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A R T Y K U Ł Y

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THE INFLUENCE OF MAPS AND PLANS CREATED IN THE 1620S  
IN THE NETHERLANDS ON THE DEVELOPMENT OF MILITARY  
CONCEPTS IN THE POLISH-LITHUANIAN COMMONWEALTH<sup>1</sup>

Keywords: modernization of the state, military revolution, siege of Breda (1624–1624), siege of ‘s-Hertogenbosch (1629), lines of circumvallation, lines of contravallation, military hydro- engineering, military cartography, field fortifications, manoeuvres, Krzysztof Arciszewski, Krzysztof Radziwiłł, Władysław Waza, drawings of the 17th century

Słowa kluczowe: modernizacja państwa, militarna rewolucja, oblężenie Bredy (1624–1624), oblężenie ‘s-Hertogenbosch (1629), linie cyrkumwalacyjne, linie kontrwalacyjne, hydroinżynieria wojskowa, kartografia wojskowa, fortyfikacje polowe, działania manewrowe, Krzysztof Arciszewski, Krzysztof Radziwiłł, Władysław Waza, ryciny XVII w.

Geoffrey Parker analysing the phenomenon of the “military revolution” at the turn of the sixteenth and seventeenth centuries, drew attention to the ease of dissemination of new solutions in the military field.<sup>2</sup> New inventions, concepts and

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<sup>1</sup> The article was written within the research project of the SONATA National Science Centre, no. 2016/23/D/HS3/03210 entitled “The military revolution as a modernization factor in the public finance and state organization of the Polish-Lithuanian state in the comparative perspective” [Rewolucja militarna jako czynnik modernizacyjny skarbowości i organizacji państwa polsko-litewskiego na tle europejskim].

<sup>2</sup> G. Parker, *Od domu orańskiego do domu Bushów: czterysta lat „rewolucji militarnej”*, trans. M. Kopczyński, “Przeгляд Historyczny” 2005, no. 2 (96), pp. 232–237; idem, *From the*

tactical and strategic solutions were not an urgent secret. The flow of information took place together with the recruitment of foreign engineers, officers and even entire units. Printed military treatises were widely available.<sup>3</sup> The most effective way of spreading the “continuous fire” – which is the basis of the author’s considerations – were the drawings showing the soldiers’ drills, which were then published in the form of prints.<sup>4</sup> This phenomenon can be applied into a broader background – new theories including siege operations and applications of field fortifications, which were very well reflected in military cartography. The article presents the reception of solutions developed in the Netherlands in the 1720s which were transferred to the Republic. The chronological scope of the article is related to the new stage of the 80-year war. Since 1621, the United Provinces and Belgium were the most innovative theatre of warfare in Europe.<sup>5</sup> Two sieges from this period should be highlighted: Breda (1624–1625) and ‘s-Hertogenbosch (1629), both were excellent examples of the use of circumvallation and contravallation lines and the use of hydro-engineering.<sup>6</sup>

The third decade of the seventeenth century is a ‘blind spot’ in the up to date research on Polish and Lithuanian military cartography.<sup>7</sup> Meanwhile, the war with

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*House of Orange to the House of Bush: 400 years of military revolutions, or how to prepare for the next Gulf War*, “Military Spectator” 2003, no. 4 (172), pp. 187–190.

<sup>3</sup> In the sixteenth century it was popular to make military treatises in a manuscript version – more such works were made than printed. However, this was not an activity aimed at concealing knowledge (copies were not uncommon), the main role was played by raising the prestige of the work as an exceptional one. M. Rogg, *Die Kriegsordnung Albrechts des Älteren von Brandenburg, Herzog in Preussen*, in: *Die Kriegsordnung des Markgrafen zu Brandenburg Ansbach und Herzogs zu Preussen Albrecht des Älteren – Königsberg 1555*, eds. H. J. Bömelburg, B. Chiari, M. Thomae, Braunschweig 2006, pp. 23–24.

<sup>4</sup> See J. de Gheyn, *The renaissance drill book*, ed. D.J. Blackmore, London 2003.

<sup>5</sup> This was due, among other things, to the fact that the process of establishing fortresses according to the rules of the old Dutch fortification was completed in 1621. Thus, it was traditionally almost impossible to get a perfectly fortified, food- and gunpowder-supplied fortification crew. Comp. E. Swart, “Qualifications, knowledge and courage”: *Dutch military engineers, c. 1550–c. 1660*, in: *Military engineers and the development of the Early-Modern European state*, ed. B.P. Lenman, Dundee 2013, p. 63.

<sup>6</sup> S. Zurawski, *New Sources for Jacques Callot’s Map of the Siege of Breda*, “Art Bulletin” 1988, no. 4 (70), pp. 621–639; J.P. Roose, *De belegering van Breda door Spinola 1624–1625*, [Alphen aan den Rijn] 2005; P. de Cauwer, *Tranen van bloed. Het beleg van ‘s-Hertogenbosch en de oorlog in de Nederlanden. 1629*, Amsterdam 2008; C.J. Gudde, *‘s-Hertogenbosch. Geschiedenis van vesting en forten*, ‘s-Hertogenbosch 1974; O. van Nimwegen, *The Dutch Army and the Military Revolutions, 1588–1688*, trans. A. May, Woodbridge 2010, pp. 209–212, 217–224.

<sup>7</sup> See S. Alexandrowicz, J. Łuczyński, R. Skrycki, *Historia kartografii ziemi polskich do końca XVIII wieku*, Warszawa 2017, passim; B. Olszewicz, *Kartografia polska XV–XVIII wieku. Chronological and bibliographic review*, ed. J. Ostrowski, Warszawa 2004, pp. 36–38. The only

Sweden between 1621–1622 and 1625–1629 should give rise to the creation of numerous engravings or the dissemination of manuscript maps and plans.<sup>8</sup> The extremely modest cartographic output of military engineers in this decade is all the stranger when we compare it with the 1630s. Many excellent works were created at that time, and in 1636, in Gdańsk, Wilhelm Hondius published probably the most monumental engraving concerning the military of the Polish nobility. In the literature on the subject, Stanisław Alexandrowicz assessed the changes taking place when writing: “the true turnover occurred in the military cartography of Poland and Lithuania only at the beginning of the reign of Władysław IV Waza”.<sup>9</sup>

In this text, I show that the military elite of the Republic of Poland was following closely all the changes taking place in the field of manoeuvring, tactics and military engineering. The 1620s were crucial as the Lithuanian and Polish armies came into contact with the modern Swedish army. As a result, it was necessary to adapt to the new way of conducting warfare.<sup>10</sup> Drawings or engravings showing the plans of the Dutch occupations were an important way of acquiring this knowledge. The information obtained formed the basis for the process of modernization in the field of old Polish military during the reign of Władysław IV Waza.<sup>11</sup>

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drawing from this period is the plan of the Battle of Chocim of 1621, which was published in print by Giacomo Lauro in 1624: Biblioteca Apostolica Vaticana, Stamp. Barb. X.I.80, fol. 23r.

<sup>8</sup> At the same time, the Swedes attached great importance to the mapping of the area of the Crown and the Grand Duchy of Lithuania, which were in the area of warfare. K. Łopatecki, *Prace kartograficzne wykonane na ziemiach Rzeczypospolitej przez szwedzkich inżynierów wojskowych w XVII wieku*, “Studia i Materiały do Historii Wojskowości” 2009, no. 46, pp. 59–68.

<sup>9</sup> It is, consisting of 16 boards plan of the Smolensk siege from 1633–1634 (218 cm x 154 cm). *Smolenscum urbs ope divina Vladislai Poloniae Sueciaeque regis invictissimi Principis virtute liberatum* was published on the basis of plans of the engineer at the Lithuanian service – Jan Pleitner. S. Alexandrowicz, *Kartografia Wielkiego Księstwa Litewskiego od XV do połowy XVIII wieku*, Warszawa 2012. In the 1730s, excellent maps and military plans of Fryderyk Ghetto and Guillaume Le Vasseur de Beauplan were also created: see T. Nowak, *Polski atlas wojskowy z lat 1634–1639*, “Studia i Materiały do Historii Wojskowości” 1969, no. 15/2, pp. 13–61; A.B. Pernal, *Two newly-discovered seventeenth-century manuscript maps of Ukraine*, in: *Od Kijowa do Rzymu. Z dziejów stosunków Rzeczypospolitej ze Stolicą Apostolską i Ukrainą*, eds. M.R. Drozdowski, W. Walczak, K. Wiszowata-Walczak, Białystok 2012, pp. 983–992.

<sup>10</sup> K. Radziwiłł do Zygmunta III Wazy, Mitawa 25 VII 1622, Archiwum Główne Akt Dawnych, Archiwum Radziwiłłów, dz. IV, sygn. 1a, k. 217. “About a field battle and thoughts [Gustav II Adolf – K.L.] yes he wanted her effugere where the densest forests, where the top mud, where the impassable rivers, there he hosts and positions himself, and the Dutch mode he leased all his hope in the coppery and planted his rifle”.

<sup>11</sup> Obviously, the territory of the United Provinces and Belgium was not within the sphere of influence of the Republic. Thus, the acquired maps and plans were not used for intelligence

The specificity of the development of the sixteenth-century Crown military was based on the domination of cavalry, which was needed to fight the Tartar invasions on the south-eastern borders of the Republic.<sup>12</sup> As a result, this has led to clear differences in military development in comparison with trends in Western Europe. The Republic of Poland did not pay much attention to the construction and maintenance of fortresses, and army commanders were striving for victory in a typical ‘old fashioned’ battle.<sup>13</sup> In Western Europe, the key role was to build and modernize fortresses and protect them from the hands of the enemy. In the face of dynamically developing defensive forces – the development of bastion fortifications<sup>14</sup> – the aim was to completely cut off the defenders from supplies by creating lines of contravallation and circumvallation.<sup>15</sup> The main breakthrough turned out to be the siege of Geertruidenberg in 1593, where Maurycy of Orange focused great attention on the construction of a contravallation and cutting off any access

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purposes and strategic concepts. For this purpose, ambassadors and spies obtained numerous maps of sieges, battles and city plans both in manuscript and printed engravings, and then sent them to headquarters. P. Barber, “Procure as many as you can and send them over.” *Cartographic Espionage and Cartographic Gifts in International Relations, 1460–1760*, in: *Diplomacy and Early Modern Culture*, eds. R. Adams, R. Cox, Basingstoke 2011, pp. 13–29.

<sup>12</sup> The Crown began to maintain permanent field troops organized around the so-called colloquial defense, which in the years 1548–1557 numbered from 1000 to 3000 soldiers driving. Then a “quarterback” army was created, paid from a special military treasury based on a fifth of the royal revenue. M. Plewczyński, *Żołnierz jazdy obrony potocznej za czasów Zygmunta Augusta. Studia nad zawodem wojskowym w XVI w.* Warszawa 1985, pp. 61 (Table 8), 63.

<sup>13</sup> B. Dybaś, *Fortece Rzeczypospolitej. Studium z dziejów budowy fortyfikacji stałych w państwie polsko-litewskim w XVII wieku*, Toruń 1998. In the book, the author points out that in the Republic of Poland no fortresses understood as “large, strongly fortified bastions of the city” developed in the seventeenth century. Instead, there were different types of fortifications used, with very different formal and legal status, which were part of the “partial systems”. Ibidem, pp. 327–328.

<sup>14</sup> D. Parrot, *The Utility of Fortifications in Early Modern Europe: Italian Princes and Their Citadels, 1540–1640*, “War in History” 2000, no. 7/2, pp. 127–153; E. Swart, “Qualifications, knowledge and courage”..., pp. 47–70. The development of the fortifications enabled even several hundred garrisons to defend themselves effectively against the many thousands of troops besieging the fortress. M. Kingra, *The Trace Italienne and the Military Revolution during the Eighty Years’ War, 1567–1648*, “The Journal of Military History” 1993, no. 3 (57), pp. 437 ff.

<sup>15</sup> At the end of the 16th and in the first quarter of the 17th century, the siege art of cutting off defenders from outside help developed mainly in the Netherlands. This was done by means of circulation, i.e. a fortified line directed against the fortress in order to protect against excursions. The siege was coming out of circulation. In addition, a countertable line was built – i.e. defensive fortifications directed outside of the fortress, in order to protect against possible relief. This solution was known as early as in antiquity, but it was used again during the 80-year war. See D.R. Lawrence, *The Complete Soldier: Military Books and Military Culture in Early Stuart England, 1603–1645*, Leiden 2009, pp. 335–336.

to the city from the coast (Figure 1).<sup>16</sup> As a result, the Spanish crew capitulated after a two-month siege. Willem Lodewijk van Nassau-Dillenburg assessed the contemporary events that the methods and actions of war used at the time went beyond primitive violence, and this siege is a clear example of the use of science and ancient martial techniques, which had been ridiculed by many commanders before.<sup>17</sup>



Figure 1. Siege and capture of Geertruidenberg from 1593. Figure Jacob de Gheyn (II) based on a drawing by Giovaia Battista Boazio, text by Petrus Hogerbeets (700 × 550 mm)

Rijksmuseum, Amsterdam, RP-P-OB-80.138,

<http://hdl.handle.net/10934/RM0001.COLLECT.448716> (public domain).

<sup>16</sup> Ch.M. Klinkert, *Nassau in het nieuws: nieuwsprenten van Maurits van Nassaus militaire ondernemingen uit de periode 1590–1600*, Zutphen 2005, pp. 142–143, 262, Figure 37.

<sup>17</sup> R. Fruin, *Tien jaren uit den Tachtigjarigen Oorlog 1588–1598*, Den Haag 1899, pp. 131–132.



On a wider scale, the appearance of maps and plans published in the form of drawings in Western Europe occurred in the 1620s. Of course, the main role is played here by the journey of Prince Władysław Waza with a large magnate and noble procession around Europe in the years 1624–1625.<sup>18</sup> Apart from the educational, tourist and political aspect, it is worth emphasizing its contribution to the material culture. The trip was a very expensive undertaking with the duke himself incurring expenses of 170,000 zloty<sup>19</sup> and 12,000 zloty in Hungary, to which we must add the costs incurred by the magnates accompanying the king.<sup>20</sup> Unfortunately, the bills from the prince's journey have not survived, however, as Juliusz Chrościcki points out, part of this sum was invested into works of art – jewels, medals, portraits. During the trip, contracts for further huge amounts were also concluded (contracts for 28,215 florins were signed with weavers in Brussels).<sup>21</sup>

Undoubtedly, there was a fraction of this sum allocated for the purchase of works on military themes – books and engravings. There was also an excellent opportunity for this – the prince's visit to the Spanish army besieging Breda at the end of September 1624.<sup>22</sup> The official, solemn meeting of Władysław Waza with Ambrosio Spinola took place on 26 September in the evening. The main Spanish camp and the system of fortifications were observed very carefully for three days from 27 to 29 September 1624. During these days, the Prince personally went around and watched most of the camps, the blockhouses and the circumvallation and contravallation lines for 12 hours. From the perspective of the Polish and Lithuanian nobility, this journey became part of the canon of foreign educational travels, in which, one of the key elements was to learn about Western European military camps advancement.

<sup>18</sup> Together with Prince Władysław, a 50-person procession was traveling, which consisted of such eminent people as Albrycht Stanisław Radziwiłł, Stefan Pac, Łukasz Żółkiewski, Gerhard Denhoff, Adam Kazanowski, Samuel Rylski. A. Przyboś, *Wstęp*, in: *Podróż królewicza Władysława Wazy do krajów Europy Zachodniej w latach 1624–1625 w świetle ówczesnych relacji*, ed. A. Przyboś, Kraków 1977, pp. 17–18.

<sup>19</sup> Money of account: 1 Polish zloty = 30 groshes.

<sup>20</sup> Władysław's guardian – Albrycht Stanisław Radziwiłł assessed the costs incurred at 100 000 Polish zloty. A.S. Radziwiłł, *Pamiętnik o dziejach w Polsce*, vol. 2, 1637–1646, tłum. A. Przyboś, R. Żelewski, Warsaw 1980, p. 311.

<sup>21</sup> J.A. Chrościcki, *Wizerunki królewicza Władysława Zygmunta Wazy z podróży (1624–1625)*, "Rocznik Historii Sztuki" 1988, no. 17, pp. 211–212; *Podróż królewicza Władysława...*, p. 49.

<sup>22</sup> General characteristics: S. Kot, *Polen in Breda in de 17<sup>e</sup> eeuw.*, "Jaarboek De Oranjeboom" 1954, no. 7, pp. 92–94.

A momentous event took place on 28 September, when a war council was convened to discuss further fortification activities. "They also advised the Prince, who when he said his sentence, they approved it and now they threw it there, calling it *forte del principe di Polonia*".<sup>23</sup> For this type of meeting, it was necessary to use cartographic sources which were not only familiarised with by the Polish guests but also copies of them were given or made for further analysis. It is characteristic, however, that in the figures depicting this event, there are no fortifications named according to the source mentioned, although the person of the Polish prince himself is accented (Figure 2).<sup>24</sup> Hence, the conclusion that Władysław's proposal was accepted only courteously, while in reality another solution was applied.

The arrival of Prince Władysław's entourage to the camp was eagerly exhibited by the creators of engravings presenting the siege of Breda. The greeting was always shown near Francisco Dada's rampage by the so-called German fortifications. This is where the meeting of Frans Hogenberg (*Beleg van Breda door Spinola* – Figure 2A), Jacob van der Heyden (*Breda Ab Excellentiss. March. Ambr. Spinola nomine Catholici Regis obsessa, cum oppositis Illustriss* – Figure 2B) and Claes Janszoon Visscher (*Beleg van Breda, 1624–1625* – Figure 2C).<sup>25</sup>

It is almost certain that these graphics have arrived, probably in more copies, at Władysław Waza or directly at the Warsaw court.<sup>26</sup> This is evidenced by the

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<sup>23</sup> *Podróż królewicza Władysława...*, pp. 182–190 (quoted p. 188). A similar description of visiting the fortifications: H. Hugo, *Obsidio Bredana armis Philippi IV. auspiciis Isabellae duct Ambr. Spinolae perfecta*, Antverpiae 1626, pp. 34–36.

<sup>24</sup> This event was noted, among others, in the work of the Jesuit and military chaplain: H. Hugo, *Obsidio Bredana...*, pp. 34–35. The author identified the lunar eclipse with the arrival of the Prince and augured him with great military deeds and the defeat of the Port of Otto ("crescent" symbol). The arrival of the Prince and the review of the fortifications was also highlighted in Pedro Calderón de la Barca's play *El sitio de Berdá*. W. Folkierski, *Ślady podróży flandryjskiej królewicza Władysława (1624) w teatrze Calderona*, "Pamiętnik Literacki" 1935, no. 32, pp. 113–116; S.A. Vosters, *La rendición de Bredá en la literatura y el arte de España*, London 1973, pp. 8–9, 28–29, 120. See *Noue guerre di Fiandra dalli 21 luglio 1624 sino alli 25 d'Agosto 1625*, Venetia 1627, p. 15.

<sup>25</sup> It is regrettable that the Polish procession, which Jacques Callot drew with interest, was not placed in the most important ricin of the siege of Breda. These drawings were issued: M. Thausing, *Livre d'esquisses de Jacques Callot, dans la collection Albertine à Vienne*, Wien 1880; comp. M. Sokołowski, *Z powodu portretów polskich we Florencyi, tudzież Zygmunta III i Konstancyi jego żony w Pinakotece monachijskiej o malarzach Soutmanie, Rubensie i Callocie*, "Sprawozdania Komisji do Badania Historji Sztuki w Polsce" 1903, no. 7/3, p. CXXXII.

<sup>26</sup> J.A. Chrościcki, *Wizerunki królewicza...*, pp. 214–218, where the author presents engravings showing the figure of the Prince, which were created during the journey. The artists tried to take advantage of the arrival of the retreat and created (often in a hurry) their own engravings, which were to bring them financial gratuities.

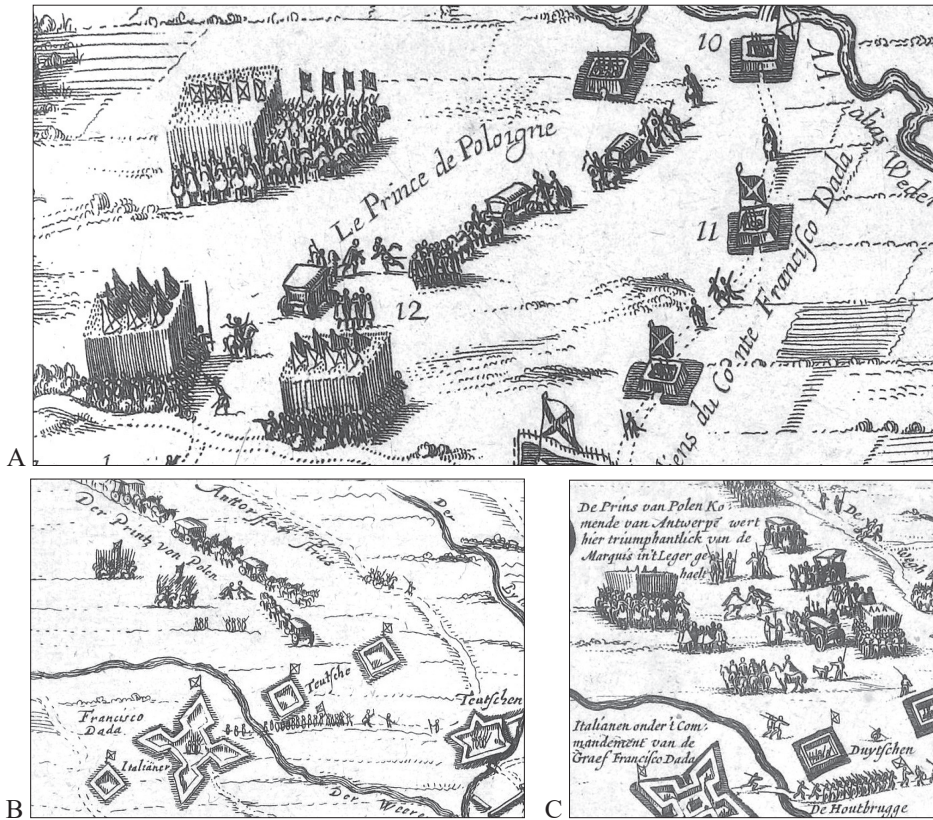


Figure 2. Welcome by Ambrosio Spinola to King Władysław Waza on 26 September 1624. A – Picture by Frans Hogenberg, *Beleg van Breda door Spinola*, circa 1625–1627; B – Jacob van der Heyden, *Breda Ab Excellentiss. March. Ambr. Spinola nomine Catholici Regis obsessa, cum oppositis Illustriss*, I 1625; C – Claes Janszoon Visscher, *Beleg van Breda*, 1624–1625, about 1624–1625,

<http://hdl.handle.net/10934/RM0001.COLLECT.442293>;

<http://hdl.handle.net/10934/RM0001.COLLECT.458712>,

<http://hdl.handle.net/10934/RM0001.COLLECT.392440>. Rijksmuseum Amsterdam:

RP-P-OB-78.785-395; RP-P-OB-81.097, RP-P-AO-16-110 (public domain).

business model of the ‘then’ publishers of maps and plans.<sup>27</sup> Cartographic services in the first quarter of the 17th century were becoming more common and affordable. For 12 guilders (7.2 guildens), the publishers accepted drawings from

<sup>27</sup> In the next two paragraphs, I convert currencies based on work: W.P. Guthrie, *The Later Thirty Years' War: From the Battle of Wittstock to the Treaty of Westphalia*, London 2003, p. 34.



random people, which they were obliged to transfer onto copperplates. An important strategy of the publishers of maps was to send them to influential people or institutions with the hope of being rewarded. Nicolaes Geelkerck received 48 guilders (28.8 guldens) from Bergen op Zoom and two pounds (13 and 1/3 guldens) from Middelburg for the 1622 siege plan of Bergen op Zoom.<sup>28</sup> The location of the figure of Prince Wladyslaw, as well as the information about this event constituting the description for the figure, undoubtedly prompted the publishers to send them to the Republic (Figure 2).<sup>29</sup>

Of course, there were still great cartographic projects concerning the fortifications and the sieges. The order of Archduchess Isabella Klara Habsburg for a drawing showing the Spanish triumph at Breda was unique. Jacques Callot was to receive 850 escudes (over 1,416 guldens) for his work.<sup>30</sup> However, 11 years later, the Dutch army reclaimed Breda – instead of paying out such huge sums of money, they only preferred to guarantee publishers to buy a certain number of copies. Yes Balthasar Florisz van Berckenrode received 336 guldens for 28 prints of the Breda siege in 1637 from the Dutch military budget (12 guldens each consisting of nine prints of 40 × 54 cm).<sup>31</sup> For comparison purposes, it should be noted that a typical design of an ordinary city plan cost about 200 guldens.<sup>32</sup>

When the royal procession was approaching Breda, and the Spanish army greeted him with intense shelling of the city, the hustle was heard by a nobleman from Wielkopolska, Krzysztof Arciszewski, who was serving in the enemy Dutch

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<sup>28</sup> H. Helmers, *Cartography, War Correspondence and News Publishing: The Early Career of Nicolaes van Geelkercken, 1610–1630*, in: *News Networks in Early Modern Europe*, eds. J. Raymond, N. Moxham, Leiden–Boston 2016, pp. 355–356, 362–263.

<sup>29</sup> The principle of reciprocity between rulers and magnates to whom the works were dedicated or given has not yet been explored. In the light of the general public's opinion, such a person should thank in a material way for the honour he has done. However, these did not have to be significant sums. It is worth noting that 10 Polish zloty was paid in the court accounts for 1612. "Cudzoziemcowi, który wiersze niemieckie JK Meci dedicował" see the Jagiellonian University Library, Berol. Ms. Slaver. Fol. 5, k. 29.

<sup>30</sup> The payment was to be made in 10 instalments, but Spinola paid Callot an advance of 550 escudes. S. Zurawski, *New Sources...*, p. 623.

<sup>31</sup> It is worth noting that a similar form of purchase was made by Jan Zamoyski. He sent J. Lauro 300 florins with the obligation to provide 100 copies of engravings showing the siege of Wolmar and Felin each. J.A. Chrościcki, *Sztuka i polityka: funkcje propagandowe sztuki w epoce Wazów 1587–1668*, Warszawa 1983, p. 85.

<sup>32</sup> 300 guilders (or 180 guldens) were given to Nicolaes Geelkerck by the city council of Aachen for preparing the town plan in 1610. This was equivalent to the annual salary of a military engineer in the second quarter of the 17th century. E. Swart, "Qualifications, knowledge and courage"..., pp. 62–63.

army. He was the son of the Arian activist Eliasz from Śmigiel.<sup>33</sup> He was educated in Śmigiel and then studied at the University of Frankfurt (Oder) (1608). He was in the circle of Krzysztof Radziwiłł's servants and during the war in Inflants in 1622 he was used by the Field Hetman of the Grand Duchy of Lithuania for intelligence activities.<sup>34</sup> At that time, he had to have had his first serious contact with military cartography, because the activity entrusted to him consisted of collecting all information about the enemy's actions<sup>35</sup>. This concerned in particular the fortification activities at Livonian castles and the possible establishment of new fortifications.<sup>36</sup> We know that in July a map showing the siege of Mittawa by the Swedish army was created.<sup>37</sup>

After the murder of Kasper Jaruzel Brzeźnicki, Arciszewski was sentenced to outlaw, which forced him to emigrate. He decided to go to the United Provinces. There, as a client of Krzysztof Radziwiłł (from whom he was paid), he studied engineering and artillery, but also served in the Dutch army or the Dutch West India Company. He was sharing many very reliable and substantive war tactics with the magnate, an important aspect of them are the maps attached to the letters, which were to illustrate the events described. This practice was known among Polish and Lithuanian elites, for example; the battle plan was requested by Anna Wazówna Jan Karol Chodkiewicz in 1605.<sup>38</sup> In 1616, Alexander Gosiewski added a map to his correspondence presenting fortification activities around Smolensk. Such a letter to King Zygmunt III Waza and Lithuanian field hetman Krzysztof

<sup>33</sup> Latest biography: U. Augustyniak, *W służbie hetmana i Rzeczypospolitej. Klientela wojskowa Krzysztofa Radziwiłła (1585–1640)*, Warszawa 2004, p. 309.

<sup>34</sup> *Memoriał służce memu urodzonemu Krzysztofowi Arciszewskiemu*, Archiwum Główne Akt Dawnych, Archiwum Radziwiłłów, dz. IV, sygn. 309, pp. 32–33. In 1622 the hetman assigned 250 zloty to K. Arciszewski for this purpose. K. Radziwiłł to K. Arciszewski, Kokenhauzen 29–30 VIII 1622, ibidem, p. 15.

<sup>35</sup> K. Radziwiłł do K. Arciszewskiego, Birże 1 IX 1622, Archiwum Główne Akt Dawnych, Archiwum Radziwiłłów, dz. IV, sygn. 309, p. 17.

<sup>36</sup> *Memoriał służce memu urodzonemu Krzysztofowi Arciszewskiemu*, Archiwum Główne Akt Dawnych, Archiwum Radziwiłłów, dz. IV, sygn. 309, p. 33.

<sup>37</sup> K. Radziwiłł do Zygmunta III Wazy, Mitawa 25 VII 1622, Archiwum Główne Akt Dawnych, Archiwum Radziwiłłów, dz. IV, file 1a, k. 215v; H. Wisner, *Rzeczpospolita Wazów*, vol. II: *Wojsko Wielkiego Księstwa Litewskiego – dyplomacja – varia*, Warszawa 2004, pp. 212–213.

<sup>38</sup> Anna Waza do J.K. Chodkiewicza, Kraków 21 X 1605, Biblioteka Polska w Paryżu, rkps. 56/36, pp. 303–304. On the basis of the drawing sent later, a drawing depicting the battle of Kircholm was created. J. Theodoric, Z. Zygulski, *Dwugłós o bitwie pod Kircholmem. Historia i ikonografia*, "Rocznik Historii Sztuki" 1999, no. 24, pp. 101–103.

Radziwiłł, undoubtedly, it had to reach Jan Karol Chodkiewicz as well.<sup>39</sup> Six years later, Krzysztof Radziwiłł passed on a letter to the field writer of the Grand Duchy of Lithuania, who was going to Warsaw – in this letter he was describing the siege at Mittawa (*a map or a counter-context of the siege of Nitawa, the location of our and the Swedish camps, gallows and forests, rivers and fields*).<sup>40</sup>

In a letter dated 12 January 1625, Krzysztof Arciszewski characterizes the actions of the Spanish army besieging Breda. He then presents the decision of the Dutch to station at the camp at Roosendaal during the winter season, which was the reason they hoped to cut off Ambrogio Spinola's army from supply.<sup>41</sup> In addition to the descriptive information, Arciszewski also sends a plan to siege Breda. *To show you the way of this siege, I'm sending out maps, from which your princely majesty will easily understand. The last works concerned the heap the dyke, which is supposed to stop the water so that the enemy camp is flooded, but Spinola [the Spanish] is also piling up the second dyke opposite.*<sup>42</sup> Thus, the field hetman of the Grand Duchy of Lithuania received a cartographic source which presented the most innovative siege of the world at that time. I exclude Arciszewski from making such a map himself. There was no such need, due to the prevalence of existing cartographic sources.

What map could Krzysztof Arciszewski have sent? The siege of Breda resulted in many graphics and paintings. Nowadays, the most famous are those that were created several years after the event<sup>43</sup>. This is due to the fact that after the victorious siege, beautifully finished, usually large, often coloured maps were issued for propaganda purposes.<sup>44</sup> The most famous images are of course the map of

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<sup>39</sup> A. Gosiewski to A. Boboli, Twerdelica 30 XI 1616, Svenska Riksarkivet (Stockholm), Skoklostersamlingen, E 8600, k. 72v; A. Gosiewski do K. Radziwiłła z Twerdylicy 12 XII 1616, Archiwum Główne Akt Dawnych, Archiwum Radziwiłłów, dz. V, sygn. 4560/II, p. 20.

<sup>40</sup> K. Radziwiłł do Zygmunta III Wazy, Mitawa 25 VII 1622, Archiwum Główne Akt Dawnych, Archiwum Radziwiłłów, dz. IV, sygn. 1a, k. 215v. A similar practice took place in Sweden, where handwritten maps were attached in correspondence. J. Rudbeckius do M.J. Zabrawsynthio, Pskov 3 XI 1615, in: J. Hallenberg, *Svea rikets historia under Konung Gustav den Stores regering*, vol. 4, Stockholm 1794, pp. 1005–1011, map after p. 1010. A handwritten version has been preserved: Uppsala universitetsbibliotek, Ms E 369, the cards are not pegged (map entitled “Pleschovia Obsidio”).

<sup>41</sup> O. van Nimwegen, *The Dutch Army...*, p. 55.

<sup>42</sup> K. Arciszewski do K. Radziwiłła, Haga 12 I 1625, Archiwum Główne Akt Dawnych, Archiwum Radziwiłłów, dz. V, sygn. 190, pp. 48–51 (quoted: p. 50).

<sup>43</sup> Review of cartographic works concerning the siege of Breda in the years 1624–1625: S.A. Vosters, *La rendición...*, pp. 78–90.

<sup>44</sup> H. Helmers, *Cartography...*, pp. 362–363.

Joan Bleau and Jacques Callot – but they only show the final phase of the siege.<sup>45</sup> Also during siege operations, maps and handwritten plans were often transferred to copperplates. That is why Arciszewski did not have to possess maps and manuscript plans, but rather bought (received or possibly drew) engravings made at the turn of 1624 and 1625.<sup>46</sup> It should be noted that the mechanism of drawing maps and plans was not a rare situation. For example, Józef Naronowicz-Naroński drew the siege of Breda in 1637. The model was a drawing by Claes Janszoon Visscher (II) entitled *Belegering en verovering van Breda*.<sup>47</sup>

The necessity to use the latest available works resulted from continuous fortification and hydro-engineering activities, cartographic works quickly became obsolete, as Arciszewski stated himself.<sup>48</sup> That is why I don't think that the plan can omit the details noted in the correspondence (especially the dykes that are buried). Therefore, I believe that Krzysztof Arciszewski used Jacob van der Heyden's engraving or its drawing archetype (see Figure 3).<sup>49</sup> The publication was published in January 1625 in the form of an ephemeral print. On a single card at the top there are graphics, while at the bottom there is a description of the siege ended on December 25, 1624. In the upper left corner of the engraving there is the arrival of the Polish prince Władysław Waza, which was also noted in his letter to Prince Radziwiłł by Krzysztof Arciszewski (Figure 2B). In the lower right corner, on the other hand, the camp of Maurice of Orange was presented, which arrived with the army in the area around Breda at the end of September, and there

<sup>45</sup> See S. Zurawski, *New Sources...*, pp. 621–639.

<sup>46</sup> Arciszewski was eager to use leaflets and newspapers published in the Netherlands to provide information. For example: “Oh Prince His Majesty our Polish, the evil ones were here to spread the news, now others are printing”. K. Arciszewski do K. Radziwiłła, Haga 18 II 1625, Archiwum Główne Akt Dawnych, Archiwum Radziwiłłów, dz. V, sygn. 190, p. 53. “Other news as I am printed. P. Winold will translate them, if in Vilnius Ks[iżęca] M[iłość] is found”. K. Arciszewski do K. Radziwiłła, Haga 8 IV 1625, Archiwum Główne Akt Dawnych, Archiwum Radziwiłłów, dz. V, sygn. 190, p. 58.

<sup>47</sup> J. Naronowicz-Naroński, *Optica oro Perspectiva (...) also peculiarly architectura militaris, i.e. the wartime buildings*, Biblioteka Uniwersytetu Warszawskiego, rkps. 1954, p. 116; J. Naronowicz-Naroński, *Budownictwo wojenne*, ed. T.M. Nowak, Oświęcim 2016, p. 187. See <http://hdl.handle.net/10934/RM0001.COLLECT.461724> (10.02.2019).

<sup>48</sup> The changes are perfectly visible in the drawings of Theodor Galle attached to the work: H. Hugo, *Obsidio Bredana*, p. or after pp. 13, 27, 96, 128. See S. Zurawski, *New Sources...*, pp. 630, 633–636.

<sup>49</sup> J. van der Heyden, *Breda Ab Excellentiss. March. Ambr. Spinola nomine Catholici Regis obsessa, cum oppositis Illustriss; Mauritii Nassouii Castris*, Germany 1625; see <https://www.rijksmuseum.nl/nl/collectie/RP-P-OB-81.097>.

is also a bottleneck which the Spaniards created to protect themselves from the approaching relief, as detailed in the letter.<sup>50</sup>



Figure 3. A drawing of the siege of Breda, which was sent by Krzysztof Arciszewski to Krzysztof Radziwiłł

Jacob van der Heyden, *Breda Ab Excellentiss. March. Ambr. Spinola nomine Catholici Regis obsessa, cum oppositis Illustriss. Mauriti Nassouii Castris*, Rijksmuseum Amsterdam, RP-P-OB-81.097; <http://hdl.handle.net/10934/RM0001.COLLECT.458712> (public domain).

Arciszewski, in addition to the plans of a Breda siege, in April, also sent a smaller scale map showing the operational activities carried out by the Spanish and Dutch armies to the prince. *Due to changes in the location of the camps, I am sending a map of the Breda area with all distances and well noted places. This way, if anything comes to the Duke's ears, You will easily find a new camp site and also find out how the Dutch want to sink the Spanish camp.*<sup>51</sup> The correspond-

<sup>50</sup> K. Arciszewski to K. Radziwiłła, Haga 12 I 1625, 1625 Archiwum Główne Akt Dawnych, Archiwum Radziwiłłów, dz. V, no. 190, p. 49: 'we heard a salvo from the cannons, from muskets, as the king of the JM of our Polish Spinola in the army he greeted the camp'; 'the camp was formed. In which we stood three Sundays, the army did nothing on both sides (...). The enemy spoiled our impetus with water, which he sank the field between himself and us by digging a dyke, and in that place where the water from us didn't flood the fortification'.

<sup>51</sup> K. Arciszewski to K. Radziwiłła, Haga 8 IV 1625 Archiwum Główne Akt Dawnych, Archiwum Radziwiłłów, dz. V, sygn. 190, p. 58.



ence shows integrated spatial thinking combining tactical maps with medium and large-scale maps. The title of the work is not given. However, if we take into account the fragment in which the author writes that on the sent map there are recorded distances between cities, it is likely that the archetype or the drawing of *Baronye van Breda* Niclaes Geelkercken itself is mentioned (Figure 4).<sup>52</sup> This belief is also confirmed by the fact that Geelkerck was personally present at the siege of Breda, and this map was ordered for the Dutch army.<sup>53</sup> So Arciszewski had easy access to it.



Figure 4. A map of the Breda area sent by Krzysztof Arciszewski to Krzysztof Radziwiłł

Jan van Bergen (author), Niclaes Geelkerck (publisher), *Baronye van Breda*. ‘T welck is een part van Brabandt, daer in te sien is de teghenwoordighe belegeringhe des Iaers 1624. ende 1625, [Netherlands 1625]. Rijksmuseum Amsterdam, RP-P-AO-16-111; <http://hdl.handle.net/10934/RM0001.COLLECT.363727> (public domain).

<sup>52</sup> It should be noted that it is not known in which month of 1625 this figure appeared in print. If it was printed at the beginning of the year Arciszewski could buy it and send it to Krzysztof Radziwiłł. See Rijksmuseum Amsterdam, <http://hdl.handle.net/10934/RM0001.COLLECT.363727> (10.02.2019). Niclaes Geelkerck’s cartographic work is presented in more detail: J. Keuning, *Nicolaas Geelkercken*, “Imago Mundi” 1954, no. 11/1, pp. 174–177.

<sup>53</sup> H. Helmers, *Cartography...*, pp. 353–373.

Krzysztof Arciszewski's correspondence is a perfect illustration of the phenomenon described by Helmer Helmers. He noted that the engravings combined with the situational description of warfare enabled the European public to observe the ongoing wars – military manoeuvring operations, marches and fortification progress. The speed of information flow and the timeliness of the figures was very important for the recipients.<sup>54</sup> The title case of this article is also included here. It is characteristic because the recipient was Krzysztof Radziwiłł, the commander of the Lithuanian army, who lived in Birża – by 1,800 kilometres (counted by road line) from Breda. The differences should also be indicated. The distance and the lack of extensive mail meant that letters arrived after a very long time, often disappeared along the way. We know some information about sending and receiving letters concerning the war situation in the Netherlands. One of Hieronim Pietrzecki's shipments reached Jan Stanislaw Sapieha after 89 days.<sup>55</sup> Knowing that it was broadcast with Leuv, and received in Inflants, near the village of Walmojza (now Valle), we know that the average daily flow of information was about 23.6 km.<sup>56</sup> In turn, Krzysztof Arciszewski received the letter after 81 days, as a result of which the daily pace was about 24.7 km.<sup>57</sup> It should be assumed that, on average, the consignment arrived in the Grand Duchy of Lithuania from the Netherlands after 80 days and the average daily journey speed was about 24 km. This is not a high value, but it does not differ significantly from other mail items sent on postal lines. In the first half of the 17th century, the speed of postal correspondence from the nunciature in Warsaw to Rome was 40 km a day

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<sup>54</sup> H. Helmers, *Cartography...*, pp. 358–359. The author quotes an inscription from a graphic *Afbeelding van Gulik naer't leven geconterfeyt*, Amsterdam: Nicolaes van Geelkercken, in which the publisher informs that the source was created by hand. Thanks to this, as the inscription says, the reader is provided with great entertainment, without the danger of being shot.

<sup>55</sup> H. Pietrzecki do J.S. Sapiehy, Lovanium 8 X 1625, Lietuvos mokslų akademijos Vrublevskių Biblioteka (Vilnius), f. 139, nr 3348, k. 1–2v.

<sup>56</sup> A. Ziober, *Po klęsce pod Walmojzą. Korespondencja Lwa Sapiehy z synem Janem Stanislawem z pierwszej połowy 1626 roku*, "Wieki Stare i Nowe" 2016, no. 11, pp. 34–47. I've calculated the way according to the information contained in the letter: H. Pietrzecki do J.S. Sapiehy, Lovanium n.d., Львівська Наукова Бібліотека НАН України ім. В. Стефаника, f. 103, teka V/133, in which we can find a description of the safest and most commonly used travellers' route (also used for correspondence – from Leuven to Cologne, Frankfurt (Oder), Leipzig and Wrocław). I assumed that I would calculate the distance by the shortest land road available. It is obvious that in reality the shipment had to travel much longer, if only because of the fact that the addressee was commanding the Lithuanian army in Inflants at that time and his place of stay often changed. To 1,906 km I estimate another 10%, which means that the consignment has travelled about 2,100 km.

<sup>57</sup> K. Arciszewski do K. Radziwiłła, Haga 12 I 1625, Archiwum Główne Akt Dawnych, Archiwum Radziwiłłów, dz. V, sygn. 190, p. 48.

in the summer, and in winter it fell to 32.8 km.<sup>58</sup> Of course, we also had extreme cases, the fastest correspondence arrived after 41 days, but there were more frequent perturbations along the way and then the parcel was received after 30, 43, 65 weeks, and sometimes even after about a year.<sup>59</sup>

The described case of Krzysztof Arciszewski is an explanation of the phenomenon, not an exception. To illustrate this, it is worth quoting the sons of the Grand Hetman of Lithuania's Leo Sapieha studying in the Netherlands at the same time. During their studies in Cologne, Leuven and Brussels, Kazimierz Lew and Krzysztof Michał sent letters with detailed information about military events to their father and step-brother.<sup>60</sup> They described the situation in Breda with particular details, reporting on the fortification progress, ruses and military potential on both sides. They visited fortresses, ports and cities, and in Brussels they learned the basics of military engineering. The most exciting experience of the brothers was to observe the surrender of Breda.<sup>61</sup> They arrived in the Spanish camp the day before, so they witnessed all the ceremonies. When informing about this event, however, they emphasized that the: *The fortifications of both sides*

<sup>58</sup> Calculation based on data collected by Tadeusz Fitych. In the summer, the parcels typically reached Rome after, on average – 41 days, and in the winter season it took nine days more. The couriers travelled almost 1,640 km. T. Fitych, *Personel i organizacja nuncjatury Giovanniego Battisty Lancellottiego 31-szego posła apostolskiego w Polsce (1622–1627)*, “Saeculum Christianum” 2001, no. 8/1, p. 76.

<sup>59</sup> K.M. Sapieha i K.L. Sapieha do J.S. Sapiechy, b.m.w. 24 VIII 1626, Львівська Наукова Бібліотека НАН України ім. В.Стефаника, f. 103, teka V/97; K.M. Sapieha i K.L. Sapieha do J.S. Sapiechy, Lovanium 7 X 1625, Львівська Наукова Бібліотека НАН України ім. В.Стефаника, f. 103, teka IV/58; K. Arciszewski do K. Radziwiłła, Haga 12 I 1625, Archiwum Główne Akt Dawnych, Archiwum Radziwiłłów, dz. V, sygn. 190, p. 48; K. Arciszewski do K. Radziwiłła, Haga 8 IV 1625, Archiwum Główne Akt Dawnych, Archiwum Radziwiłłów, dz. V, sygn. 190, p. 56; K. Arciszewski do K. Radziwiłła, Haga 12 VII 1625, Archiwum Główne Akt Dawnych, Archiwum Radziwiłłów, dz. V, sygn. 190, p. 60.

<sup>60</sup> K.M. Sapieha i K.L. Sapieha do J.S. Sapiechy, Kolonia 28 IV 1625, Львівська Наукова Бібліотека НАН України ім. В.Стефаника, f. 103, teka IV/2; K.M. Sapieha i K.L. Sapieha do J.S. Sapiechy, Lovanium 7 V 1625, Львівська Наукова Бібліотека НАН України ім. В.Стефаника, f. 103, teka IV/5; K.M. Sapieha i K.L. Sapieha do L. Sapiechy, Lovanium 7 X 1625, Львівська Наукова Бібліотека НАН України ім. В.Стефаника, f. 103, teka IV/51; K.M. Sapieha i K.L. Sapieha do J.S. Sapiechy, Lovanium 7 X 1625, Львівська Наукова Бібліотека НАН України ім. В.Стефаника, f. 103, teka IV/58; K.M. Sapieha i K.L. Sapieha do J.S. Sapiechy, Kolonia 17 XI 1625, Львівська Наукова Бібліотека НАН України ім. В.Стефаника, f. 103, teka IV/61; K.M. Sapieha i K.L. Sapieha do J.S. Sapiechy, Lovanium n.d., Львівська Наукова Бібліотека НАН України ім. В.Стефаника, f. 103, teka IV/63; K. Sapieha do J.S. Sapiechy, Lovanium 19 XI 1626, Львівська Наукова Бібліотека НАН України ім. В.Стефаника, f. 103, teka V/122.

<sup>61</sup> H. Piestrzecki do J.S. Sapiechy, Lovanium n.d., Львівська Наукова Бібліотека НАН України ім. В.Стефаника, f. 103, teka V/133.



Figure 5. Fortifications, the construction of dykes and floodplains and the Breda fortress and surrounding camps

Theodora Galle, *Obsidio Bredae Perfecta*, in: H. Hugo, *Obsidio Bredana armis Philippi IV. auspiciis Isabellae duct Ambr. Spinolae perfecta*, Antverpiae 1626, p. 126 (extract).

are not described in the letter, because Spinola's confessor is about to publish a book or a Jesuit diary together with plans and dimensions, which we will send out immediately after publication.<sup>62</sup> The brothers obviously referred to the person of Herman Hugo,<sup>63</sup> who in early 1626 published in Antwerp the work of *Obsidio Bredana armis Philippi IV. auspiciis Isabellae duct Ambr. Spinolae perfecta*, in which there were excellent engravings of Theodor Galle depicting fortifications, the construction of dykes and floodplains and the Breda fortress and surrounding camps (Figure 5). The sons of the Grand Hetman of Lithuania did not stop with theory and observation. In particular, Krzysztof Michał Sapieha was an enthusiast of camp life, fortification work and hydro-engineering and asked his father to agree to practical lessons in Spanish military camps in order to "practice the military work".<sup>64</sup>

<sup>62</sup> К.М. Сапієха і К.Л. Сапієха до J.S. Сапієху, Lovanium n.d., Львівська Наукова Бібліотека НАН України ім. В.Стефаника, f. 103, teka IV/63.

<sup>63</sup> B. De Groof, *A noble courtier and a gentleman warrior: Some aspects of the creation of the Spinola image*, in: *Narratives of Low Countries History and Culture: Reframing the Past*, eds. J. Fenoulhet, L. Gilbert, U. Tiedau, London 2016, p. 27.

<sup>64</sup> К. Сапієха до J.S. Сапієху, Lovanium 28 IX 1626, Львівська Наукова Бібліотека НАН України ім. В.Стефаника, f. 103, teka V/114; К.М. Сапієха до J.S. Сапієху, Lovanium 19 XI



Returning to the cartographic materials collected by Lithuanian Field Hetman Krzysztof Radziwiłł, it should be emphasized that he had much more works on the sieges from the Netherlands than results from the correspondence with Krzysztof Arciszewski. This is indicated by the magnate's mobility inventory made on 15 July 1633, in which it was recorded:

- *Map Fourth, which expressed siege of Boldak, behind the hermitage of Hendrych Fryderyk, the Aurasian graf from Nasan in 1629;*
- *Map Fifth, which expresses the Balduk's 1629 occupation.*<sup>65</sup>

This source refers to the activities of the stadtholder Frederick Henryk Oranski (29 I 1584 – 14 III 1647) during the siege of 's-Hertogenbosch (after Fr. Boisle-Duc, and after the Spanish Bolduque) in 1629. The author of the inventory used the titles of maps to paraphrase them into Polish. Therefore, it is almost certain that the first map given is a print entitled *Buscoducum Obsessum a Frederico Henrico Pr. Auransiae Com. De Nassau etc. A° 1629* (see Figure 6). It is worth mentioning that in Duke Radziwiłł's inventory – this object was listed in the category “different images and contexts” – and therefore it was a map glued and hung on the wall.<sup>66</sup>

There is a chance that these maps could have been sent by Krzysztof Arciszewski before he sailed to Brazil in November 1629. We know that he participated in 1629 in the conquest of the La Rochelle fortress with the French army, and then served with Frederick Henry of Orange during the conquest of s-Hertogenbosch.<sup>67</sup>

However, it is more likely that they were brought by Krzysztof's son, Janusz Radziwiłł, who at that time was peregrinating around Europe.<sup>68</sup> The siege of

1626, Львівська Наукова Бібліотека НАН України ім. В.Стефаника, f. 103, teka V/122; K. Sapięha do J.S. Sapięhy, Bruksela 13 VI 1627, Львівська Наукова Бібліотека НАН України ім. В.Стефаника, f. 103, teka VI/40; K. Sapięha i K.L. Sapięha do L. Sapięhy, Lovanium 1 VIII 1627, Львівська Наукова Бібліотека НАН України ім. В.Стефаника, f. 103, teka VI/48; W. Sokołowski, *Studia i peregrynacje Janusza i Krzysztofa Radziwiłłów w latach 1595-1603 (model edukacji syna magnackiego na przełomie XVI i XVII w.)*, “Rozprawy z Dziejów Oświaty” 1992, no. 35, p. 31.

<sup>65</sup> Archiwum Główne Akt Dawnych, Archiwum Radziwiłłów, dz. XXVI, sygn. 45, p. 91.

<sup>66</sup> Ibidem, p. 89.

<sup>67</sup> K. Arciszewski do K. Radziwiłła, Wicht 26 XI 1695, Archiwum Główne Akt Dawnych, Archiwum Radziwiłłów, dz. V, sygn. 190, p. 76; M. Paradowska, *Krzysztof Arciszewski: admirał wojsk holenderskich w Brazylii*, Warszawa 2001, pp. 48–50; A. Kraushar, *Dzieje Krzysztofa z Arciszewa Arciszewskiego*, vol. 1, Petersburg 1893, pp. 231–233.

<sup>68</sup> R.T. Tomczak, *Podróż młodego magnata do szkół – księżę Janusz Radziwiłł w cudzych krajach (1628–1633)*, in: *Spoleczne i kulturowe uwarunkowania edukacji Rzeczypospolitej XVI–XVIII wieku. Materiały z badań, część druga*, eds. K. Puchowski, J. Orzeł, Warszawa 2018, pp. 125–148.



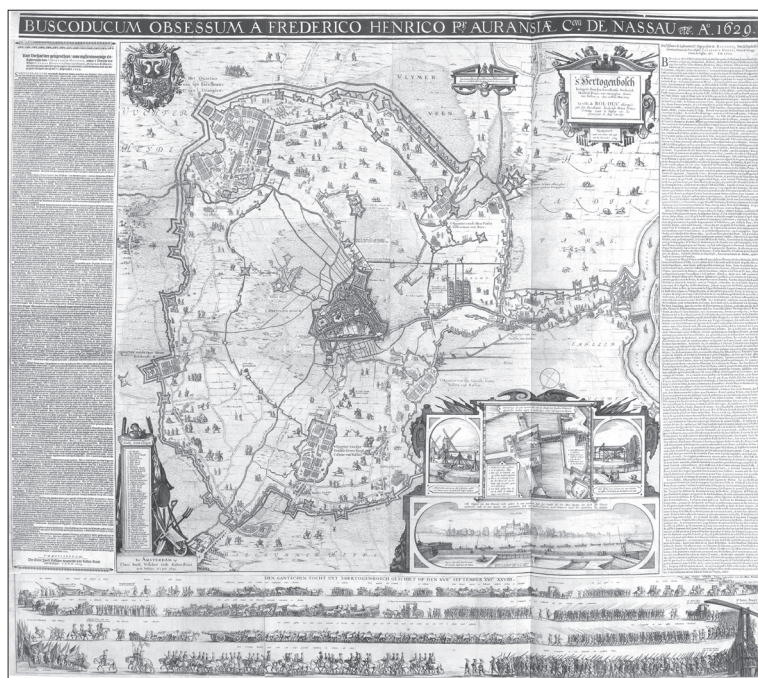


Figure 6. The map hung on the wall in the palace of Krzysztof Radziwiłł  
 Claes Janszoon Visscher, *Buscoducum obsessum a Frederico Henrico, pr. auranisae, com. de Nassau, etc. Ah. 1629*, Amsterdam 1629, Rijksmuseum Amsterdam, <http://hdl.handle.net/10934/RM0001.COLLECT.468324> (public domain).

s-Hertogenbosch had a sentimental meaning for Krzysztof Radziwiłł, as he himself travelled around Europe and participated for three months in this siege in 1603.<sup>69</sup> His son went on a trip abroad at the age of 16 at the turn of 1628 and 1629.<sup>70</sup> Of course, the aim of the peregrination, in addition to studying and renewing the friendships made a quarter of a century earlier by his father, was also military education.<sup>71</sup> Janusz Radziwiłł arrived in the United Province, or rather Leiden, only

<sup>69</sup> K. Radziwiłł do J. Radziwiłła, Heccegenbush 28 X 1603, Archiwum Główne Akt Dawnych, Archiwum Radziwiłłów, dz. IV, sygn. 297, p. 35; W. Sokołowski, *Studia i peregrynacje...*, p. 25.

<sup>70</sup> H. Wisner, *Lata szkolne Janusza Radziwiłła. Przyczynek do dziejów szkolnictwa kalwińskiego na Litwie w pierwszej połowie XVII wieku*, "Odrodzenie i Reformacja w Polsce" 1969, no. 14, pp. 193–194; E. Kotłubaj, *Życie Janusza Radziwiłła*, Wilno–Witebsk 1859, pp. 23–24.

<sup>71</sup> Departure plans were prepared much earlier. As early as 1625. Krzysztof Arciszewski recommended the Netherlands to his patron as an excellent area to learn about the latest military

in April 1631 and stayed in the city until the end of 1632.<sup>72</sup> During this time he spent four months in military camps, first of all with Frederick Henry the Duke of Orange in Heusden but also under s'Hertogenbosch.<sup>73</sup> A detailed analysis of this journey goes beyond the scope of the article; however, it is worth emphasizing that Janusz Radziwiłł made large purchases of books, including many on military subjects.<sup>74</sup> It is very likely that he bought or received the siege drawings of the Dutch fortresses as a gift. This significantly increased the number of maps and plans of military activities in Western Europe existing in the Republic of Poland.<sup>75</sup>

The frequency of importing purchased or copied maps and plans is confirmed by the information provided in the already analysed inventory of Krzysztof Radziwiłł. There is an inscription saying that there were numerous engravings coiled on a shaft in Lubcza Castle, which depicted *various Gustaws' victories* [Swedish – K.Ł.] *and Dutch* [Spanish and Dutch – K.Ł.]<sup>76</sup> Most of them were created or related to the war activities carried out in the 1720s, as it was noted that they were brought by Janusz Radziwiłł, who had recently returned from a trip. During his expedition, he drew 17 plans of siege himself.<sup>77</sup> There are many

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concepts. K. Arciszewski do K. Radziwiłła, Haga 8 IV 1625, Archiwum Główne Akt Dawnych, Archiwum Radziwiłłów, dz. V, sygn. 190, p. 56: “Father[iżę]ciu J[ego] M[iłość] Janusz would have a wonderful memorial if he had come here on holiday, so that he could see such wonderful aramids and the fortified camps, which are so wonderful, one can hardly see through the life of one man. And there are ways in which who has money (and even more so when who has royal recommendations), that securissime can reorder the Spanish camp everywhere”.

<sup>72</sup> T. Tomczak, *Podróż młodego magnata...*, pp. 130 ff.; M. Chachaj, *Zagraniczna edukacja Radziwiłłów od początku XVI do połowie XVII wieku*, Lublin 1995, pp. 81–82; M. Zachara, T. Majewska-Lancholc, *Instrukcja Krzysztofa II Radziwiłła dla syna Janusz*, “Odrodzenie i Reformacja w Polsce” 1971, no. 16, pp. 171–184. Towards the end of 1632, he was authorised to hold lectures on behalf of Władysław IV Vasa, King of the Republic of Poland, at the home of Fryderyk Henryk Oranski in The Hague, Izabela Klara Habsburg’s Infanta in Brussels and Charles I Stuart in London. U. Augustyniak, *In the service of the Hetman...*, p. 292.

<sup>73</sup> T. Tomczak, *Podróż młodego magnata...*, p. 133.

<sup>74</sup> M. Jarczykowa, *Książka i literatura w kręgu Radziwiłłów birżańskich w pierwszej połowie XVII wieku*, Katowice 1995, p. 46–47.

<sup>75</sup> The description of troops stationed near Breda on 25 May 1625 also reached the Republic of Poland. *Ordre zu marching*, Breda 2 V 1625, Riksarkivet (Stockholm), Extreanea IX Polen, 120, cards not pegged.

<sup>76</sup> Archiwum Główne Akt Dawnych, Archiwum Radziwiłłów, dz. XXVI, sygn. 45, p. 91.

<sup>77</sup> Janusz Radziwiłł used his cartographic and artistic skills through his entire life. He sketched not only panoramas and building plans, but also fortifications and city plans all by himself. Нацыянальны гістарычны архіў Беларусі (г. Мінск), ф. 694, оп. 1, no. 287, к. 1–47. Comp. [Wolkow M.] Волков Н.А., *Оборонительные сооружения Беларуси и Украины середины XVII века на рисунках Абрахама ван Вестерфельда и набросках из архива Радзивиллов в Минске, “Новые материалы по истории фортификации”* 2016, no. 2, pp. 40–52.

similar descriptions in the magnate's inventories, this one is distinguished by the fact that the number of objects can be directly identified with a particular peregrination, it also contains a clarification of the subject matter (military), which is rare in this type of sources. In my opinion, this source gives the rationale about the number of maps and plans of a military nature the magnate could have brought from the journey.

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From the perspective of the military authorities of the Crown and the Grand Duchy of Lithuania, the way of conducting wars following Western European patterns became increasingly attractive. The experience of military operations with Gdansk in the years 1576–1577, three expeditions to the Moscow Tsar (1579–1582), the siege of Krakow by Archduke Maximilian III Habsburg (1587), the war in Inflants (1600–1611), the siege of Smolensk (1609–1611). In all these conflicts, defending or conquering fortifications was a key element of the warfare. In the second decade of the 17th century, the strategy began to change and manoeuvring measures were introduced, involving the establishment of field fortifications (spurs), which limited the enemy's manoeuvrability.<sup>78</sup> The use of infantry and field fortifications intensified during the wars with Sweden conducted by the Grand Duchy of Lithuania (1621–1622, 1625–1626) and the Crown (1626–1629).<sup>79</sup> The conflicts with Sweden were the direct cause of the search for the latest military knowledge in the Netherlands. In the context of the changes taking place, the analysis carried out allows to draw the following conclusions and research theses.

1. The key role in transferring new solutions and ways of warfare was, of course, played by soldiers, and above all officers and engineers recruited from

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<sup>78</sup> K. Łopatecki, *Pierwszy poetycki traktat wojskowy z mapą – Jana Kunowskiego Odsiecz smoleńska. Wykorzystanie kartografii w działaniach operacyjnych (1616–1617)*, "Rocznik Lituaniistyczny" 2018, no. 4, pp. 41–75. The reforms were the reception of Russian solutions. During the reign of Vasyl Shuisky, he supported the Russian troops of the Swedish allied corps of James Pontus de la Gardie. Chief Prince Michał Skopin-Szujski carried out infantry reforms on the Dutch model. In order to stop the excellent Lithuanian-Polish driving, Krister Summ and Jakub de la Gardie proposed the construction of field fortifications ("warning signs"). В.В. Пенской, Попытка военных реформ в России начала XVII века, "Вопросы истории" 2003, no. 11, pp. 129–133.

<sup>79</sup> Comp. *Polskie tradycje wojskowe. Tradycje walk obronnych z najazdami Niemców, Krzyżaków, Szwedów, Turków i Tatarów*, vol. 1, ed. J. Sikorski, Warszawa 1990, pp. 244–263; H. Wisner, *Wojsko litewskie I połowy XVII wieku*, part. 2, "Studia i Materiały do Historii Wojskowości" 1976, no. 20, p. 6; idem *Wojsko litewskie I połowy XVII wieku*, part 3, "Studia i Materiały do Historii Wojskowości" 1978, no. 21, pp. 136–140.

other countries.<sup>80</sup> However, an important source of knowledge was the personal observation of the functioning of foreign armies by the Polish and Lithuanian nobility and magnates going abroad. The new way of “camp” education began at the turn of the 16th and 17th centuries. Since 1621 the Netherlands was once again covered by a warfare, so the area has become an excellent place to learn about practical military knowledge.<sup>81</sup> The main role in this was played by Prince Władysław, who together with the whole procession dedicated three days (26–29 September 1624) to the sightseeing and analysis of the siege of Breda, which constituted the foundation and model for future peregrination expeditions.<sup>82</sup> It is worth noting that the 12-hour observation of the fortifications and military camps, which Władysław Waza performed, contributed to the change of the views on the nature of war rather than any specific military improvements however, it should not be underestimated.<sup>83</sup> On the other hand, magnates and nobles were often present in the camps for several months, hence the possibility of making in-depth observations and evaluation of new inventions and strategic and tactical solutions.

2. The maps and military plans which reached the Republic of Poland, either in manuscript or printed form, played an important role in transferring military knowledge from the Netherlands. In this article, I have indicated that the maps were imported or sent by people peregrinating or working abroad. I found out that a magnate returning from the journey alone could bring from a dozen to several dozen engravings, as well as his own drawings of the plans of sieges and

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<sup>80</sup> Of course the Netherlands was an ideal area for recruiting military engineers. It was recommended to accompany the young magnates. Yes, in 1626. Hieronim Piestrzecki staying in Leuven was commissioned by the Cracow castellan Jerzy Zbaraski to enlist two engineers. Everyone was offered a 1,000 Polish zloty annual salary, and several hundred Polish zloty as compensation for travel. This offer exceeded the standard wage in the Netherlands by far (see footnote 31). H. Piestrzecki do J.S. Sapiehy, Lovanium 6 IV 1626, Львівська Наукова Бібліотека НАН України ім. В. Стефаника, f. 103, briefcase V/32.

<sup>81</sup> For this reason, Tomasz Zamoyski, who travelled around the Netherlands in 1615 and was in camps: Dutch at Maurice Orange and Spanish at Ambrosio Spinola's, could not observe the warfare. His stay was limited to the “inspection” of Western European troops. A.A. Witusik, *Tomasz Zamoyski's Foreign Peregrinations in 1615–1617*, “Annales Universitatis Mariae Curie-Skłodowska. Sectio F, Philosophical and Humanistic Sciences” 1970, no. 25, pp. 33–35.

<sup>82</sup> It is characteristic that magnates wanting to learn more about the warfare carried out by Spanish troops asked Prince Vladislav for letters of recommendation. K.M. Sapieha i K.L. Sapieha do J.S. Sapiehy, Lovanium 4 XII 1626, Львівська Наукова Бібліотека НАН України ім. В. Стефаника, f. 103, briefcase V/125.

<sup>83</sup> The great role of Władysław Vasa's peregrination for the reforms of discipline and military drift is seen by a contemporary observer: E. Wassenberg, *Gestorum Gloriosissimi ac Invictissimi Vladislai IV. Poloniae & Sveciae Regis*, part 2, Gedani 1641, pp. 174–176.

fortifications (the example of Janusz Radziwiłł). Books were also purchased which contained engravings of the siege and were intended to deepen the knowledge of the warfare (the example of the Sapieha brothers). The siege of Breda (1624–1625) and ‘s-Hertogenbosch (1629) were particularly often exposed. I have presented engravings, which were placed at the magnate and royal courts (il 3–6). These maps and plans showed the application of the most modern military engineering solutions - among others, construction of circumvallation and contravallation lines, hydro-engineering works. This led to the dissemination and appreciation of the field fortifications by the commanders of Polish and Lithuanian troops.<sup>84</sup>

3. The article emphasizes the role in the dissemination of cartographic sources thanks to the foreign journey of Prince Władysław (1624–1625), observation of the condottiere of Krzysztof Arciszewski (1624–1629) and peregrination of the magnate’s retinue of Janusz Radziwiłł (1628–1633) and Kazimierz and Krzysztof Sapieha (1625–1629). It should be remembered, however, that these unitary messages are only a small part of the phenomenon, as the prevalence of education, foreign travel and military service in the Netherlands among the Polish-Lithuanian nobility and townspeople testifies to the scale of the phenomenon.<sup>85</sup> The engravings were relatively cheap and, above all, universally available, thus they started to be increasingly popular in the Republic of Poland. Presentations of contemporary sieges have entered the culture of the nobility, which is an obligatory element of knowledge. It was no coincidence that Stanisław Ciświcki received a series of tapestries in 1642 in Maksymilian van der Gucht’s workshop, which

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<sup>84</sup> K. Arciszewski do K. Radziwiłła, Haga 12 VI 1625, Archiwum Główne Akt Dawnych, Archiwum Radziwiłłów, dz. V, sygn. 190, p. 61: ‘We could not give Breda any relief by any means, he was equal to the enemy and the army, and he was so powerful in digging in behind the Dutch encroachment that we couldn’t hurt him and a hundred thousand people from such wonderful trenches.

<sup>85</sup> For example, R.T. Tomczak, *Podróż młodego magnata...*, pp. 133, 139–140, noted that in 1631 alone, seven Poles and seven Inflans and one Lithuanian enrolled at the University of Leiden, apart from Janusz Radziwiłł and his entourage (16 people). Out of 132 doctors practicing in Gdańsk, as many as 52 were after graduation in that city. In the years 1625–1626, six representatives of the Sapieha family studied in Leuven, 77 km away, and at the end of 1626, two representatives of the Wielkopolska magnateateate, Krzysztof and Łukasz Opaliński, enrolled at the university. In the first half of the 17th century, 110 citizens of the Republic of Poland studied at the university, including 80 representatives of senatorial families. S. Kot, *Stosunki Polaków z Uniwersytetem Lowańskim (w 500 rocznicę otwarcia Uniwersytetu Lowańskiego)*, “Minerwa Polska” 1927, no. 1/3, pp. 215–216, 221.



represented, among others, the siege of Breda (1624–1625), ‘s-Hertogenbosch (1629), La Rochelle (1629), Masstricht (1632) and additionally Smolensk (1634).<sup>86</sup>

4. The 1720s saw the beginning of a phenomenon as the noble elites were able to participate, from a distance, in the war in the Netherlands. This was possible thanks to the newspapers and leaflets that were published on a massive scale in the United Provinces and neighbouring countries. Current information was given in the correspondence to which maps and plans were attached. This phenomenon was visible on the national ground as early as the beginning of the 17th century and concerned the chieftains and the royal court. The 1720s, on the other hand, are a breakthrough in cartographic observation of wars in Europe.<sup>87</sup> However, information from the Dutch-Spanish wars reached the Grand Duchy of Lithuania with a considerable 80-day delay. The average daily speed of mail sent was about 24 km.

5. The transfer of modern fortification patterns from the Netherlands to the Republic of Poland was fully implemented during the Smolensk siege in 1632–1634. At that time, both defenders (the Republic of Poland) and aggressors (the Moscow Tsar) applied the scheme developed in the 1720s in the Netherlands.<sup>88</sup> It was a phenomenon fully comprehensible by contemporaries. During the warfare aimed at liberating Smolensk from the Russian siege, Jakub Maximilian Fredro wrote: *So, yesterday the king was just about to visit Smolensk, and all the bases, blockhouses, and entrenchments abandoned by the enemy. And it's not surprising, because it is confirmed by those who saw the siege of Breda and 's-Hertogenbosch that bigger and better work couldn't have been done by fortifications built and dug out, from which one another can go around Smolensk through dug ditches.*<sup>89</sup>

<sup>86</sup> R. Szmydki, *Wydatki artystyczne dworu Jana Kazimierza w latach 1650–1653*, “Roczniki Humanistyczne” 1999, no. 47/4, p. 198.

<sup>87</sup> The analysed phenomenon did not disappear in the following decades. For example, in 1637 Krzysztof Radziwiłł received a number of sketches of German and French fortifications from Adam Freitag. H. Wisner, *Wojsko litewskie I połowy XVII wieku*, part 2, p. 14.

<sup>88</sup> W. Lipiński, *Materiały i źródła do wojny smoleńskiej 1632–1634*, “Przegląd Historyczno-Wojskowy” 1930, no. 2, pp. 119–141; D. Kupisz, *Smoleńsk 1632–1634*, Warszawa 2001, *passim*; P. Gawron, *Finansowanie oraz zaopatrzenie armii polsko-litewskiej w czasie wojny smoleńskiej*, in: *Historia na źródłach oparta. Studia ofiarowane Profesorowi Tadeuszowi Srogoszowi w 65. rocznicę urodzin*, ed. A. Stroynowski, Częstochowa 2017, pp. 199–200.

<sup>89</sup> *Diariusz of the Smoleńsk Campaign of Władysław IV 1633–1634*, ed. M. Nagielski, Warszawa 2006, p. 130 (analogous quotation: *ibidem*, p. 228).

6. The dissemination in the Republic of Poland of the maps produced in the Netherlands has developed a new standard in military cartography, which has in particular been reflected in the plans for fortresses and possible siege operations. First of all, the space began to be mapped on a two-dimensional plane. A significant part of the military work created so far has been done diagonally (from the bird's eye view) or even in a perspective. In addition, the use of engineering and cartographic tools allowed for a partial replacement of normal re-focusing. This made it possible for cartography to develop uniquely in the Republic of Poland in the 1730s and 1840s, when Friedrich Getkant, Guillaume Le Vasseur de Beauplan and Jan Pleitner created their works.<sup>90</sup>

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<sup>90</sup> The fact that engineers enlisted abroad made cartographic sources for Western European fashion is nothing unusual. It is important that the military authorities and patrons in the Crown and the Grand Duchy of Lithuania expected this form of execution.

Львівська Наукова Бібліотека НАН України ім. В. Стефаника, ф. 103:

IV/2, IV/5, IV/51, IV/58, IV/61, IV/63, V/32, V/97, V/114, V/122, V/125, V/133, VI/40, VI/48

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### WPLYW MAP I PLANÓW POWSTAŁYCH W LATACH 20. XVII WIEKU W NIDERLANDACH NA ROZWÓJ KONCEPCJI WOJSKOWYCH W RZECZYPOSPOLITEJ SZLACHECKIEJ

#### ABSTRAKT

Artykuł analizuje wpływ map i planów dotyczących działań wojskowych w Niderlandach w latach 20. XVII stulecia na modernizację i reformy sztuki wojennej w Rzeczypospolitej szlacheckiej. Przeprowadzono w niej analizę, która prowadzi do konstatacji, że źródłem wiedzy taktycznej, operacyjnej i strategicznej były źródła kartograficzne docierające do ziem Rzeczypospolitej. Najczęściej przywoziły je osoby, które wyjeżdżały z Korony i Wielkiego Księstwa Litewskiego na Zachód w celach edukacyjnych i zarobkowych, a następnie wracały do ojczyzny. Ustalono, że magnat powracający z podróży przywoził od kilkunastu do kilkudziesięciu rycin i własnoręcznych rysunków planów oblężeń i fortyfikacji. Rozpowszechnioną formą było dostarczanie map do korespondencji. Źródła kartograficzne miały pomóc w ocenie podejmowanych działań militarnych i pozwalały odbiorcom „na bieżąco” obserwować konflikty europejskie.

Dzięki podróży królewicza Władysława Wazy po Europie w latach 1624–1625 ukształtował się wzorzec pobierania „nauk wojskowych” nie tylko na uniwersytetach ale i obozach wojskowych w Niderlandach. Ukazana została również rola Krzysztofa Arciszewskiego – klienta hetmana polnego litewskiego, który dostarczał Krzysztofowi Radziwiłłowi liczne, powstałe w Niderlandach mapy i plany. Zaakcentowano również analogiczny kontekst wyprawy edukacyjnej Janusza Radziwiłła oraz Krzysztofa Michała i Kazimierza Lwa Sapiehów.

**THE INFLUENCE OF MAPS AND PLANS CREATED IN THE 1620  
IN THE NETHERLANDS ON THE DEVELOPMENT OF MILITARY CONCEPTS  
IN THE POLISH-LITHUANIAN COMMONWEALTH**

**ABSTRACT**

The article analyses the impact of maps and plans for military operations in the Netherlands in the 1620s on the modernisation and reform of the art of war in the Republic of Poland. The analysis showed that the source of tactical, operational and strategic knowledge were cartographic sources that reached the lands of the Republic. They were most often brought by people who left the Crown and the Grand Duchy of Lithuania to the West for education and work and then returned to their homeland. It was established that a typical magnate returning from the journey brought between a dozen and a few dozen or so engravings and his own drawings of the sieges and fortification plans. A common form was to provide maps for correspondence. Cartographic sources were supposed to help evaluate the military actions taken and allow the recipients to “keep an eye on” European conflicts.

Thanks to the journey of Prince Wladyslaw Vasa around Europe in the years 1624–1625, a pattern of taking “military science” was formed not only in universities but also in military camps in the Netherlands.