonna del Rosario. Al ritorno da Lepanto, Marcantonio Colonna sciolse il voto consegnando lo stendardo al vescovo Pietro Lunello. Il vessillo fu poi conservato presso la cattedrale dei Santi Erasmo e Marciano.

Central European Infantry Handbooks in the Time of Early Modern Military Revolution¹

by Klára Andresová

SUMMARY. The theory of early modern military revolution, which was presented by Michael Roberts in the 1950s and was later revised by various historians, is well known and still in use even today. One of the pillars of supposed revolution was a change of infantry training and a general change of infantry tactics, which first happened in the Netherlands in the 1590s. Another modification of infantry training and tactics took place in Sweden during the reign of Gustavus Adolphus. These transformations were reflected by a specific genre of period learned literature – military handbooks for infantry. Military manuals were published not only in Western but also in Central Europe, mostly in Germany. In the period of 1550-1650, 125 military handbooks were printed in 227 editions there. Twenty-four of these books were concerned exclusively with the infantry warfare, another four dealt with both infantry and one of the other branches of the contemporary army. Book history is a transdisciplinary field which offers new methods of studying military history. While researching changes of the content and formal aspects of military publications, it is possible to trace changes of period military theory. The prosopography of military theorists and book publishers helps to reveal how the new ideas were disseminated – in this case how the new approaches to infantry training and the art of war spread from Western and Northern Europe to its centre. The aim of this chapter is not only to describe period infantry handbooks, but also to characterise the transfer of revolutionary changes in infantry warfare from Netherlands and Sweden into Central Europe with the help of period military manuals – especially those intended for infantry.

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^{1 ©} Klára Andresová, 2023, Masaryk Institute and Archives of the CAS, v. v. i., Gabčíkova 2362/10, 182 00 Prague 8, Czech Republic, ID: 67985921. An earlier version of the text has been published in Tadeusz Grabarczyk – Magdalena Pogońska-Pol (edd.), Oblicza wojny. Tom 7, Przed bitwą (Łódz 2023), p. 195–211. This chapter is based on the findings published in the Ph.D. dissertation Klára Andresová, Šíření vojenské teorie v raném novověku: Vojenské příručky vytištěné ve střední Evropě v letech 1550–1650 [= The Dissemination of Military Theory in the Early Modern Period: Military Manuals Printed in Central Europe in 1550–1650] (Praha 2023).

1. Introduction

hen Johann Jacob von Wallhausen published his *Kriegskunst zu Fuss* in 1615,² it was one of the first detailed treatises on the military art of infantry to appear in print in Europe. Wallhausen soon became known as a military theorist who published at least 14 writings on military subjects. The most influential of these was the *Kriegskunst zu Fuss*, which was published at least 10 times by the mid-17th century in four different language versions. The book was later followed by a number of other authors. While writing it, Wallhausen himself drew on information he had acquired in various ways, both by studying older writings and by personal experience gained from his service in the army of the military reformers Maurice of Orange and his cousins. What was the history of infantry military manuals in Central Europe before and after Wallhausen, and what was the development of this genre?

2. Military handbooks as a genre of educational literature

The genre of military manuals does not have a universally employed definition; therefore, it is necessary to characterise it at the beginning of this paper. Taking into account the specifics of different historical periods and geographical areas, military manuals can be broadly characterised as educational publications intended for soldiers at different levels of military hierarchy, containing information about military service and warfare in general terms, or more specifically about service and warfare as related to a specific type of troop. Such information may come from a single source or multiple, including but not limited to military or legal regulations, service instructions and real-life troop experience. When focusing on the period 1550–1650, the military manuals of the time can be characterised more specifically as educational publications pertaining to military administration, the art of war, military mathematics, fortress architecture, and military pyrotechnics. They discussed their subject matter in universal terms or focused on a specific types of troop. They were general texts used internationally, with recommendations on how to proceed when solving both broad and specific military and troop problems rather than obligatory guidelines for contemporary commanders. The dissemination of military handbooks through movable type

² Johann Jacob von Wallhausen, Kriegskunst zu Fuss (Oppenheim 1615).



1. Johann Jacob von Wallhausen (ca. 1581-1627) was one of the most important European military theoreticians of the 17th century. Wikimedia Commons.

began in the early printing period. The first printed military manual was *De re militari* by the Italian architect Roberto Valturio (1405–1475), a manuscript version of which appeared before 1463 and was first printed in 1472.³ It was soon followed by a treatise of the same title by the Roman military theorist Flavius Vegetius Renatus (4th–5th century AD), issued around 1473. Both works were published in Italy, but the Central European press did not take long to follow suit. It was the aforementioned Vegetius's work that became the earliest German military incunabulum.⁴

Military manuals, which were before 1472 distributed only as manuscripts, could reach a wider circle of readers thanks to the invention of the printing press. In addition to editions of treatises that originated in antiquity or were heavily inspired by ancient writings, new works began to be printed that responded to modern trends in military science. This paper focuses exactly on these books, as they were the only ones that could be used as instructional texts for modern warfare. The Central European military manuals from 1550–1650 can be divided into three similarly long chronological periods, which roughly indicate the development and transformations of the genre.

The period of 1550–1590 was a time when bastion fortresses were developed in Southern and Western Europe, and this coincided with the publishing of literature on fortifications. However, in Central Europe, such books still appeared rarely. Publications issued there were mostly of an administrative nature, did not pay much attention to the tactics and frequently responded to the war with the Ottomans.

In the period of 1590–1618, the number of books on military administration gradually dropped and publications on military art grew. Besides the works responding to the wars with the Ottomans, the first publications promoting ideas of the Dutch military reforms started to appear in the German states. In Central Europe, publications on fortification construction were printed more frequently.

The period of 1618–1650 can be identified with the Thirty Years' War and the immediately following years. The new military publications now responded to

³ Roberto Valturio, *De re militari* (Verona 1472). For more, cf. Guy Wilson, "Military Science, History and Art", in Pia F. Cuneo (ed.) *Artful Armies, Beautiful Battles. Art and Warfare in Early Modern Europe* (Leiden 2002), p. 14–15.

⁴ In Latin, it was Vegetius, *De re militari* (Köln ca. 1475). In a German translation Vegetius, [Kurze Verweissung von der Ritterschaft] (Augsburg ca. 1475).

this major conflict. Books on fortification were still published. Many book militaria were new editions of works from the previous period.⁵

3. Military handbooks of East-Central Europe

The German-speaking area, which is the main focus of the chapter, became an important centre for the development of military science in the context of the entire Europe. Military manuals were disseminated there primarily through the printing press, and copies of individual editions can still be found in libraries throughout the continent. The situation was different in the eastern half of Central Europe, where the printing industry spread later. In the case of today's Slovakia, for example, it is impossible to speak of any printing house having been active on its territory for a long period of time before the middle of the 17th century. Books therefore had to be imported from other parts of the Kingdom of Hungary or from abroad. However, military manuals were not printed in Hungarian workshops at that time either, therefore all military prints had to be imported from abroad.

The situation was different in the territory of the Kingdom of Bohemia and the Kingdom of Poland (later Polish-Lithuanian Commonwealth), where printing had already spread at the end of the 15th century. Although educational publications were disseminated through this region, military manuals were not so much. Between the mid-16th and the mid-17th centuries, only one military manual was printed in the territory of the Kingdom of Bohemia – a translation of the famous work of the imperial general Lazarus von Schwendi, *Kriegs Discurs*,⁶ which was published in Prague in 1618 under the title *Discurs o běhu wálečném*.⁷ However, no other military handbook was printed there until 1733. In Poland, 10 military manuals were printed between 1550 and 1650, but the situation in the two countries did not differ much. Both Czechs and Poles produced military manuals, but

⁵ More on the reflection of military manuals in modern literature (mainly dictionaries and encyclopaedias), on the specifics of the genre between 1550–1650 and its division into distinctive subcategories in: Klára Andresová, "Vojenské příručky raného novověku jako předmět výzkumu historiografie vojenství a knihovědy: Tisky středovýchodní Evropy v kontextu evropské produkce", in *Vojenská História*, 2018, vol. 3, p. 62–68.

⁶ First issue: Lazarus von Schwendi, Kriegs Discurs (Frankfurt am Main 1593).

⁷ Lazarus von Schwendi, Discurs o Běhu Wálečném a Auřadech Wogenských (Praha 1618). More about this book in: Klára Andresová, "Česká vojenská příručka z roku 1618", in Acta Musei Nationalis Pragae – Historia Litterarum, 2020, vol. 1–2, p. 44–52.

they mostly distributed them in manuscripts. The most important military manuscripts of that time in Bohemia were probably the *Instrukci vojanská* by Zikmund Chotek of Chotkov⁸ and the *Kriegsdiscurs über der hochlöblichen Cron Böhmen Landtdefension* by Jindřich Michal Hýzrle of Chody.⁹ In Poland it is worth mentioning, for example, *Księgi hetmańskie* by Stanisław Sarnicki,¹⁰ a book on period artillery and art of fortification *Praxis ręczna o działa* by Andrea dell'Aqua,¹¹ or a fortification manual *Architectura militaris* by Józef Naronowicz-Naroński.¹²

Other strategies for the dissemination of military thoughts included the incorporation of military treatises into larger works, which, however, cannot be described as military manuals due to their more general focus. Some authors chose to publish their military works in printing houses in the Western Europe, most notably the Poles Adam Freitag and Kazimierz Siemienowicz.¹³ In the period 1550–1650, only one manual of infantry military art was printed in the territory of the Kingdom of Bohemia or the Kingdom of Poland – the German-language book *Tyrocinium militare* by Conrad Cöller, published in 1616 in the cosmopolitan Hanseatic city of Danzig, whose cultural and printing tradition differed significantly from most areas of Poland.¹⁴ The first and only Polish infantry training manual published in the 17th century was *Piechotne ćwiczenie albo wojenność piesza* authored probably by Błażej Lipowski only in 1660.¹⁵

The rest of the chapter will therefore focus mainly on publications issued in the German-speaking area.¹⁶

⁸ More on the manuscript: Ondřej Švehelka, "'Zbroje a odění potřebí jest…': Čtyři texty ze 16. století týkající se tureckých válek, s přihlédnutím k válce patnáctileté", in *Historie – Otázky – Problémy*, 2014, vol. 2, p. 186–196.

⁹ Hýzrle's manual is available in an edited version prepared by Jiří Kubeš et al. *Cesty a život Jindřicha Hýzrla z Chodů* (Praha 2021), p. 350–363.

¹⁰ More on it, e.g., in: Zdislav Spieralski, *Polska sztuka wojenna w latach 1454–1562* (Warszawa 1958), p. 137–143, 149–153.

¹¹ Cf. Tadeusz Nowak (ed.), Andrzej dell'Aqua. Praxis reczna o działa (Oświęcim 2016).

¹² The book is available in the modern edition: Tadeusz Nowak – Janina Nowakova (edd.), *Józef Naronowicz-Naroński: Budownictwo wojenne* (Warszawa 1957).

¹³ For editions of their works, cf. the database *Universal Short Title Catalogue (USTC)*, www.ustc.ac.uk Read November 6, 2024.

¹⁴ Conrad Cöller, Tyrocinium militare (Gdańsk 1616).

¹⁵ Błażej Lipowski, *Piechotne ćwiczenie albo wojenność piesza* (Kraków 1660). More on the handbook in: Agnieszka Szczaus, "Językowy kształt komend w 'Piechotnym ćwiczeniu' Błażeja Lipowskiego (1660 r.)", *Studia Europaea Gnesnensia*, 2015, vol. 12, p. 117–127.

¹⁶ More on the issue of military manuals of East-Central Europe: Andresová (2018), p. 72–76.

4. Infantry handbooks

Between 1550 and 1650, 227 editions of military manuals were published in Central Europe. As some books were published twice or more, this amounts to a total of 125 different works. A lot of these books dealt with the warfare of the time in general – either in terms of military administration or military art and drill. Twenty-four of the editions dealt exclusively with infantry. If the publications that also included passages on another branch of period army are added (i.e. cavalry, artillery or fortification construction), this makes a total of 28 editions. Most of these books (21) can be characterized as publications on military art (both analytical treatises and drill manuals), but besides them there are also five books on military mathematics, one book on military administration and one military treatise.

Military treatises were a relic of medieval military literature. They usually took a philosophical approach to warfare and offered reflections on various aspects of war. Unlike most other military handbooks, the military treatises were aimed at civilians – especially rulers, their heirs, politicians and scholars. Military treatise *Extract, unnd kurtzer Außzug des Büchleins, von der newen Armatur unnd Instrumentstärck* written by Wendelin Hipler was a text on the use of new inventions – weapons for infantry and artillery.¹⁸

Books of military mathematics were a special kind of literature, usually written not by warriors but by mathematicians. They were either mathematics textbooks, part of which dealt with the use of arithmetic and geometry in military science, or collections of tables supplemented only by a short introduction. Some of these tables were aimed at fortress construction, in which case they specified the recommended angles and dimensions of fortification structures; artillery tables dealt with ballistics. Tables for infantry or cavalry determined how a particular number of men should be divided into various organisational units. This group of military handbooks might have been accompanied by simple illustrations – woodcuts or illustrations made from typographic marks – depicting battle

¹⁷ These numbers are based on excerpts from the databases USTC (www.ustc.ac.uk), VD16 (https://www.vd16.de/), VD17 (http://www.vd17.de/), GLN 15-16 (http://www.ville-ge.ch/musinfo/bd/bge/gln/), Bibliografia Staropolska (https://www.estreicher.uj.edu.pl/staropolska/), Knihopis (http://www.knihopis.cz/); All read November 6, 2024.

¹⁸ Wendelin Hipler, Extract, vnnd kurtzer Außzug des Büchleins, von der newen Armatur vnnd Instrumentstärck (Frankfurt am Main 1593).

formations. The authors of published mathematical tables for the use by infantry and cavalry officers in the period under study were Zacharias Lochner, Johannes Lhor, Caspar Grunewald, and Philipp Gyger.¹⁹ The mathematic textbook for (future) military offices, which dealt first with mathematics in general and then with the use of mathematics for the needs of infantry and fortress construction, was written by Jacob Willemsz Verroten.²⁰

Military administrative manuals were the dominant type of military hand-books until about 1590. These books dealt primarily with the various ranks and offices in the army and discussed the rights and duties of their holders. The most important author of military administrative manuals in the Central Europe was Leonhardt Fronsberger. His general-oriented *Fünff Bücher. Vonn KriegsRegiment vnd Ordnung* of 1555²¹ was later expanded into a comprehensive three-volume *Kriegsbuch*, which was published repeatedly until the end of the 16th century.²² The work was a bestseller from the beginning, and was followed by books by other authors.

One such example is the unique book *Kurtzer vnd notwendiger bericht der Feldtschreiberey* by Stanislaus Hohenspach.²³ This publication, unlike most other military manuals, was not primarily intended for officers and generals, but for military scribes. It describes duties of military scribes and also the documents they produced. The present-day researcher will find in it, among other things, information on the recruitment and mustering of troops.

After 1590, publications on military art were among the most common types of military manuals (besides books on fortress construction). These books can be subdivided into short but usually richly illustrated drill books and more compre-

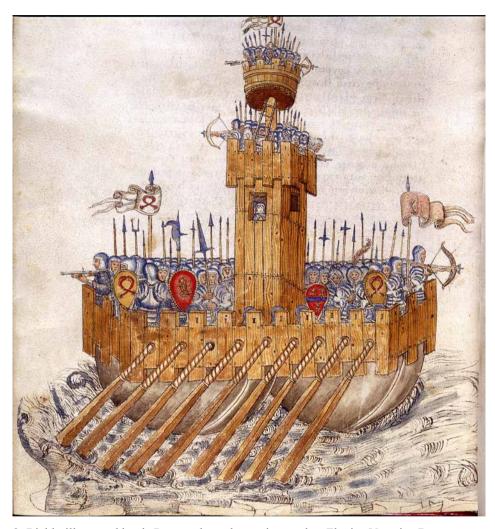
¹⁹ Zacharias Lochner, Zwey Büchlein der gerechneten Schlachtordnung (Nürnberg 1557); Johannes Lhor, KRiegs Feldbüchlin, von allerlay Schlachtordnungen (Dillingen 1569); Caspar Grunewald, ANALYSIS, Daβ ist, Aufflösung vierer schöner Cossischer Schlachtordnungs Exempeln (Frankfurt am Main 1616); Philipp Gyger, Newe Arithmetische Kriegsordnung (Basel 1617).

²⁰ Jacob Willemsz Verroten, Kriegs MATHEMATICA (Hamburg 1636).

²¹ First issue: Leonhardt Fronsberger, Fünff Bücher. Vonn Kriegs Regiment vnd Ordnung (Frankfurt am Main 1555).

²² First issue: Leonhardt Fronsberger, Kriegsbuch (Frankfurt am Main 1573). It was last published in 1596.

²³ Stanislaus Hohenspach, Kurtzer vnd notwendiger bericht der Feldtschreiberey (Heidelberg 1577).



2. Richly illustrated book *De re military* by ancient author Flavius Vegetius Renatus was one of the first military manuals to be printed (British Library, Add. Ms 24945, f. 231v). Wikimedia Commons

hensive analytical treatises.²⁴ The former focused on the operation of weapons and the basic functioning of soldiers in units, while the longer treatises included next to the chapters on drill also texts on military administration, military cam-

²⁴ Division into drill books and analytical military treatises is based on David Lawrence, *The complete soldier* (Leiden 2008), p. 195.

paigns, strategies, building of military camps and other related topics. Drill books and analytical military treatises coexisted, and the gradual trend, which became more pronounced in the second half of the 17th century, was an increase in the number of drill books at the expense of analytical treatises. This is indicative of the changing function of the military manual and the changing demands on this type of literature over the years, as large books originally intended for scholars gradually changed to utilitarian booklets for officers that helped to unify military practice across Europe.

One of the first and most famous drill books is *Wapenhandelinghe* by Jacques de Gheyn. The core of the book is composed of a series of 117 illustrations showing the operation of infantry weapons – simple handguns, muskets, and pikes. This is why the work is known not by the author of the text (probably John of Nassau) but by the author of the illustrations (Jacques de Gheyn). *Wapenhandelinghe* was first published in 1607 in the Netherlands.²⁵ It was soon translated and a bilingual German-French version was first published in 1609.²⁶ Gheyn was followed by a number of other authors. Peter Isselburg's bilingual German-French drill book *Künstliche Waffenhandlung* from 1620 was in fact just a reprint of Gheyn's book.²⁷ Another drill book comes from 1619 – anonymous publication *Scola Militaris Exercitationis*.²⁸

The first analytical military treatise published in the Central Europe was issued at the turn of the century: a lesser-known manual of military art by Maurice of Hesse-Kassel.²⁹ The book was relatively short and dealt briefly with basic issues of recruiting and training infantry soldiers and their use on the battlefield.

The best-known military treatise for infantry was not published in Central Europe until fifteen years later: Johann Jacob von Wallhausen's *Kriegskunst zu Fuss*. Its illustrations depicting the operation of infantry weapons were based on

²⁵ Jacques de Gheyn, *Wapenhandelinghe van de Roers, Musquetten ende Spiesen* (The Hague 1607).

²⁶ Jacques de Gheyn, Waffenhandlung Von den Röhren, Mußquetten vnd Spiessen (Frankfurt am Main 1609).

²⁷ Peter Isselburg, Künstliche Waffenhandlung der Musqueten vn[d] Piquen oder Langen-Spiessen (Nürnberg 1620).

²⁸ Scola Militaris Exercitationis (Köln 1619).

²⁹ Maurice Hesse-Kassel, Instruction. Was sich vnsere Bestellte Kriegsräthe vnd Diener verhalten sollen (Kassel 1600).

Jacques de Gheyn's copperplates from a few years earlier. The book was republished several times and translated into several European languages. It was a large publication in folio format, accompanied by a number of copperplate illustrations, and was therefore quite expensive. In order to make the basics of military art accessible to poorer people, Wallhausen published an abridgement of the book soon afterwards, entitled *Alphabetum pro tyrone pedestri*.³⁰

One of the first to be inspired by Wallhausen's infantry manual was an officer who very likely knew him personally. Wallhausen entered in 1613 a military service in Danzig, and he signed his works as the captain of that city until 1 May 1616.³¹ When on 29 May 1616 the otherwise unknown Conrad Cöller dated the preface of his handbook *Tyrocinium militare*, he titled himself as a Danzig lieutenant. However, lieutenant Cöller did not become as famous as captain Wallhausen, did not write further works, and did not publish his book for a second time. His only known manual, which contains only one simple illustration, deals mainly with the operation of infantry weapons and training the movements of infantry units, and is written in the form of a dialogue between two men, Julius and Cornelius. However, Wallhausen was also followed by a number of other authors who did not necessarily know him personally but were familiar with his books.

5. Authors of infantry handbooks

Seventeen different men can be identified as the authors of the 28 books examined, one of which is anonymous. The authors of these infantry manuals – and also of contemporary military manuals in general – can be divided into several groups according to their occupation. In the group of authors examined, there are well-known military theorists (Johann Jacob von Wallhausen) and fortress builders (Valentin Friderich). Several military officers, who usually published one theoretical work each, are known mainly from the pages of these works and are otherwise essentially unknown (Conrad Cöller, Zacharias Krammer von Hey-

³⁰ Johann Jacob von Wallhausen, Alphabetum pro tyrone pedestri (Frankfurt am Main 1615).

³¹ Recently on Wallhausen's life: Christian Brachthäuser, "Wie sich ein Fürst zum Krieg soll rüsten": Die älteste Militärakademie der Welt (Groß-Gerau 2016); Klára Andresová, "Šíření myšlenek raně novověké revoluce ve vojenství do střední Evropy prostřednictvím vojenských příruček Johanna Jacobiho von Wallhausena", in Lucie Heilandová – Jindra Pavelková (edd.), Knížky naučení všelikého (Brno 2019), p. 49–68.

deck, Bartolomeo Pellicciari, Laurentius a Troupitzen, the military scribe Stanislaus Hohenspach). In the case of mathematical books, the authors were mathematicians (Zacharias Lochner, Johannes Lhor, Philipp Gyger, Caspar Grunewald and Jacob Willemsz Verroten). The authorship of military manuals, of which the pictorial element is an essential component, fell to illustrators (Jacques de Gheyn, Peter Isselburg). Some military manuals were written by people engaged in different professions (Gamaliel de La Tour was a physician), profession of some remains unknown (Wendelin Hipler). The last type of authors were noblemen – in this case it was just one – Maurice of Hesse-Kassel. His military-theoretical book is not unusual, as nobles were often educated in military issues and studied the works of older military theorists. Among the most famous examples of this approach is John of Nassau, who was writing at the same time, and whose extensive military works remain only in manuscript.³²

6. Illustrations

Most military handbooks printed in Central Europe in the period 1550–1650 were illustrated, and infantry manuals are no exception. Three graphic types of illustrations were involved: woodcuts, prevalent in the 16th century, were gradually replaced over the years by copperplates. At the same time, illustrations made of typographic marks, which usually indicated the way soldiers were arranged in units, were used throughout the whole century under study.

The examined infantry manuals are accompanied by two types of illustrations in terms of their function: The first type is educational illustration depicting the handling of weapons, the order of soldiers in units, the structure of military camps or outlines of fortress buildings. The second type lies on the borderline between educational and artistic illustrations, and it depicts the holders of various offices and ranks in the army or scenes from military engagements.

The illustrations are usually not signed. This is true for simple educational diagrams, but often also for more demanding depictions. In fact, only two illustrators of the infantry manuals examined are known by name: the engraver and painter

³² John's work has been made accessible editorially: Werner Hahlweg (ed.), *Die Heeresreform der Oranier. Das Kriegsbuch des Grafen Johann von Nassau-Siegen* (Wiesbaden 1973).



3. A musketeer from the famous drill book *Wapenhandelinghe* (2-14) by Jacques de Gheyn for instructing its readers how to operate a musket and other weapons. Wikimedia Commons.

Jacques de Gheyn³³ and the draughtsman, engraver and printer Peter Isselburg,³⁴ who followed Gheyn's illustration book and reprinted it under his own name. As for general military manuals, it is worth mentioning the painter and engraver Jost Amman, who created the illustrations of the *Kriegsbuch* by Leonhardt Fronsberger in the mid-16th century.³⁵ In the case of the infantry part of the book, these are woodcuts depicting various types of soldiers and military officials, as well as copperplates showing military camps or troops on campaign.

7. Dissemination of ideas through military books

Several inspirational lines can be traced among the infantry manuals examined. Within books on military mathematics, Zacharias Lochner's *Zwey Büchlein der gerechneten Schlachtordnung*, published in 1557, achieved a certain influence.³⁶ It was a set of tables advising how to arrange a unit of a certain number of soldiers into a square formation. Johannes Lhor's *Kriegs Feldbüchlin*, 12 years younger, dealt with the same problem.³⁷ Lochner's book was also mentioned in other literature – for example, from 1561 onwards a page extract from this book appeared in Georg Lauterbeck's *Regentenbuch*.³⁸ This excerpt was later translated into Czech when a translation of the *Regentenbuch* was published in 1584 and 1606 under the title *Politia historica* in Prague by Daniel Adam of Veleslavín.³⁹ *Politia historica* was a rather exceptional text in the Czech environment, as it contained several chapters focusing on the warfare of the time. As already mentioned, for the entire period under study, only one separate military manual was published in Czech – *Discurs o běhu wálečném*.

The second source of inspiration is Leonhardt Fronsberger's *Kriegsbuch*. In his work, the war veteran Fronsberger discussed, among other things, the rights

³³ More on Gheyn, e.g., Jan Piet Filedt Kok, "Jacques de Gheyn II Engraver, Designer and Publisher – I", in *Print Quarterly*, 1990, vol. 3, p. 248–281.

³⁴ More on Isselburg, e.g., Kurt Pilz, "Isselburg, Peter", in *Neue Deutsche Biographie 10* (Berlin 1974), p. 201–202.

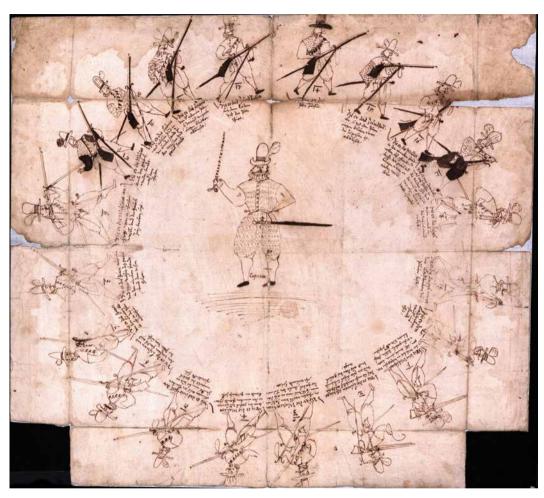
³⁵ More on Amman, e.g., Gero Seelig (ed.), *The New Hollstein German engravings, etchings and woodcuts 1400–1700, Part I–X* (Rotterdam 2002–2003).

³⁶ Lochner (1557).

³⁷ Lhor (1569).

³⁸ First issue with this extract: Georg Lauterbeck, Regentenbuch (Leipzig 1561), p. CCXIIa.

³⁹ First issue: Georg Lauterbeck, *Politia historica* (Praha 1584), p. 480–481.



4.How to manage the firearms, illustration of the military manuscript *Kriegsbuch* by Count John of Nassau. Near 1600 (Darstellung der Bedienung von Gewehren, Hessisches Hauptstaatsarchiv Abt. 171 Nr. K 923). Wikimedia Commons.

and duties of different types of soldiers and military officials. The book was published repeatedly during the second half of the 16th century and achieved considerable fame, to which other authors and printers referred. In 1577, 22 years after the publication of Fronsberger's first military work, a manual for military scribes, *Kurtzer vnd notwendiger bericht der Feldtschreiberey* by Stanislaus Hohenspach, was printed. In a dedication to colonel Claus von Handtstadt, the printer Müller included the following sentence:

'I have no doubt that your Grace has encountered and read the *Kriegs-ordnung* [sic], published by the late Leonhardt Fronsberger and recently reprinted in Frankfurt.'40

The intention of the printer, and perhaps of the author, was therefore evidently to build on Fronsberger's fame and to expand on one of the themes opened up by that author.

Almost everyone who published a military administrative manual in the German-speaking area, whether specifically infantry or universal, responded to Fronsberger's work. The Dresden topographer and postmaster Daniel Wintzenberger, in his *Beschreibung einer KriegsOrdnung* of 1588, stated:

'Useful ideas have previously been written down, especially in that great book, divided into three volumes and published in Frankfurt am Main by Georg [sic] Fronsberger, which deals with the war exploits of Emperor Charles V, waged both on water and land, together with artillery and all ammunitions, with many illustrations. But not everyone can buy the book, furthermore it takes a lot of time to read such an extensive work, and it is impossible to keep it all in one's head. All this is briefly treated in this book, which every warrior, according to his status and office, needs to know.'41

The third source of inspiration came from the Netherlands from military reformers – Prince Maurice of Orange and his cousins William and John of Nassau, whose military works remained in manuscript only. Although the most famous of these three men is undoubtedly Maurice of Orange, the main originator of Dutch modernisation and the unification of military training and equipment was John of Nassau, author of the manuscript *Kriegsbuch*. In it, he explored both ancient soldiering and ways to apply it in a modern way using the resources that the late 16th century offered. John of Nassau was the author of the textual part of the drill book illustrated by Jacques de Gheyn, which was later reprinted by Peter Isselburg.

Johann Jacob von Wallhausen also drew from his contacts with the Dutch reformers. He began his military career in 1599 in the army of Maurice of Orange, later serving in Hungary and Russia and from 1613 in Danzig. In 1616, in collaboration with John of Nassau, he prepared the curriculum for the first European military academy in the German town of Siegen, which he ran as its director

⁴⁰ Hohenspach (1577), p. [3].

⁴¹ Daniel Wintzenberger, Beschreibung einer KriegsOrdnung zu Roß vnd Fueß (Dresden 1588), p. [4].



5. An Officer of the Rank of 'Oberster Feldprofoss' (chief of military police) in the Imperial Army, by Jost Amman (1539-1591) Released as CC-0 by Getty 103R3C. Commons Wikimedia.

for several months in 1617.⁴² It should be recalled that Wallhausen's work was followed by that of another soldier working in Danzig – perhaps Wallhausen's subordinate – lieutenant Conrad Cöller.

Inspiration in Dutch military reforms can be found in a number of military manuals from the first half of the 17^{th} century. In particular, the infantry manual by Valentin Friderich *Kriegs kunst zu Fuß* of 1619 refers to the teachings of Maurice of Orange.⁴³ The Netherlands is mentioned as a leading country where military art was taught by Zacharias Krammer von Heydeck, author of the manual *Bellona* of 1625. The author also mentions that he was taught at a 'high military school,' by which he could theoretically mean the Siegen Academy.⁴⁴ Also the French manual by Gamaliel de la Tour, published in Geneva in 1633 and 1634, *Principes de l'art militaire*, refers to military art as practiced in the Netherlands.⁴⁵

In the 1630s, a new stream of ideas came to Central Europe from Sweden. There, Dutch military doctrine was reworked by the king – Gustavus Adolphus. An infantry manual published twice in Germany was called *Kriegs Kunst, Nach Königlicher Schwedischer Manier* and was written by an officer in the Swedish service, Laurentius a Troupitzen. In the preface of the book, he praised the order, wisdom, art, and experience of the soldiers in the Dutch service. However, he emphasised above all the contribution of Gustavus Adolphus to the Swedish military, who, in his opinion, improved the discipline and order previously used in Europe, but also, for example, invented new battle formations, thus earning eternal fame.

8. Theory and praxis

It is clear, then, that Dutch and Swedish reformist ideas reached Central Europe through books shortly after their introduction in Western and Northern Europe. Virtually everyone who published a book on infantry warfare in the German-speaking area can be linked in some way to the Dutch military reforms,

⁴² More on the Siegen military academy: Brachthäuser (2016).

⁴³ Valentin Friderich, Kriegs kunst zu Fuβ vnnd Eige[n]dlicher vnderricht (Bern 1619), p. 1.

⁴⁴ Zacharias Krammer von Heydeck, Bellona (Neuburg am Donau 1625), p. [3].

⁴⁵ First issue: Gamaliel de La Tour, Principes de l'art militaire (Genève 1633), title page.

⁴⁶ First issue: Laurentius a Troupitzen, *Kriegs Kunst, Nach Königlicher Schwedischer Manier* (Frankfurt am Main 1633), p. 4.

either through personal experience or through study of earlier books. On the other hand, it should be mentioned that not everyone associated with the Dutch tradition actually implemented it in his writings. This is also true for Wallhausen himself – while he knew and accepted the Dutch drill, he recommended that troops be trained and organised according to older, proven practices used, for example, on the battlefield in Hungary.⁴⁷

After all, it is also his work that raises the question of how quickly Dutch military practice really took hold in Central Europe. In 1615 Wallhausen published his first work on the military art of infantry, in which he recalled the art of proper warfare – 'ars bene belligerandi.' He published the book in the hope that experienced warriors would once again elevate the art. However, in 1621, when he published *Defensio patriae*, Wallhausen mentioned that he had unfortunately not seen the use of this art in practice so far.⁴⁸

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⁴⁷ Cf. Wallhausen, Kriegskunst (1615).

⁴⁸ Johann Jacob von Wallhausen, Defensio patriae (Frankfurt am Main 1621), p. 6.

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