

The Influence of Austrian Military Cartographers and Topographers on Knowledge of the Central Sava-Drava Interfluve: The Case of Johann Christoph Müller's Map of Hungary (1709)

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Abstract: During the 18th century, the eastern Croatian multiple borderland was shaped by dynamic military, political, social, economic, and cultural influences, along with the diverse communication networks and the spread of innovations across multiple spheres of life. Ongoing military conflicts and devastations intensified the demand for new spatial expertise, which was largely introduced by foreign specialists, facilitating a more systematic understanding of the region. The Habsburg–Ottoman wars and the demands of the military and civil authorities attracted some of the most prominent cartographic experts from Central Europe. This paper aims to re-examine their role, particularly within the work of the Boundary Commission established after the Peace of Karlowitz in 1699. By employing a qualitative comparative analysis of orography, hydrography, and settlements in the central part of the Sava - Drava interfluve, this study evaluates the contribution of military cartographers to the development of a geo-visual understanding of the region. The topographic map segments selected for analysis were determined by whether the depicted areas were encompassed by the military survey of the Slavonian Military Frontier (e.g. Brod on the Sava) or lay beyond the border zone and thus lacked systematic field-based measurements (the Požega Basin).

Keywords: 18th century, military cartographers and topographers, J. C. Müller, Požega Basin, Brod on the Sava River

1 Introduction

By the late seventeenth century, the significantly weakened Ottoman Empire had relinquished substantial portions of its European territories to the Habsburg Monarchy and the Venetian Republic. These conflicts, which grew during the Great Turkish War, ended with the Treaty of Karlowitz in 1699. As Europe's main powers shifted, organized border mapping began to help prevent future conflicts. Simultaneously, these cartographic efforts reflected the increasing geostrategic

interest of European markets in the Croatian lands, situated along the cultural, political, and civilisational frontier of Eastern Europe. The establishment of the Mixed Commission for Demarcation, responsible for conducting field measurements and mapping the border zone extending two hours' walk on either side of the agreed boundary line, represented an innovative cartographic and diplomatic undertaking in a region previously devastated and depopulated by war. This is evidenced by documents such as the *Map of Hungary with Croatia and Slavonia* by Johann Christoph Müller, the

Utjecaj austrijskih vojnih kartografa i topografa na poznavanje središnjega dijela savsko-dravskog međurječja: primjer Müllerove karte Ugarske iz 1709. godine

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Sažetak: Istočnohrvatski višegranični prostor se tijekom 18. stoljeća našao na raskrižju vojno-političkih, društvenih, ekonomskih, kulturnih i drugih utjecaja i interesa, ali i raznorodnih komunikacija te primjene inovacija u različitim područjima života. Upravo su zbog vojnih sukoba i ratnih devastacija potrebe za novim vještinama i znanjima o prostoru rasle, a strani stručnjaci koji su ih uvodili omogućavali su njegovo bolje poznavanje. Habsburško-osmanski ratovi i potrebe vojne i civilne administracije za preciznim kartama su na savsko pogranje privukli najveće tadašnje kartografske stručnjake srednje Europe. Cilj je ovoga rada preispitati njihovu ulogu, posebno u okviru rada Komisije za razgraničenje, osnovane prema odlukama Mira u Srijemskim Karlovcima 1699. godine. Kvalitativnom komparativnom analizom orografije, hidrografije i naselja središnjeg dijela savsko-dravskog međurječja nastojali smo preispitati ulogu vojnih kartografa u napretku geo-vizualnog poznavanja toga prostora. Segmenti topografskih karata za analizu birani su upravo po kriteriju je li kartirani prostor bio uključen u spomenutu vojnu izmjeru Slavonske krajine (poput okolice Broda na Savi) ili smješten dalje od granice pa stoga ostao bez terenskih mjerenja (Požeška kotlina).

Ključne riječi: 18. stoljeće, vojni kartografi i topografi, Johann Christoph Müller, Požeška kotlina, Brod na Savi

1. Uvod

Krajem 17. stoljeća vidno oslabljeno Osmansko Carstvo izgubilo je dio europskih posjeda, u korist Habsburške Monarhije i Mletačke Republike. Sukobi eskalirani Velikim bečkim ratom su okončani Mirom u Srijemskim Karlovcima 1699. godine. U okviru izmijenjenih vojno-političkih odnosa velikih europskih sila naloženo je kartiranje graničnog područja kako bi se budući konflikti eventualno spriječili. Ujedno je valjalo odgovoriti na povećani geostrateški interes europskih tržišta za hrvatske zemlje na istočnoeuropskome

kulturnom, političkom pa i civilizacijskom rubu. Osnivanje Mješovite komisije za razgraničenje sa zadatkom da terenski izmjeri i kartira granični prostor u širini dva sata hoda s obje strane dogovorene granične crte bio je inovativan kartografski, ali i diplomatski pothvat na prethodno ratom devastiranom i opustošenom prostoru. Tome svjedoče dokumenti poput Karte Ugarske s Hrvatskom i Slavonijom Johanna Christopha Müllera, glavnog kartografa Komisije, koja je nastala 1709. godine na temelju provedenih terenskih izmjera. Ova studija je fokusirana na taj izvor u komparaciji s još nekoliko drugih karata nastalih neposredno nakon nje.

Commission's chief cartographer, produced in 1709 based on extensive field surveys. This study focuses on that source in comparison with several other maps produced shortly afterwards. It examines cartographic representations of the Požega Basin, analysing the placement and number of toponyms as well as orographic and hydrographic features, and compares them with equivalent data recorded on maps of the broader area surrounding Brod on the Sava River. The two selected micro-localities of the central Drava-Sava interfluve were chosen because the Požega region, as part of Civil Slavonia (Provincial), lay outside the scope of the Commission's topographic and engineering surveys. In contrast, the frontier zone in the wider surroundings of the Brod fortress was a primary focus for Military Frontier cartographers along the demarcation line between the Posavina Frontier and the Ottoman Empire, and was therefore subject to military surveying and new cartographic documentation (Magaš et al. 2021).

2 Sources, approach and methodology

The central hypothesis - that the area subjected to the Commission's surveys and field engineering works along the immediate border was mapped with significantly greater detail and precision, both in terms of physical-geographical features (watercourses and relief) and the social content of the maps (settlements, spatial positioning, and toponymy)¹ - was tested through a synchronic analysis of Müller's map and several other subsequently produced archival maps. The primary source maps used in this study include Müller's map of 1709, J. Gadea's map of 1718, and J. B. Homann's map² of 1714. These three were subjected to diachronic comparison with nineteenth-century Habsburg topographic maps³, as well as with contemporary geocartographic data for the same area obtained from the Geoportal of the State Geodetic Administration of the

Republic of Croatia⁴. Although the work of J. C. Müller, including the 1709 map, has been previously addressed by Hungarian and Croatian historians, and by scholars from other disciplines, this study offers a novel contribution. Its originality lies in the analytical treatment of a selected corpus of data of varying informational quality, combined with a critical synthesis of cartographic and non-cartographic sources for the central area of the Drava-Sava interfluve (Deak et al. 2004; Kljajić and Mlinarić 2016). The research was conducted within a methodological framework of comparative qualitative analysis, treating the map as both a multilayered medium of communication and a historical source. It was examined through transgenre comparison with other types of sources, including settlement registers, diplomatic records, statistical data, and secondary literature. The very nature of the premodern map - above all, its pronounced subjectivity⁵ - has, to some extent, determined the methodological approach adopted in this study.⁶ From a post-modernist perspective, such maps are seen as cultural visual representations and rhetorical instruments, that is, as constructions of the cartographer's "reality." Maps are always produced under the influence of the author, including their religious, ethnic, and cultural identity, as well as their political and other interests, particularly within the circle of power, priorities, and preferences to which the cartographer belonged (Mlinarić and Miletić

⁴ A visual comparative analysis of historical maps was conducted in relation to the cartographic representation of the same historical Croatian territory available at the address <https://geoportal.dgu.hr>.

⁵ A map, particularly when viewed from an early modern perspective, cannot be regarded solely as a geographically and spatially accurate reflection of reality; rather, it should be understood as a technologically and conceptually non-uniform representation of geographic reality - a symbolised image that represents selected features and emerges from the creative effort and choices of its author. (International Cartographic Association/ Definitions). Early modern maps were significantly influenced by the personal skill and creativity of their authors, the quality of the geographical data and knowledge available to them, and their familiarity with the technologies used in map production (Török 2001b, 110; Mlinarić and Blaženović 2024, 66-67).

⁶ The interpretive approach to maps used in this study is primarily based on interdisciplinary Harleyan critical analysis, and the discursive practices of new cultural geography, environmental history, the Space turn, and related research perspectives (Harley 1989). Priority is given to a multiperspectival and problem-oriented connection of the map as a persuasive - or even seductive - mimetic medium with culture, identity, and the meaning of space, through reflection on the categories of historical and geographical space, whose perceived truthfulness, unlike that of written sources, is more readily assumed by the average user (Mlinarić and Miletić 2017, 23; Crampton 2009, 845; Cosgrove 2004; Štimac, 2022; Delort and Walter, 2002).

¹ This emphasis on the physical and social elements of space - water systems, relief, and settlements - was already evident in sixteenth-century chorographic maps, as the existing cartographic inventory, including graphic symbols and their linguistic variants for settlements (toponyms), particularly fortified ones, could be used for military and strategic planning and the conduct of warfare (Mlinarić and Blaženović 2024, 79-84).

² Among contemporary works, the study of Matthäus Seutter is of particular interest for comparative purposes, especially his 1720 map, which has already been the subject of scholarly analysis (Štimac 2022).

³ Arcanum maps, the Third Military Survey of the Habsburg Monarchy (1869-1887).

Uspoređeni su kartografski prikazi Požeške kotline te smještaj i broj toponima kao i orografsko-hidrografskih geografskih podataka spram istog tipa sadržaja zabilježenog na karti na prostoru šire okolice Broda na Savi. Dva su spomenuta mikro-lokaliteta srednjeg dravsko-savskog međurječja odabrana stoga jer je Požeština kao dio Civilne Slavonije (Provincijala) ostala izvan obuhvata topografskog inženjerskog rada Komisije, za razliku od krajiškoga dijela šire okolice brodske utvrde, koja je bila u najužem fokusu krajiških kartografa na crti razgraničenja Posavske krajine i Osmanskoga Carstva te je time obuhvaćena vojnom izmjerom i novim kartiranjem (Magaš i sur. 2021).

2. Izvori, pristup i metode

Temeljnu hipotezu da je područje obuhvaćenom izmjerom i terenskim inženjerskim gradom Komisije uz samu granicu kartirano znatno detaljnije i preciznije, bilo da se radi o fizičko-geografskom sadržaju (vodotoci i reljef) ili društvenom sadržaju karte (naselja, položaj i toponimija)¹ provjerili smo sinkronijskom analizom Müllerove i nekoliko drugih arhivskih karata nastalih nakon nje. Korištene izvorne karte su Müllerova karta iz 1709., karta J. Gadee iz 1718. i karta J.B. Homanna² iz 1714. godine, a njih tri su dijakronijski uspoređene i s habsburškim topografskim kartama iz 19. stoljeća³ te sa suvremenim geo-kartografskim podacima za isto područje s Geoportala Državne geodetske uprave⁴. Sam rad J.C. Müllera, pa i konkretna karta iz 1709. godine i prethodno je bio tema mađarskih i hrvatskih povjesničara i istraživača drugih znanstvenih disciplina, ali analitički pristup odabranom setu podataka različite kvalitete informacija kao i drugim kartografskim i ne-kartografskim izvorima za područje središnjeg dijela međurječja Drave i Save inovativnost je ovoga rada (Deak i sur. 2004; Kljajić i Mlinarić 2016). Istraživanje je provedeno u metodološkom okviru komparativne kvalitativne analize karte kao višeslojnog medija komunikacije, ali i povijesnoga izvora u transžanrovskoj usporedbi s drugim vrstama izvora, poput

popisa naselja, diplomatskih spisa, statističkih podataka te sekundarne literature. Sama priroda predmoderne karte, prije svega njena izrazita subjektivnost,⁵ donekle je odredila mogući metodološki pristup ove studije⁶. One se u postmodernističkoj perspektivi promatraju kao kulturalne vizualne slike, ali i retorički alat odnosno konstrukcije kartografove „stvarnosti“. Uvijek nastaju pod utjecajem samog autora, njegovoga vjerskog, etničkog i kulturnog identiteta, ali i političkih i drugih interesa, posebno unutar kruga moći, prioriteta i preferencija, kojemu je kartograf pripadao (Mlinarić i Miletić Drder 2017, 20, Harley 2002: 57-57, 62). Ontološki su procesi iz kojih je karta proizlazila osim nje i autora (domet njegovih geografskih spoznaja i poznavanja tehnika kartiranja) uključivali i naručitelje odnosno korisnike (Kitchin i Dodge 2007). Dekodiranje kartografskih informacija podrazumijevalo je da korisnik poznaje kartografski rječnik (kod) kojim su podaci posredovani, ali je ovisilo i o mjerilu karte i s njime vezanom generalizacijom (Robinson i Bartz Petchenik 1977). No u to vrijeme dio redukcija podatka nije počivao samo na njihovoj selekciji zbog mjerila ili namjene karte, već i na izostanku spoznaja o prostoru. Za kontekstualizaciju karata 18. stoljeća je stoga nužno „čitavanje između redova“ tog slikovnog dokumenta, odnosno analiziranje elemenata koji nadilaze sam prostorni sadržaj. Odnosi se to i na opće-geografski, dekorativni sadržaj karte, ali i na topografski segment ranih tematskih (vojnih) karata. On uključuje dokumentiranje prostora u krupnom mjerilu (planovi), bez obzira radi li se o fizičko-geografskim elementima poput voda i reljefa, ili socijalno oblikovanim elementima nastalim utjecajem čovjeka, kao što su naselja ili prometnice. Pri tome se pretpostavljena stvarnost više odnosila na društveni nego fizički sadržaj

¹ Usmjerenost upravo na spomenute fizičke i društvene elemente prostora (vode, reljef i naselja) primijenjena je već na korografskim kartama 16. stoljeća, jer se postojeći inventar, uključujući i grafičke simbole i njihove jezične inačice za naselja (toponime), pogotovo ona fortificirana, mogao koristiti u svrhu vojno-strateškog planiranja i vođenja ratova (Mlinarić i Blaženović 2024, 79-84).

² Od suvremenika zanimljiv za usporedbu bi bio i rad Matthausa Seuttera, posebno njegova karta iz 1720., koja je već analizirana (Štimac 2022).

³ Arcanum maps, Treća vojna izmjera Habsburške Monarhije (1869-1887).

⁴ Vizualna komparativna analiza starih karata provedena je u odnosu na kartografski zapis istog povijesnoga hrvatskog prostora na adresi <https://geoportal.dgu.hr>.

⁵ Karta se, posebno u rano novovjekovnoj perspektivi ne može promatrati isključivo kao geografski-prostorno vjerodostojan odraz, već prije kao tehnološki i konceptualno niskouniformna reprezentacija geografske stvarnosti, simbolična slika koja odražava izabrane odlike, a rezultat je kreativnih nastojanja i izbora svog autora (International Cartographic Association/Definitions). Na ranonovovjekovne je karte znatan utjecaj ostavljala i osobna vještina i kreativnost odnosno kvaliteta geografskih podataka (znanja) koje su njihovi autori imali te upućenost u tehnologiju proizvodnje karte (Török 2001b, 110; Mlinarić i Blaženović 2024, 66-67).

⁶ Interpretacijski pristup kartama, primijenjen i u ovom radu bazira se pretežito na interdisciplinarnoj harleyanskoj kritičkoj analizi te diskurzivnim praksama nove kulturne geografije, ekohistorije i prostornog obrata i sličnih istraživačkih perspektiva (Harley 1989). Prednost se daje multiperspektivnom i problemskom povezivanju karte kao uvjerljivog ili čak zavodljivog mimetičkog medija s kulturom, identitetom i značenjem prostora kroz promišljanje kategorija povijesnoga i geografskog prostora, kojima je za razliku od pisanih izvora prosječan korisnik skloniji prejudicirati istinitost (Mlinarić i Miletić Drder 2017, 23; Crampton 2009, 845; Cosgrove 2004; Štimac, 2022; Delort i Walter, 2002).

Drder 2017, 20; Harley 2002: 57–58, 62). Ontologically, the processes from which a map emerged encompassed not only the map and its author - the scope of their geographical knowledge and mastery of cartographic techniques - but also the patrons or intended users (Kitchin and Dodge 2007). Decoding cartographic information required the user to be familiar with the cartographic language (code) through which the data were conveyed, but it also depended on the map's scale and the associated level of generalisation (Robinson and Bartz Petchenik 1977). At that time, however, some data reductions resulted not only from selection dictated by scale or the map's intended purpose, but also from insufficient knowledge of the territory. For the contextualisation of eighteenth-century maps, it is therefore essential to "read between the lines" of these graphic documents by analysing elements that extend beyond the purely spatial content. This applies to both the general-geographical and decorative content of the map, as well as to the topographical component of early thematic (military) maps. It includes the documentation of space at a large scale (plans), whether involving physical-geographical features such as watercourses and relief, or socially shaped elements resulting from human influence, such as settlements or transport routes. In this context, the presumed reality related more to the social than to the physical content of the map (Delort and Walter 2002, 2–63). As reliability increased - despite ongoing heterogeneity in information quality and, at times, its merely compilatory nature - the growing strategic importance of military maps was accompanied by geostrategic secrecy and the rarity of these early syntheses. Conversely, alongside a slow process of standardisation, one can observe a gradual specialisation or thematization of cartography, in contrast to the pronounced diversity of cartographic styles and contents characteristic of the sixteenth century (Mlinarić and Miletić Drder 2017, 32–35; Török 2021b, 111).

3 Historical Context: The Multi-Border Regions of Early Modern Croatia

During the eighteenth century, the Ottoman Empire gradually lost control over its southeastern European possessions, a process accompanied by the gradual disintegration of the Timariot-Sipahi system.⁷ While their European Christian opponents consolidated their forces, formed alliances, and concentrated troops in fortresses along the border, the Ottomans adopted a defensive mode of warfare (Moačanin 2005). Efforts to reclaim the historical Croatian

territories, associated with the Great War (1683–1699), resulted in the reconquest of Hungary, all of Slavonia, Baranja, southwestern Syrmia, Pounje, and Lika, as well as Croatia up to the Una River and southern Velebit, while Venice confirmed its claims to Dalmatia and the Bay of Kotor.

The Ottomans gained access to the sea along the borders of the Republic of Ragusa (Moačanin 2005). Military operations ended with the signing of peace treaties between the Ottoman Empire and the Habsburg Monarchy, as well as the Republic of Venice, in 1699 at Srijemski Karlovci. Under the terms of these treaties, Croatian territories in the Drava-Sava interfluvium were incorporated into Habsburg possessions, mainly within the captaincy system of the Military Frontier, while parts of medieval Croatian territory remained under the Bosnian Eyalet (Kljajić and Mlinarić 2016, 477–478; Slukan Altić 2003, 103; Magaš et al. 2021). This phenomenon of historical shifts in sovereignty and discontinuities in administrative territoriality, together with the documentation of spatial information, forms the spatial-thematic framework of the present study.

4 Military Frontier Cartographers and the Topographical Work of the Boundary Commission

Accurate and detailed boundary maps of the continental interior were essential for both the Croats and Vienna throughout the seventeenth and eighteenth centuries, partly due to intermittent major wars, but even more because of the frequent minor border conflicts and the increasing demands of the central bureaucratic and military apparatus. Military topographers of the Slavonian Frontier, prior to the Josephine Survey, generally focused on mapping the characteristics of the terrain and the defensive fortifications of the frontier system, not only for the construction of new fortifications but also for the maintenance of existing ones. Unlike Habsburg maps of the Ottoman-Habsburg borderlands from earlier centuries⁸,

⁷ Social instability intensified the number of holders of hereditary rights to regalian revenues increased, that is, as the rights of the *spahis* were reduced and *timars* became fragmented (Moačanin 2005, 143–144, Magaš et al. 2021, 186).

⁸ Similar to Venice in the Adriatic coastal region, the Habsburg Monarchy implemented cartographic policies in the continental interior of Croatia to demonstrate its political, economic, and military "perception" of the territory, reflecting its own interests and aspirations (Marković 1993, 63–70, 98). While Venetian cartographers generally based their maps on earlier models, travel accounts, and descriptive sources, Habsburg cartographers focused on strengthening the mathematical and geodetic foundations, employing new measuring instruments, and conducting fieldwork to gather more accurate and detailed geographical information. Even before the formal establishment of military topography and cartography, civilian maps were already used to design improved defensive systems against the Ottomans (Slukan Altić 2003, 100; Mlinarić and Blaženović 2004, 64–68; Török 2001a; Török 2001b; Štimac 2022).

karte (Delort i Walter 2002, 2-63.) S rastom pouzdanosti, premda još uvijek heterogene kvalitete informacija ili čak kompilacija, veća je strateška važnost vojnih karata išla pod ruku s geostrateškom tajnošću i rijetkošću tih ranih sinteza. S druge strane je uz sporu standardizaciju zamjetna i postupna specijalizacija odnosno tematizacija kartografije nasuprot kartografske raznovrsnosti stilova i sadržaja u 16. stoljeću (Mlinarić i Miletić Drder 2017, 32-35; Török 2021b, 111).

3. Povijesni kontekst: hrvatska višegrađnja ranoga novog vijeka

Tijekom 18. stoljeća Osmansko Carstvo postupno slabi u osvajanju južne europske posjede, što je praćeno i rastakanjem timarsko-spahijskog sustava.⁷ I dok europski kršćanski oponenti ujedinjuju snage, sklapaju saveze i gomilaju vojsku u utvrdama uz granicu, osmanlijska strana prelazi u defenzivni oblik ratovanja (Moačanin 2005). Akcije za oslobođenje hrvatskog povijesnog prostora koje su pratile Veliki (Bečki) rat (1683-1699) rezultirale su rekonkvistom Ugarske, cijele Slavonije, Baranje, jugozapadnog Srijema, Pounja i Like, Hrvatske do Une i južnog Velebita, dok je Venecija potvrdila pravo na Dalmaciju i Boku Kotorsku. Osmanlije su dobile izlaz na more uz granice Dubrovačke Republike (Moačanin 2005). Ratne aktivnosti okončane su potpisivanjem mirovnih sporazuma Osmanskoga Carstva s Habsburškom Monarhijom i s Mletačkom Republikom 1699. u Srijemskim Karlovcima. Prema točkama mirovnih sporazuma u habsburške posjede, prije svega u kapetanijski sustav Vojne krajine uključeni su hrvatski teritoriji u dravsko-savskom međurječju, dok je dio srednjovjekovnog hrvatskog teritorija ostao u Bosanskom pašaluku (Kljajić i Mlinarić 2016, 477-478; Slukan Altić 2003, 103, Magaš i sur. 2021). Upravo taj fenomen povijesne izmjene suverena i diskontinuiteta upravne teritorijalnosti, s konkretnim dokumentiranjem prostornih informacija prostorno-tematski je okvir ovoga rada.

4. Vojnokrajiški kartografi i topografski rad Komisije za razgraničenje

Precizne detaljne karte razgraničenja u kontinentalnoj unutrašnjosti su kroz 17. i 18. stoljeće bile i Hrvatima i Beču neophodne, dijelom zbog povremenih velikih ratova, a još više zbog „malog“ pograničnog rata te rastućih potreba centralnog birokratskog i vojnog aparata. Vojni su topografi Slavonske krajine prije jozefinske izmjere generalno

bili fokusirani na kartiranje osobina terena i obrambenih fortifikacija krajiškoga sustava, ne samo za gradnju novih već i održavanje postojećih fortifikacija. Za razliku od habsburških karata osmansko-habsburškoga pograničja iz prethodnih stoljeća,⁸ vojna topografija i kartografija 18. stoljeća bazira se na više praktičnoga terenskoga rada, što je usložnjavalo, ali i poskupljivalo nastanak detaljnih karata, mada je pritom doprinosilo njihovoj većoj kvaliteti i prostornoj preciznosti. Kartografi se u koncipiranju svojih karata mogu manjim dijelom osloniti i na ranije predloške bilo grafičko-topografske prirode (npr. karte međurječja Save i Drave Lazarusa Secretariususa, Wolfganga Laziusa ili Martina Stiera) ili narativnu građu i registre (putopisi, izvještaji, statistike) različitih razina distorzije podataka i vrsta dizajna karte. Starije su karte bile uglavnom shematizirani korografski prikazi sveukupnog kartografskog sadržaja, bez posebnog fokusa na granice ili bilo koji drugi detalj.⁹ Trasiranje tematske kartografije vodili su, pored vojnih, i gospodarski motivi kontrole iskorištavanja prirodnih resursa poput evidencije i klasiranja zemljišta i šuma, na putu prema prvim katastrima, odnosno potreba reforme poreznog sustava. Iz toga izvire i kasnije provođenje detaljnih geodetskih izmjera i na vojno i na civilno upravljanoj prostoru (Slukan, 2003, 142; Mlinarić i Miletić Drder, 1917, 63). Radi velikih vojnih, ali i upravnih promjena te uspješnijeg reguliranja na pregovorima dogovorenih granica formirana je mješovita Komisija za razgraničenje koja je u idućih nekoliko godina trebala na terenu utvrditi i obilježiti granice te ih kartografski dokumentirati. Takvo

⁸ Slično kao i Venecija za priobalni jadranski prostor, i Habsburška je Monarhija za hrvatsku kontinentalnu unutrašnjost koristila kartografske politike za demonstraciju svog političkog, gospodarskog te vojnog „percipiranja“ teritorija, odražavajući vlastite interese i političke aspiracije (Marković 1993, 63-70, 98). No dok mletački kartografi karte većinom temelje na ranijim predlošcima, putopisima i deskriptivnim izvorima, habsburški kartografi se intenzivno usmjeravaju na jačanje matematičke i geodetske podloge, korištenje novih mjernih instrumenata i terenski rad u cilju prikupljanja točnijih i detaljnijih geo-informacija. Već i prije utemeljenja vojne topografije i kartografije upravo su civilne karte služile za osmišljavanje boljeg sustava obrane od Osmanlija (Slukan Altić 2003, 100; Mlinarić i Blaženović 2004, 64-68; Török 2001a; Török 2001b; Štimac 2022).

⁹ Renesansni su kartografi mogli koristiti rijetke starije izvore, ali nisu propustili priliku da podsjetu na antičku i kršćansku nomenklaturu kod kartiranja hrvatskih zemalja, prvenstveno u cilju boljeg komercijalnog plasiranja svojih karata na tržištu (Mlinarić i Miletić Drder, 2017, 43-45, 56). Naime europski su intelektualni i politički radije poistovjećivali ugarske zemlje pod osmanskim pritiskom s njihovom bogatom predosmanskom (antičkom) tradicijom, većinom toponimijom, ne bi li argumentirali njihovu pripadnost europskoj (kršćanskoj) tradiciji kao i potrebu da se takva pozicija zadrži (Marković 1993, 98; Mlinarić i Blaženović 2024, 69; Stagen 1982; Török 2021a, Török 2021b, 111-136).

⁷ Društvena nestabilnost jačala je s rastom broja korisnika nasljednog prava na uživanje regalnih prihoda, odnosno smanjenjem prava spahija i usitnjavanjem timara (Moačanin 2005, 143-144, Magaš i sur. 2021, 186).

eighteenth-century military topography and cartography relied more heavily on practical fieldwork. This increased the complexity and cost of producing detailed maps, but also contributed to their higher quality and greater spatial accuracy. In designing their maps, cartographers could, to a limited extent, draw on earlier models of either a graphic-topographical nature (for example, maps of the Drava-Sava interfluvium by Lazarus Secretarius, Wolfgang Lazius, or Martin Stier) or on narrative materials and registers (travel accounts, reports, statistical records) that exhibited varying levels of data distortion and types of cartographic design. Older maps were generally schematic chorographic representations of the overall cartographic content, lacking specific focus on boundaries or any other particular detail.⁹ The development of thematic cartography was driven not only by military considerations but also by economic motives, including the control and management of natural resources, such as the surveying and classification of land and forests, in preparation for the first cadastral surveys and the tax system reform. This led to the subsequent implementation of detailed geodetic surveys in both military and civil administrative territories (Slukan, 2003, 142; Mlinarić and Miletić Drder, 1917, 63). Due to significant military and administrative changes, as well as more effective border regulation agreed through negotiations, a mixed Boundary Commission was established. In the following years, it was tasked with determining and marking the borders on the ground and documenting them cartographically. This new, almost revolutionary significance of linear demarcation fundamentally altered the concept and representation of the state boundary on maps, which were categorised according to the thickness and type of the boundary line, as well as by the colour of the line or the territories it separated. The outer boundary line was rendered thicker and darkest, while internal lines were shown in lighter shades. For the first time, the boundary was also to be physically marked in the field (Kljajić and Mlinarić 2016, 477–478; Slukan Altić

2003, 49). Members of the Commission were required to depict the boundary line on the map, which led to the introduction of a new method of linear signature or line demarcation. Earlier practices of mapping political (state) boundaries¹⁰ were based on recording the spatial extent and jurisdiction in written sources, which were then transposed onto maps, typically through the notation of names (choronyms) or by marking the area of an administrative or political unit using a method of superimposition. This approach assumed that each unit encompassed a coherent natural entity, bounded by natural barriers such as rivers (Slukan Altić, 2023, 47–48, 210). The Slavonian Drava-Sava-Danube interfluvium is a prime example of such a defined region. The Boundary Commission was led by the Habsburg representative, Count Luigi Fernando Marsigli, while the working group comprised delegates from all interested parties.¹¹ The cartographic work was often divided, making it difficult to attribute authorship of any given map to a single individual.¹² Alongside Pavle Riter Vitezović, who defended the interests of the Croatian estates, the chief military surveyor, engineer, cartographer, and topographer of the Commission was Johann Christoph Müller of Nuremberg, while the military engineer Giusto Emilio Alberghetti conducted surveying and cartographic work on behalf of the Venetian side (Deak et

⁹ Renaissance cartographers could use the few available older sources, but they did not miss the opportunity to invoke classical and Christian nomenclature when mapping the Croatian lands, primarily to enhance the commercial appeal of their maps (Mlinarić and Miletić Drder, 2017, 43–45, 56). European intellectual and political circles tended to associate the Hungarian lands under Ottoman pressure with their rich pre-Ottoman (classical) heritage, mostly reflected in toponyms, to assert their connection to European (Christian) tradition and to justify the need to maintain such a position (Marković 1993, 98; Mlinarić and Blaženović 2024, 69; Stage-na 1982; Török 2021a, Török 2021b, 111–136).

¹⁰ Before the Ottoman conquests, the cartography of Central Europe was underdeveloped, particularly in the thematic field of military cartography. Consequently, information concerning the spatial characteristics of battlefields, terrain specificities, the functional use of military structures, the deployment of troops, and related matters could only be sought in existing general or regional chorographic maps, however inadequate these may have been (Török 2021a, 2–5).

¹¹ The Habsburg forces were led by Johann Ferdinand Herberstein, Count Joseph Rabatta, Count Guidobald Max Sauer, Count Johann Joseph Wildenstein, Chief Engineer Johann Fridrich Hollstein, Wolfgang von Öttingen, and General Count Leopold Schlik. Venetian interests were represented by Carlo Ruzzini and Giuseppe Grimani, while the Ottoman side was represented by Rami Mehmed Pasha, Osman-aga, and Ibrahim Efendi (Slukan Altić, 2003, 104; Slukan 1999, 24; Deak et al. 2004, 71).

¹² The maps were signed with the statement: “Produced by the Boundary Commission after the Peace of Sremski Karlovci, 1699, under the leadership of Count Fernando Luigi Marsigli.” The border region was depicted on numerous sheets at a scale of 1:37,500, after which the maps were reworked into syntheses at various scales. The original map is preserved in the Manuscript Collection of the Austrian National Library in Vienna, while copies of sections are held in the Cartographic Collection of the War Archive of the Austrian State Archives, as well as in archival collections in Budapest and Zagreb (Deak et al. 2004, 69; Kljajić and Mlinarić 2016, 478–479; Lapaine and Kljajić 2009, 409; Novak et al. 2005, 143; Marković 2003, 221; Slukan Altić 2003, 103).

novu, gotovo revolucionarno značenje linijskoga razgraničenja iz temelja mijenja pojam i značenja državne granice na karti, koje se kategoriziraju debljinom i tipom crte razgraničenja te bojom granične crte ili teritorija koje linija razdvaja. Pritom je vanjska linija deblja i najtamnija, a unutarnje svjetlije nijanse. Granica se uz to po prvi puta trebala i fizički označiti na terenu (Kljajić i Mlinarić 2016, 477–478; Slukan Altić 2003, 49). Članovi Komisije morali su predložiti graničnu liniju na karti, što je dovelo do uvođenja nove metode linijske signature ili linijskog omeđivanja. Ranija praksa kartiranja političkih (državnih) granica¹⁰ temeljila se na bilježenju prostornog opsega i jurisdikcije u pisanim izvorima koji su se transponirali na karte eventualno kroz bilježenje imena (horonima) odnosno površine administrativne ili političke cjeline na karti metodom superimpozicije, kojom se pretpostavljalo da svaka cjelina obuhvaća zaokruženu prirodnu jedinicu, omeđenu prirodnim preprekama poput rijeka (Slukan Altić, 2023, 47–48, 210). Primjer slavonskoga savsko-dravsko-dunavskog međurječja upravo predstavlja jednu tako definiranu regiju. Povjerenstvo (Komisiju) za razgraničenje vodio je predstavnik habsburške strane, grof Luigi Fernando Marsigli, a članovi radne skupine bili su izaslanici svih zainteresiranih strana.¹¹ Sam kartografski posao često je dijeljen i teško je autorstvo bilo koje karte pripisati jednoj osobi.¹² Uz Pavla Ritera Vitezovića, koji je štitio interese hrvatskih staleža, glavni vojni mjernik, inženjer, kartograf i topograf Komisije bio je Johann Christoph Müller iz Nürnberga, a vojni inženjer Giusto Emilio Alberghetti odrađivao je mjernički i kartografski posao za mletačku stranu (Deak i

sur. 2004, 79). Zbog metodologije i prostornog obuhvata rad Komisije smatra se sustavnim i cjelovitim procesom prikupljanja i obrade prostornih podataka s elementima organizirane geodetske vojne izmjere s obje strane granice na Savi (Kljajić i Mlinarić, 2016, 477–479). Karte su na temelju izmjere preciznije dokumentirale naselja, tokove rijeka i potoka, putove, močvare, vegetaciju (šume) i reljef na način nezabilježen do tada. Većinom se radilo o vojno relevantnim objektima, kotama ili fortifikacijama, skiciranim u perspektivi ili tlocrtu te o putovima, šumama, poljoprivrednim prostorima ili prirodnim zaprekama (klisure, nepremostivi prolazi i sl.), koji su bili važni u gospodarskoj valorizaciji šireg prostora odnosno kretanju ljudi i roba (Mlinarić i Miletić Drder, 2017, 52). Nepouzdana transkripcija geografskog nazivlja donekle otežava današnju identifikaciju i ubikaciju pojedinih naselja (Slukan Altić 2003, 213; Marković 1993, 162–163). Članovi Komisije obilazili su širu okolicu granice od mjesta do mjesta. Ono što čini rad Komisije za razgraničenje u izradi karata¹³ različitim od radova kartografa ranijih perioda su precizna terenska mjerenja. Prilikom utvrđivanja crte razgraničenja na terenu su postavljeni graničnici odnosno humci te podignuti brojni čardaci s vojnim posadama koje su od tada nadzirale protok robe i ljudi preko granice. Prikupljanje podataka je obavljano tehnikom direktnog terenskog rada *in situ*, uz pomoć lokalnog stanovništva kao savjetnika. Kartiranje zemljišta obavljalo se pomoću tada raspoloživih mjernih instrumenata, ponajprije busole. Topografi su provodili grafičku triangulaciju geodetskim stolom te ispitivali udaljenosti između mjesta mjernim kotačem (Deak i sur. 2004, 71). Komisija je prvo izradila terenske skice u krupnom mjerilu, koje su objedinjene u prve regionalne topografske karte, kasnije sinteze i pregledne karte, sve u cilju pružanja realnijeg i točnijeg prostornog prikaza hrvatskog povijesnog prostora početkom 18. stoljeća.¹⁴ Bila je to prekretnica u shvaćanjima granice u vojnim krugovima, koji uviđaju značaj detaljnog kartiranja u organizaciji i kontroli graničnoga pojasa. S obzirom na nastavak ratnih djelovanja na krajištu, cjeloviti veći posao izmjere prolongiran je za mirnija vremena, ali su nastavljena mjerenja u svrhu dopune odnosno revidiranja postojećih karata.

¹⁰ Prije osmanskih osvajanja kartografija srednje Europe bila je nerazvijena, posebno tematsko područje vojne kartografije. Stoga se za podatke o prostoru bojišta, specifičnosti terena, iskoristivosti vojnih objekata, rasporedu vojnih trupa i sl. eventualno moglo konzultirati postojeće pregledne ili regionalne korografske karte, koliko god one nedostatne bile (Török 2021a, 2–5).

¹¹ Habsburške snage predvodili su Johann Ferdinand Herberstein, grof Joseph Rabatta, grof Gvidobald Max Sauer, grof Johann Joseph Wildenstein, nadinženjer Johann Fridrich Hollstein, Wolfgang von Öttingen i general grof Leopold Schlik. Mletačke interese su zastupali Carlo Ruzzini i Giuseppe Grimani, a osmanlijske Rami Mehmed-paša, Osman-aga i Ibrahim-efendija (Slukan Altić, 2003, 104; Slukan 1999, 24; Deak i sur. 2004, 71).

¹² Karte su potpisivane izjavom *Izradila Komisija za razgraničenje po miru u Srijemskim Karlovcima 1699. godine pod vodstvom grofa Fernanda Luigija Marsiglia*. Granično područje prikazano je na velikom broju listova u mjerilu 1 : 37 500, nakon čega je slijedila prerada karata u sinteze različitih mjera. Originalni primjerak karte čuva se u Zbirci rukopisa austrijske nacionalne knjižnice u Beču, no postoje i kopije sekcija u Kartografskoj zbirci Ratnog arhiva Austrijskog državnog arhiva, te arhivskim zbirkama Budimpešte i Zagreba (Deak i sur. 2004, 69; Kljajić i Mlinarić 2016, 478–479; Lapaine i Kljajić 2009, 409; Novak i sur. 2005, 143; Marković 2003, 221; Slukan Altić 2003, 103).

¹³ I oni su odražavali osnovne postavke habsburške vojne kartografije koja je bila najzaslužnija i za dotadašnje topografsko-kartografske prikaze višegraničja, bilo kao priloga narativnim izvješćima (Pieron, Klobuccarich, Stier) ili kao detaljnije elaboriranih karata krupnoga mjerila (npr. planovi utvrda) (Slukan 1999, 22; Mlinarić i Miletić Drder 2017, 46–56).

¹⁴ Müllerov rad rezultirao i prvim topografski prikazom bosanskog teritorija, bar u širini 2 sata hoda od granice, odnosno 10-ak km u dubinu osmanskog posjeda. To je podiglo kvalitetu poznavanja i toga prostora jer su osmanlijske vlasti do tada zazirale od kartiranja svojih posjeda (Kljajić i Mlinarić 2016, 479; Novak i sur. 2005, 409; Slukan Altić 2003, 108).

al. 2004, 79). Due to its methodology and spatial scope, the work of the Commission is regarded as a systematic and comprehensive process of collecting and processing spatial data, incorporating elements of organised geodetic military surveying on both sides of the Sava River (Kljajić and Mlinarić, 2016, 477–479). The maps produced from this survey documented settlements, river and stream courses, roads, marshes, vegetation (forests), and relief with a previously unattained level of precision. The focus was primarily on military-relevant features, such as elevations and fortifications, depicted in perspective or plan, as well as roads, forests, agricultural areas, and natural obstacles (gorges, impassable passages, etc.), which were important for the economic valorisation of the wider region and for the movement of people and goods (Mlinarić and Miletić Drder, 2017, 52).

The unreliable transcription of geographic names somewhat complicates the modern identification and localisation of individual settlements (Slukan Altić 2003, 213; Marković 1993, 162–163). Members of the Commission traversed the broader border region from place to place. What distinguishes the work of the Boundary Commission in the production of maps¹³ from that of cartographers of earlier periods is the precision of the field measurements. In establishing the boundary line on the ground, boundary markers or cairns were erected, and numerous watchtowers with military garrisons were constructed, which henceforth controlled the movement of goods and people across the border. Data collection was conducted through direct fieldwork in situ, with local inhabitants assisting as advisors. Land mapping was carried out using the measuring instruments available at the time, primarily the compass. Topographers performed graphical triangulation with a geodetic table and measured distances between locations using a surveyor's wheel (Deak et al. 2004, 71). The Commission first produced large-scale field sketches, which were then combined into the first regional topographical maps, later synthesised into overview maps, all to provide a more realistic and accurate spatial representation of the historical Croatian territories at the

beginning of the eighteenth century.¹⁴ This represented a turning point in military conceptions of the border, as the importance of detailed mapping for the organisation and control of the frontier zone became apparent. Given the continuation of military operations in the borderlands, completion of the full, large-scale survey was postponed until calmer periods; nevertheless, measurements continued to supplement or revise existing maps.

5 J. C. Müller's contribution to the interpretation of Croatian historical geography: analysis of the map of Hungary including regions of Croatia and Slavonia

Following Marsigli's instructions, Müller was tasked with producing a general *map of Hungary with Croatia and Slavonia* (Müller 1709, Fig. 1).¹⁵ Over two years of work, he relied on data obtained through geometric and astronomical measurements to determine geographical latitude and distances between settlements with precision. In this process, he was assisted by Pavao Ritter Vitezović, who acted as a delegate of the Diet of the Kingdom of Croatia. Vitezović contributed his knowledge of the local terrain and language, as well as his expertise in geography, history, cartography, and copper engraving, acquired during his education in Vienna under Johann Weichard Valvasor and Georg Matthäus Vischer. Following Marsigli's instructions, Müller was tasked with producing a general *map of Hungary with Croatia and Slavonia* (Müller 1709, Fig. 1). Over two years of work, he relied on data obtained through geometric and astronomical measurements to determine geographical

¹³ They also reflected the fundamental principles of Habsburg military cartography, which had been primarily responsible for previous topographical and cartographic representations of the multi-border regions, whether as supplements to narrative reports (Pieroni, Klobuccarich, Stier) or as more detailed large-scale maps (Slukan 1999, 22; Mlinarić and Miletić Drder 2017, 46–56).

¹⁴ Müller's work also produced the first topographical representation of Bosnian territory, at least within a range of two-hours'-walk from the border, or roughly ten kilometers into the Ottoman possession. This enhanced knowledge of the area, as the Ottoman authorities had hitherto been reluctant to allow the mapping of their territories (Kljajić and Mlinarić 2016, 479; Novak et al. 2005, 409; Slukan Altić 2003, 108).

¹⁵ The copy preserved at the National and University Library in Zagreb consists of four sheets and was produced at a scale of 1:550,000 (Kljajić and Mlinarić 2016, 477–481). The two maps used for comparison in this study were either at an approximately twice larger scale (1:222,600, Gadea 1718) or at a significantly smaller scale than Müller's map (1:780,000, Homann 1714). It was therefore assumed that the amount of information they contain would correspond to the degree of necessary cartographic generalisation. Accordingly, Gadea's map was expected to include the greatest number of features, such as toponyms, whereas Homann's map, due to its greater reduction in scale, was expected to be more limited in this respect.

5. Doprinos Johanna Christopha Müllera poznavanju hrvatskoga povijesnog prostora: karta Ugarske s dijelovima Hrvatske i Slavonije

Prema Marsiglijevim uputama Müller je dobio zadatak izraditi preglednu Kartu Ugarske s Hrvatskom i Slavonijom (Müller 1709, slika 1).¹⁵ Tijekom dvogodišnjeg rada na karti služio se podacima dobivenim geometrijskim i astronomskim mjerenjima radi preciznog određivanja geografske širine i udaljenosti između naselja. Pritom se oslanjao na postignuća Pavla Ritera-Vitezovića koji je, kao izaslanik Sabora Kraljevine Hrvatske pomagao poznavanjem domaćeg terena i jezika, ali i znanjima iz geografije, povijesti, kartografije i bakrorezbarstva koje je usvojio tijekom školovanja u Beču kod Johanna Weicharda Valvasora i Georga Matthäusa Vischera. Stoga je rezultat Müllerovog rada i mogao biti prvi moderni i kartografski najtočniji prikaz hrvatskog povijesnog prostora do tada.¹⁶

Čak se ni boja na toj karti Ugarske (slika 1) ne koristi isključivo u estetske svrhe već pridonosi jasnoći prikaza, boljem razumijevanju te većoj upotrebljivosti karte, posebno u dijelu različito obojenih graničnih crta. I ostale inovacije, poput preciznih terenskih mjerenja koja je Müller uveo u struku, postavila su temelje koje su slijedili daljnji naraštaji kartografa poput J. Gadee, J. B. Homanna i njegovih nasljednika.

6. Rezultati analize kartografskog poznavanja požeškog prostora

Nova saznanja donosi analiza elemenata okoliša na karti, poput prikaza reljefa i voda.

6.1. Orografija i hidrografija

Tako je porječje rijeke Orłjave, odnosno Požeška kotlina obrubljena na Müllerovoj karti uzvisinama na rubovima (Papuk, Krndija, Dilj gora, Požeška gora i Psunj), koja (ne)jasno definiraju središnji prostor kotline kao zaravan jer su sve

uzvisine, bez obzira na visinu i raspored grafički izjednačene. Hidrografska karta bilježi samo nekoliko tekućica orljavsko-ga porječja, i to one koje su imale znatniju gospodarsku ulogu početkom 18. stoljeća, a na sličan je način i orografija lišena plastičnosti. Sve su uzvisine, bez obzira na nadmorsku visinu, slično sjenčane, obojene istim tonom zelene boje i ponegdje iscrtanim stablima na gorskim padinama. Kartom dominira prostorni dojam da se ne radi o kotlini konkavnoga oblika, suprotan stvarnom stanju (DGU, Geoportal). Analiza sadržaja nešto kasnije Homannovom karte (1714, slika 3) pokazuje da niti on nije u likovnom smislu odmakao prema boljem vizualnom prikazu reljefa i tekućica, izostaje dojam kotline, štoviše ni brdski dijelovi nisu u potpunosti ucrtani pa gorje svodi na dio Papuka, Dilja i Krndije. Gadeov pak prikaz istog prostora (1718, slika 4) jasno bilježi gorja u odnosu na površine niže nadmorske visine i najbliže od sve tri navedene karte dočarava reljef ovoga dijela Slavonije. Müllerova karta bilježi tek rijetke oronime, što korisniku uskraćuje saznanje kako su pojedine uzvisine nazivali lokalni stanovnici, a isti pristup demonstriraju i karte ostale dvojice kartografa (Homann 1714; Gadea 1718). Müllerova uporaba kavalir metode i sjenčanja orografije crticama novi je postupak, kojim se reljef vizualizira kao da ga se gleda s povišenog stajališta. Istom su tehnikom naglašene i strmine u nagibu gorskih lanaca u odnosu na doline (slika 1) (Slukan Altić 2003, 35).

Komparacija toponima s karata i podataka u drugim arhivskim izvorima otkriva da toponim *Papuk/Papugh* potječe od hidronima riuulus *Papugh*, zapisanog prvi put u dokumentu iz 1238. godine (Andrić 2003, 2008, 2009). Poslije se značenjski proširio na cijelo okolno područje i najviši vrh ove gore, a potom i na čitavi zapadni dio gorskog masiva. Krndija, kao njegov istočni dio danas nosi ime turskoga podrijetla, što je česta pojava i drugdje u Slavoniji. Srednjovjekovni dokumenti, ali i lokalno stanovništvo Požeštine sjeverno gorje kotline, tj. današnji Papuk naziva *Sljeme/Szelemen*, jer to ujedno i jest hrbat gorskog objekta. S obzirom da je Papuk najveći gorski masiv na prostoru (središnjeg dijela) savsko-dravsko-dunavskog međurječja, jasno je zašto ga narativni izvori dokumentiraju pod tim imenom, premda analizirane karte to nisu potvrdile.¹⁷

Analiza hidrografije i hidronimije na Müllerovoj karti (1709, slika 2) daje jednako oskudne rezultate kao i za orografiju i oronimiju. Dok se neki vodotokovi jednoznačno prepoznaju po smještaju i smjeru, za druge je moguće samo iznijeti pretpostavku. Niti kasniji radovi Gadee i Homanna ne demonstriraju bitan napredak u preciznosti

¹⁵ Primjerak koji se čuva u NSK u Zagrebu ima četiri dijela i izrađen je u mjerilu 1:550 000 (Kljajić i Mlinarić 2016, 477–481). S obzirom da su dvije karte koje su u ovoj studiji služile za usporedbu bile približno dvostruko krupnijeg mjerila (1:222 600, Gadea 1718) ili znatno sitnijeg od Müllerove karte (1:780 000, Homann 1714) za pretpostaviti je da će i opseg informacija na kartama te dvojice autora odgovarati stupnju nužne generalizacije, odnosno da će Gadea biti u prilici prikazati najviše npr. toponima, dok je Homannu ta mogućnost zbog stupnja umanjavanja uskraćena.

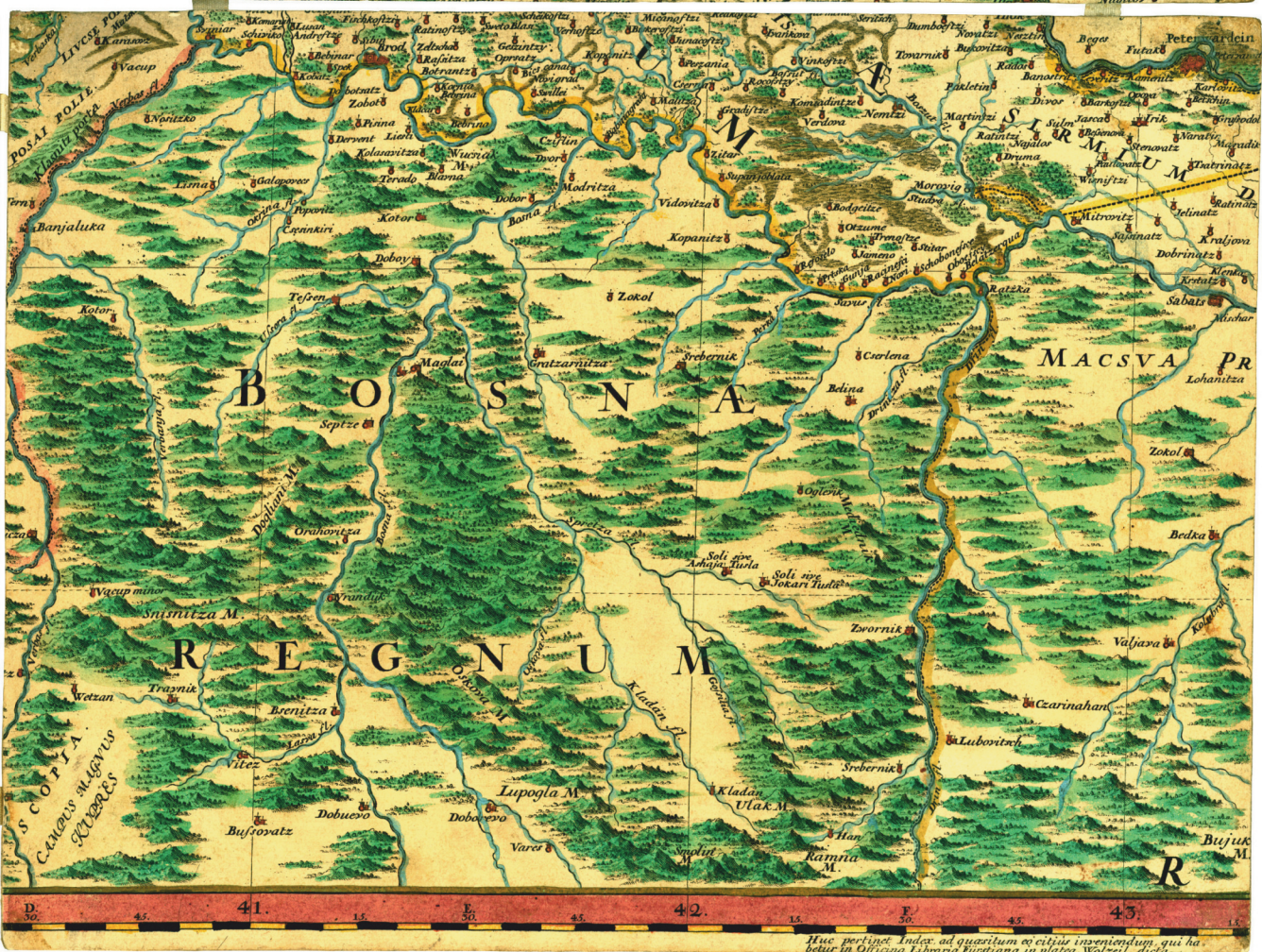
¹⁶ Kartu su otisnuli Johann Andreas Pfeffel i Christian Engelbrecht u tehnici bakroreza (Müller 1709).

¹⁷ Isprave o Požeškoj kotlini od 13. do 16. stoljeća bilježe i oronime *mons Posega* i *mons Poseganus*. Vjerojatno se radilo o doživljaju

osoba koje nisu bili žitelji tog kraja, bilo da su pripadnici kraljevske i pečuške biskupske kancelarije ili stanovnici koji su živjeli sjeverno od Papuka, u Podravini. Taj je gorski masiv u osmanlijskom razdoblju nazivan i *Orahovičkom planinom* jer je s motrišta središta Požeškoga sandžaka taj naziv bio opravdan (Andrić 2008, 58–59).

Fig. 1 Johann Christoph Müller (1709) Hungariae Regi invictissimo mapmam hanc Regni Hungariae, 3/4.





Slika 1. Johann Christoph Müller (1709) Hungariae Regi invictissimo mappam hanc Regni Hungariae, 3/4.

latitude and distances between settlements with precision. In this process, he was assisted by Pavao Ritter Vitezović, acting as a delegate of the Diet of the Kingdom of Croatia, who contributed his knowledge of the local terrain and language, as well as expertise in geography, history, cartography, and copper engraving acquired during his education in Vienna under Johann Weichard Valvasor and Georg Matthäus Vischer. Consequently, Müller's map represented the first modern and, at the time, the most cartographically accurate depiction of the Croatian historical territory.¹⁶

Even the use of colour on this map of Hungary (Fig. 1) serves not merely an aesthetic purpose but enhances visual clarity, comprehension, and overall usability, particularly through the differentiated colouring of boundary lines. Other innovations, such as the systematic application of precise field measurements introduced by Müller, established methodological foundations later adopted by subsequent generations of cartographers, including J. Gadea, J. B. Homann, and their successors.

6 The Findings of the Analysis of the Cartographic Knowledge of the Požega Area

An analysis of environmental elements on the map, particularly the topographic and hydrographic ones, provides important new insights.

6.1 Orography and hydrography

For instance, Müller's map shows the valley of the River Orłjava (that is, the Požega Basin) as surrounded by elevations (Papuk, Krndija, Mount Dilj, Mount Požega and Psunj), which define the central area of the basin as a plateau, although not entirely clearly, because all the elevations are rendered uniformly, regardless of their relative height and configuration. Hydrographic elements show only a few watercourses in the Orłjava valley, namely those important to the local economy at the beginning of the 18th century. The orography is also devoid of plasticity. All the elevations, regardless of their altitude, are shaded uniformly, in a single shade of green, occasionally with trees indicated on mountain slopes. The map also implies that the basin curves outwards, where in reality it is the opposite (DGU, Geoportal). An analysis of Homann's map, dated several

years later (1714, Fig. 3), shows little to no improvement in terms of visual representation of the relief and watercourses, the impression of a basin is absent, and the elevations are not fully rendered, with only Papuk, Dilj and Krndija shown on the map. On the other hand, Gadea's map of the same area (1718, Fig. 4) clearly distinguishes mountainous terrain from areas of lower altitude, which makes it the most faithful topographical depiction of this part of Slavonia among those three. Müller's map records only a few oronyms, thus depriving map readers of insights into local nomenclature, and the same approach is evident in the maps made by the remaining two cartographers (Homann 1714; Gadea 1718). Müller's use of the cavalier method and hachures represented a new technique of relief visualisation, where the area was depicted as though observed from a high vantage point. The same technique was used to emphasise steep slopes of mountain chains, in contrast to the adjoining valleys (Fig. 1) (Slukan Altić 2003, 35).

By comparing the toponyms on the maps to the ones found in other archival sources, we learn that the toponym *Papuk/Papugh* originates from *riuulus Papugh*, a hydronym first recorded in a 1238 charter (Andrić 2003, 2008, 2009). Gradually, the term began to refer to the whole surrounding area, as well as the mountain's highest peak, and, finally, the whole western part of the mountain range. The name of its eastern part, Krndija, has Turkish origins, as is often the case in Slavonia. Medieval documents and locals alike refer to the mountain north of the valley (today known as Papuk) as *Sljeme/Szelemen*, since it represents the ridge of the range. Seeing as Papuk is the highest mountain in the central Sava-Drava-Danube interfluvial region, it is clear why narrative sources have it recorded under that name, although the same is not the case with the maps that were analysed.¹⁷

An analysis of the hydrography and hydronymy on Müller's map (1709, Fig. 2) yielded equally meagre results as orography and oronymy. While some watercourses can be easily identified by their location and direction, others leave us to rely on mere conjecture.

¹⁶ The map was engraved and printed by Johann Andreas Pfeffel and Christian Engelbrecht using the copperplate engraving technique (Müller 1709).

¹⁷ Charters regarding the Požega Basin from the 13th to the 16th century also contain the oronyms *mons Posega* and *mons Poseganus*. These toponyms likely reflect the perspective of individuals who were not local residents, either members of the royal or Pécs episcopal chanceries or residents of the area north of Papuk in the Drava lowlands. In the Ottoman period, the same mountain bulk was called Orahovica Mountain. Looking from the standpoint of the seat of the Požega sanjak, such a name would seem grounded (Andrić 2008, 58–59).

u crtavanju hidronima Požeške kotline. Homann je posebno neprecizan u bilježenju manjih tekućica u odnosu na Savu, koja je važna i kao granica, ali i kao gospodarska žila kuca- vica (Homann 1714, slika 3). Tek treća karta pokazuje mali pomak u odnosu na prethodne radove, no i dalje je razvidno da sva trojica kartografa ne raspolažu iscrpnim terenskim podacima (Gadea 1718, slika 4). Promatrajući same hidroni- me, Orljava je, kao najduža i najbogatija vodom, jedina ime- nom zabilježena (*Orlava fl.*). Premda izvire na sjevernim padinama Psunja, zapadno od sela Bučje i kroz klanac iz- među Papuka i Psunja ulazi u Požešku kotlinu (Müller 1709, GDU, Geoportal), njen izvor Müller smješta istočnije od na- selja Stražeman i južno od Kamenskog, na jugozapadnim obroncima Papuka. Za razliku od toka oko Požege, tok rijeke prema Savi kroz klanac između Požeške i Dilj gore zabilje- žen je nešto točnije. Gadea ne navodi hidronime, čak niti za Orljavu, premda ju simbolom ucrtava nešto preciznije od Müllera, s izvorištem na sjeverozapadnom dijelu Papuka, blizu *Borche* (Bučje) (Gadea 1718). Müllerova karta demons- trira još slabije prostorno poznavanje hidrografije, posebno na razini onih nižega reda (pritoci). S istočne strane Orljave jedan potok se ulijeva kod Požege, a izvor mu je južno od naselja Stražeman. Vjerojatno je riječ o današnjem potoku Stražemanki, koja izvire sjevernije na Papuku. Na Gade- aovoj karti te pritoke nema, ali je ucrtana druga neidentifi- cirana sa zapadne strane Orljave, sjeverno od Rudine (Gadea 1718). Zanimljivo je da ni na Müllerovoj ni na Gade- ovoj karti nije dokumentirana rječica Veličanka u koju se u njenom donjem toku ulijeva Stražemanka te se kod Požege spajaju s Orljavom. Obe su tekućice dale okolnom prostoru ime još u srednjem vijeku. Riječ je o složenim tvorenicama mađarskog podrijetla *Sztrazsemlyemelléke*, odnosno *Velike- melléke* koje Andrić prevodi kao *Postrazemlje*, odnosno *Pove- ličje* (Andrić, 2009, 67–68, 70–71). Tok Veličanke je i u današnje vrijeme bogat vodom, a uz njega se razvilo naselje Velika poznato po vodenicama. U osmanlijskom razdoblju, ali i poslije, one su bile odraz gospodarske razvijenosti. Habsburški popis iz 1698. godine također bilježi vodenice, čiji korisnici čak niti ne plaćaju porez. Za razliku od opisa Velike, selo Stražeman isti dokument opisuje: „Imaju poto- čić Stražemanka (*Sztrasebanka*) i tri mlina, no nisu plaćali nikakav porez.“ (Sršan 2000, 335, 339; Mažuran 1988, 373–375, 383–384). Zato čudi izostanak tog podatka na Mül- lerovoj karti, koja ne bilježi niti ucrtan tok ni ime tekućice koja je imala znatan kapacitet i veću gospodarsku važnost u odnosu na Stražemanku. Potvrda je to pretpostavke da Müller nije poznao ovo područje, a posebno nije povezi- vao prostorni s gospodarskim značajem, što objašnjava i „šablonski“ proizvoljno bilježenje pritoka i činjenicu da je rijeku Veličanku „pomaknuo“ prema zapadu, na mjesto gdje bi trebala biti zabilježena Stražemanka. Druga važna tekućica, potok Bistra, koji u naselju Kaptol mijenja svoje

ime u Kaptolka, najpreciznije je ucrtana tekućica Požeške kotline na Müllerovoj karti. U izvorima se spominje prvi puta 1250. godine, kada je kralj Bela IV Ivanki Abrahamovu potvrdio vlasništvo posjeda Velika, a rijeka je bila granica između dva spomenuta zemljišna posjeda (Andrić 2009, 74). Kada se Müllerov zemljovid usporedi s onim nastalim tijekom trećeg vojnog istraživanja provedenog od 1869. do 1887. godine (Arcanum maps), zanimljivo je zapaziti pre- ciznost grafike toka potoka Bistra na starijoj karti u samom naselju. Ako se topografski simbol s Müllerove karte, od- nosno utvrda Kaptol, uzme kao njegovo središte, tada je primjetno kako potok teče s istočne strane što odgovara stvarnom stanju (DGU, Geoportal). Isto tako ušće u Orljavu jest južno od naselja Šeoci, točnije između Dervišage i Kuz- mice. Naselje *Imanofzi* (Ramanovci) smješteno je s istočne strane potoka, dok se na zapadnoj strani, usporedno s nji- ma, nalaze Alilovci. Vjerojatno je to zbunilo Müllera pa je zamijenio stranu riječne obale Bistre na koju je ucrtao *Imanofce*. Vodotok koji bi odgovarao Kaptolki je na Mülle- rovoj karti također površno zabilježen, dok ga Gadea po- miče istočno od Vetova te označava da se pored Dervišage (*Dervigasello*) ulijeva u Orljavu (Gadea 1718). Treća tekućica, Kutjevačka rijeka prvi put se spominje u izvorima 1367. godine mađarskom inačicom imena *fluvius Gothow* (Andrić 2009, 91). Izvire na Krndiji i teče kroz Kutjevo što je i doku- mentirano na karti iz 1709. godine. No samo je naselje na kartu ucrtano južnije od svoje stvarne pozicije, što također izmješta prikaz riječnog toka sve do ušća kod Šeovaca. Ga- dea na svojoj karti ovu tekućicu uopće niti nije zabilježio, a Londžu je ucrtao vrlo neprecizno, uz istočne padine Dilj gore, s izvorom kod naselja *Schvibokouzi* i ušćem u Orljavu sjeveroistočno od Pleternice (Gadea 1718). Danas je ta rije- ka regulirana te joj tok ne odgovara onomu kakav je bio početkom 18. stoljeća (Arcanum maps, DGU, Geoportal). Upravo stoga je za rekonstrukciju prostora i poslužila voj- na habsburška karta nastala u 19. stoljeću. Usporedba istog područja na karti nastaloj terenskom izmjerom provede- nom između 1869. i 1887. godine, dakle prije regulacije to- ka Londže, pokazuje da se Kutjevačka rijeka ulijeva u Černi potok, a tek potom u Londžu, a ne izravno u Orljavu (Mül- ler 1709). Habsburški inženjeri su u 19. stoljeću potvrdili da takvo Müllerovo pozicioniranje nije moglo biti stvarno, jer Londža izvire duboko u Dilj gori, protječe istočno od nase- lja Latinovac te dalje prema ušću u Orljavu kod Pleternice (Arcanum maps). Na Müllerovoj karti zabilježena je i čet- vrti (zapadna) pritoka Orljave, premda nije jasno o kojem je vodotoku riječ. Naime niti jedna tekućica ne izvire istoč- no od Cernika, teče sjevernim obroncima Požeške gore južno od Požege te se ulijeva u Orljavu istočno od Blacka (GDU, Geoportal). Moguće je riječ o Bzeničkom potoku, koji se spušta s obronaka Požeške gore i utječe u Orljavu nedaleko od Pleternice, premda i za to ima malo indicija.



Fig. 2 The Požega Basin and Brodska Posavina region as depicted on Müller's map from 1709 (Section 3, a detail).

Slika 2. Požeška kotlina i brodska Posavina na Müllerovoj karti iz 1709. godine, (3. dio, isječak).

Iz svega navedenog proizlazi da niti jedan od tri isječka spomenutih karata Požeške kotline s početka 18. stoljeća ne dokumentira s primjerenom vjerodostojnošću vodotoke, vjerojatno jer se nisu nalazili u granicama vojno-ustrojbeno zanimljivog prostora da bi izmjera bila nužna ili imala geostrateško-vojnu relevantnost. Čak je i gospodarski značaj tih rijeka bio samo lokalnog karaktera i nije imao dovoljan kapacitet za distribuciju roba prema granici da bi opravdao interes (i financijske izdatke za izmjernu) habsburških vlasti.

6.2. Naselja

Osim manje očiglednih fizičkih elemenata prostora važnih za prostorno pa onda i vojno-obrambeno planiranje, kao što su bili hidrografija i orografija Požeštine, civilna i vojna naselja očitiji su element društveno-kulturnog inventara karte primjenjiv za tu namjenu. Neka naselja Požeške kotline već su spomenuta u analizi vodotoka. Toponimi nisu uspoređivani pojedinačno već su traženi određeni opći obrasci u oblikovanju njihovog smještaja i oblik imena) na Müllerovoj karti u odnosu na isti sadržaj s karata Gadee i Homanna. Reprezentivnost naselja koja su detektirana počiva na činjenici da se očito radi o ojkonimima kojima su na kartama bilježena naseljena mjesta bez obzira na funkciju (vojnu, civilnu, vjersku) koju su imala.

Kao što je jasno vidljivo iz tablice 1 problem bilježenja slavenskih toponima imala su sva tri kartografa, premda je on bio posebno istaknut kod Homanna. Zabilježeni toponimi su uglavnom na tim kartografima nerazumljivom jeziku pa ni značenja riječi nisu mogli osobno provjeriti. Očito je hrvatski jezik autorima bio prepreka u razumijevanju i autentičnom dokumentiranju izvornih toponima, koji su potom bilježeni njemačkom grafijom i pritom nerijetko iskrivljavani do neprepoznatljivosti. Naime prije 19. stoljeća i Gajeve kodifikacije hrvatskog jezika i pisma uvođenjem palatala nije bilo moguće jednoznačno (standardizirano) zabilježiti toponime čak niti uz poznavanje jezika, što kod habsburških kartografa i nije bio slučaj. Tako Müllerova karta bilježi toponime *Luschintzy* (Lučinci) ili *Straseman* (Stražeman), ali nasuprot njima i toponime koji ne sadrže slavenske glasove i koji su zapisani identično kako se i danas izgovaraju (npr. *Novoselo*, *Velika* ili *Ivandol*). Dio toponima je iskrivljeno zabilježen ne nužno samo zbog jezične barijere između lokalnog stanovništva i popisivača već dijelom i zbog grešaka u prijelazu imena iz predložaka kojima se Müller služio prilikom izrade karte. Primjer je ojkonim *Radunoftzi*, koji se, s obzirom na smještaj južno od Pleternice u uskom kanjonu Orljave i okolno ucrтана sela, vjerojatno odnosi na Kadanovce (Müller 1709). Dio toponima s karte ne može se identificirati, primjerice *Lupoglav* i *Ratzmarftze*, tim više jer nisu zabilježeni niti u popisu naselja provedenom 1698. godine (Sršan 2000, 257–304, 335–354).

Kod Homanna je teško identificirati i dio imena naselja. S jedne strane su neprecizno smještene one koje se unatoč tome mogu identificirati, još je više onih za koje se ne može ustanoviti kojem današnjem naselju odgovaraju, a treća su ubicirana na više različitih mjesta. Tako je Požega zabilježena kao *Pošega* na mjestu gdje bi doista trebala biti i kao *Pofguavar* sjevero-zapadno od prethodnog toponima, na južnim obroncima Papuka (Homann 1714, slika 3). Gadea je nešto precizniji, premda se i kod njega dio naselja (*Toichinovatz*, *Lurkofzi*, *Poritoe*) ne može identificirati. On najviše topografskih podataka pruža za gradove, sela i zaselke. Na primjeru posjeda Prepoštije, srednjovjekovnog Kaptola sv. Petra navodi sva naselja osim Ramanovaca, uključujući i Đurak (*Iurakovatz*) i Galešić (*Galissich*), naselja koja danas više ne postoje. Premda su neka od njih neprecizno smještene, vidljiv je napor da ona ipak budu dokumentirana u okvirima posjeda *Praposit* (Gadea 1718, slika 4). Požega kao glavno upravno središte Požeštine dominira prostorom na isječku Müllerove karte, iako nije potpuno precizno smještene na obroncima Požeške gore već sjevernije u dolini. Uz utvrdu na uzvisini vidljivo je i podgrađe. U neposrednoj blizini je rijeka Orlava, s mostom na sjeveroistočnoj strani utvrde. Naselja koja su se razvila zapadno od grada (Novo Selo, Brestovac, Daranovci, Ivandol) nižu se uz cestu koja spaja Požegu i Cernik, odnosno Novu Gradišku. Sva su naselja pozicionirana nešto južnije od grada, a posebno je Ivandol izdvojen i ucrtan zapadno čak i od Cernika (Müller 1709, slika 2). Već je iz ovoga segmenta Požeške kotline vidljivo da terenski rad na ovom prostoru nije provoden nego su naselja kartirana na temelju informacija prikupljenih iz drugih izvora. Može se čak pretpostaviti da je kartograf izbor naselja koja je zabilježio na karti mogao napraviti služeći se popisom naselja koji su sastavili komorski službenici 1698. i 1702. godine (Sršan 2000), ali ih je u tom slučaju koristio selektivno. I Gadea lokaciju Požege (*Bocega*) bilježi razmjerno precizno na posjedu *Comunitas*, kraj rijeke Orljave i sjeverozapadno od obronaka Požeške gore (Gadea 1718, slika 4). Homann je daleko neprecizniji u odnosu na prethodna dva kartografa. Uz pretpostavku da između dva toponima, *Pofguvar* i *Pošega*, drugi označava gradsko naselje koje je od 1790. godine ponovno bilo sjedište županije, ono je smješteno sa zapadne strane Orljave, i fortificirano obrambenim zidovima (Homann 1714, slika 3). I Velika je na Müllerovoj karti označena fortifikacijama, ali je njena funkcija označena i vojnim i vjerskim simbolima, vjerojatno stoga što je franjevački samostan sv. Augustina bio ishodište pobune narodne vojske protiv Osmanlija, vođene fra Lukom Ibrišimovićem (Sršan 2000, 335). Nekadašnji Zborni Kaptol (lat. *Capitulum*) sv. Petra, odnosno osmanlijsko trgovište, sada je označeno samo kao utvrda (Müller 1709). S druge strane popis iz 1698. bilježi kolektivnu memoriju na nekada slobodan kraljevski grad, s poveljom o pravima stanovnika na održavanje sajma o blagdanu sv. Petra (Sršan 2000, 277–278).

The later works of Gadea and Homann demonstrate no improvement when it comes to the precision in recording the hydronymy of the Požega Basin either. Homann was especially imprecise in marking smaller watercourses in relation to the River Sava, which was relevant both as a borderline, as well as lifeblood of the economy (Homann 1714, Fig. 3). Only the third map shows some improvement over the earlier works. However, it is clear that neither of the three authors could draw upon the detailed field data (Gadea 1718, Fig. 4.). If we examine only the hydronyms, the river Orljava, the longest and the richest in water, is the only one recorded by name (*Orlava fl.*). Although it springs from the northern slopes of Psunj, west of the Bučje village, and enters the Požega Basin through a pass between Papuk and Psunj (Müller 1709, DGU, Geoportal), Müller placed its headwaters east of Stražeman village and south of Kamensko, on the southwestern slopes of Papuk. Unlike its course around Požega, the course of the river Orljava towards the Sava, through the pass between Mount Dilj and Mount Požega, is recorded somewhat more accurately.

Gadea does not provide hydronyms, not even for the Orljava, although he marked it with a symbol more accurately than Müller, with its headwaters placed southwest from Papuk, near *Borche* (Bučje) (Gadea 1718). Müller's map shows even poorer geographic knowledge of hydrography, especially when it comes to lesser watercourses (tributaries). On the eastern side of the Orljava, there is a stream that flows into it near Požega, whose source is south of Stražeman. It is probably the stream Stražemanka, which rises further north on Papuk. Gadea's map does not feature that tributary at all. However, another tributary appears on the west side of the Orljava, north of Rudina (Gadea 1718). It is interesting that neither Müller's nor Gadea's map make any note of the small river called Veličanka. Stražemanka flows in its lower course before it joins Orljava near Požega. Both watercourses gave names to their surrounding areas in the Middle Ages. These complex toponyms are compounds of Hungarian origin, *Sztrazsemyemelléke* and *Velikemelléke*, which Andrić translated to Croatian as *Postrazemlje* (the region/valley around the Stražemanka) and *Poveličje* (the region/valley around the Veličanka) (Andrić, 2009, 67–68, 70–71). The course of the Veličanka remains rich in water even today. A settlement called Velika developed on its banks, which is known for its watermills. During the Ottoman period, and later, these mills reflected the economic development of the area. The Habsburg census of 1698 also documented watermills, whose users pay no taxes. Unlike the description of Velika in this document,

the description for Stražeman states: "They have a small stream called Stražemanka (*Sztrazemanka*) and three watermills, but they pay no taxes." (Sršan 2000, 335, 339; Mažuran 1988, 373–375, 383–384). Müller's map, surprisingly, makes no note of this. Since Müller's work omits watercourses of greater capacity and economic significance than the Stražemanka, it can be deduced that Müller was, in fact, not very familiar with the area. Moreover, he made no connections between the geographic elements and their economic significance, which explains his "patterned" arbitrary recording of streams and tributaries and the fact that he "displaced" the river Veličanka towards the west, where the Stražemanka should have been. Another important watercourse, the stream Bistra, which is referred to as Kaptolka once it reaches the Kaptol village, is the most accurately plotted watercourse on Müller's map. Its earliest mention dates from 1250, when king Bela IV confirmed Ivanka Abrahamov's ownership of the Velika estate, with the stream marking the boundary of the estate (Andrić 2009, 74). When we compare the Müller map with the map of the Third Military Survey, conducted from 1869 to 1887 (Arcanum maps), the former maps the course of the Bistra inside the settlement with markedly more precision. If the topographic symbol on the Müller map, namely the Kaptol fort, is taken as its centre, we can see that the stream flows on its east side, as it does in reality (DGU, Geoportal). Also, its mouth into the river Orljava lies south of the Šeoci village, more accurately, between Dervišag and Kuzmica. The settlement of *Imanoftzi* (Ramanovci) lies east of the stream, whereas on the western side, running parallel lies Alilovci village. This, probably, confused Müller, who placed *Imanoftzi* on the opposite bank of the Bistra. The watercourse that could correspond to the Kaptolka on Müller's map was also recorded with less accuracy, while Gadea placed it east of Vetovo, marking it as flowing into the Orljava near Dervišag (Dervigasello) (Gadea 1718). The third watercourse, the river Kutjevo, was first mentioned in 1367, under its Hungarian name *fluvius Gothow* (Andrić 2009, 91). It rises on Krndija and flows through Kutjevo, as shown on the 1709 map. However, the settlement itself is inaccurately plotted south of its actual location, as is, consequently, the entire course of the river all the way to its mouth near Šeovci. Gadea omits this river from his map, while plotting the course of the Londža rather inaccurately, along the eastern slopes of Mount Dilj, placing its spring around *Schvibokouzi*, and its mouth into the Orljava northeast of Pleternica (Gadea 1718). Today, this river is regulated and its course no longer corresponds to the one recorded in the 18th century (Arcanum maps, DGU, Geoportal). For this reason, Habsburg



Slika 3. Johann Baptist Homann (1714) Regnorum Hungariae, Dalmatiae, Croatiae, Sclavoniae,..., isječak.
Fig. 3 Johann Baptist Homann (1714) Regnorum Hungariae, Dalmatiae, Croatiae, Sclavoniae,..., a detail.



Slika 4. Joseph Gadea (1718) Tabula geographica nova et exacta distincte exhibens regnum Slavoniae, cum Syrmii ducatu, isječak.
Fig. 4 Joseph Gadea (1718) Tabula geographica nova et exacta distincte exhibens regnum Slavoniae, cum Syrmii ducatu, a detail.

Table 1 Comparative Analysis of the Požega Region Toponyms in Administrative (Statistical) and Cartographic Sources.**Tablica 1.** Usporedna analiza toponima Požeštine u administrativnim (statističkim) i kartografskim izvorima.

1698 Census (Sršan 2000) / Popis naselja iz 1698. god. (Sršan 2000)	Müller's Map (Müller 1709) / Müllerova karta (Müller 1709)	Homann's Map (Homann 1714) / Homannova karta (Homann 1714)	Gadea's Map (Gadea 1718) / Gadeina karta (Gadea 1718)	Map of Hungary created between 1869 and 1887 (Arcanum maps) / Karta Ugarske nastala između 1869. i 1887. god. (Arcanum maps)	Present-day Toponym (DGU, Geoportal) / Današnji toponimi (DGU, Geoportal)
Pleternica	Pleternitza	Pletervifo	Pleternitz Komoriza Pzenicka	Pleternica	Pleternica Komorica Bzenica
Orlyavacz Szrednye Szelo Viskovacz Blaczki Cadanovczi Frklyevczi Vercsendol Buk Reznik Szvilno Svilna dolnia Mihalyevczi Bilacz Tulniczi Dervisaga	Blaski Radunoftzi		Blarko Kadanofzi Ferklefzi Vrchindol Buck Resnik Svilna grna	Orljavica (Kuzmica) Srednje selo Viškovci Blacko Kadanovci Frkljevci Vrčindol Buk Resnik	Kuzmica Srednje Selo Viškovci Blacko Kadanovci Frkljevci Vrčin Dol Buk Resnik
Gradacz Mitrovacz Kutieva Szveti György Knesczi Cziglenik	Swilnavuk Svilna	Svilna	Tulninsz Dervigasello Virovatz Gradatz s. Georgen Ciglenik Velischeuzi Keneri... ?	Mihaljevci Bilač mali, Bilač veliki Tulnik Dervišaga dolnja Gradac Mitrovac Kutjevo Kula (Josefsfeld) Knezci Ciglenik	Pleternički Mihaljevci Mali Bilač, Veliki Bilač Tulnik Dervišaga Gradac Mitrovac Kutjevo Kula Knežci Ciglenik
Begtessi			Zaglin Vuckochevzi Czodunzi Velischeuzi Czariliack	Begtež	Bektež Čaglin Vukojevica
Szarilacz Szezvete Lakusia	Mitrovatz Cutjava		Lacusia Schuue Sueli ? Sumanofzi Czodunzi ? Grabarie Assikovci	Zarilac Sesvete Lakušija	Zarilac Sesvete Lakušija
Grabarie Assikovczi Csozinczi Vehto Lukacsi Hernye Tominovczi Venye		Vethi	Vectovo Luchasch Hernitza Dominovatz Vaine Mittrovatz	Grabarje Ašikovac Čosinac Vetovo Lukač Hrnjevac Tominovac Venje	Grabarje Ašikovci Čosinac Vetovo Lukač Hrnjevac Tominovac Venje Mitrovac
Csakatić			Sumanofzi		Šumanovci

1698 Census (Sršan 2000) / Popis naselja iz 1698. god. (Sršan 2000)	Müller's Map (Müller 1709) / Müllerova karta (Müller 1709)	Homann's Map (Homann 1714) / Homannova karta (Homann 1714)	Gadea's Map (Gadea 1718) / Gadeina karta (Gadea 1718)	Map of Hungary created between 1869 and 1887 (Arcanum maps) / Karta Ugarske nastala između 1869. i 1887. god. (Arcanum maps)	Present-day Toponym (DGU, Geoportal) / Današnji toponimi (DGU, Geoportal)
Jakicsi			Raisavatz		Rajsavac
Bilisevczi			Nacoitz	Jakšić	Jakšić
Granye			graine	Bjeliševac	Bjeliševac
Czerovac			Cerovack	Granje	Granje
Novoszelo				Cerovac	Cerovac
Trapari			Trapare	Novoselci	Novoselci
Illiasvczi				Trapari	Trapari
Porich				zu Ilijaševci	
Nereševci				Porec	Poreč
Kaptol	Captol	Captohun	Captol	Kaptol	Kaptol
Komarevac			Komarofzi	Komarovci	Komarovci
Dolyanovci			Dolanouzi	Doljanovci	Doljanovci
Besinczi			Bechini	Bešinac	Bešinci
Podgorie			Podgorie	Podgorje	Podgorje
Gyurak			Iurakovac		Đurak ?
Goloberdo			Golo brdo	Golobrdo	Golo Brdo
Halilovci			Hallilovci	Alilovci	Alilovci
Radmanovci	Imanoftzi			Ramanovac	Ramanovci
Cseslakovci			Cheslakovze	Češljakovac	Češljakovci
Galesich			Galessich		Galešić ?
Csecsavac				Čečevac	Čečavac
Orlyavac			Orlievatz	Orljavac	Orljavac
Koprivnicza				Koprivna	Koprivna
Pavlovci			Paulofzi	Pavlovci	Pavlovci
Vilich				Viličselo	Vilič Selo
Desevci	Deftzentzi		Dechefzi	Deževci	Deževci
Vucsiak				Vučjak	Vučjak
Brztovac	Prestovatz	Berfevia	Prestovatz	Brestovac	Brestovac
			Radin		Rudina
			Markovatz		Markovac
			Serovarch		
			saverzie		
			Tollas		
Dolacz				Dolac	Dolac
Murkovci				Nurkovac	Nurkovac
Novozelo	Novoselo		Novosello	Novoselo	Novo Selo
Kugyani			Gutzani	Gučani gornji, Gučani dolnji	Gornji Gučani, Doljnji Gučani
			Oblakovatz		Oblakovac
Ivandol	Ivandol		Ivandol	Jvandol	Ivandol
Daranovci	Duranoftze			Daranovac	Daranovci
Szakorenye			Saorenje	Zakorenje	Zakorenje
			Burnovo		Busnovi
Jaguglia			Iaguplije	Jaguplje	Jaguplije
Szkenderovci			Skenrerovze	Skenderovci	Skenderovci
			Gigerovzi		Žigerovci
Berdgyani				Brdjani	Brđani (nije u PSŽ)
Lippa			Lippa	Lipa	Lipa
Kunovci			Kunofzi	Kunovci	Kunovci
			Gerenzij		
			Vgarzy		
Ugarci				Ugarci	Ugarci
Goloberdci			Goloberzi	Golobrdci	Golobrdci

1698 Census (Sršan 2000) /	Müller's Map (Müller 1709) /	Homann's Map (Homann 1714) /	Gadea's Map (Gadea 1718) /	Map of Hungary created between 1869 and 1887 (Arcanum maps) /	Present-day Toponym (DGU, Geoportal) /
Popis naselja iz 1698. god. (Sršan 2000)	Müllerova karta (Müller 1709)	Homannova karta (Homann 1714)	Gadeina karta (Gadea 1718)	Karta Ugarske nastala između 1869. i 1887. god. (Arcanum maps)	Današnji toponimi (DGU, Geoportal)
Szaversye Derskovczi Szverzigatye Stitnyak Hemovczi Sznigovczi Pazkovczi	Pacoftzi		Emofzi Schnegovich Pasikofzi Kamenska Rasija	Zaversje pusla. Drzkovci Svrzgaće Štitnjak Emovcigrn, Emovci dl Šnjegavić Pasikovci	Završje Drškovci Štitnjak Emovci Šnjegavić Pasikovci Kamenska
Razna Kunyk	Kamensko			Rasna Kujnik Kamensko (Topole)	Rasna Kujnik Kamensko
Sztriesevicza Merkopie Szassia Vranich Vucsiak Katyunicza Szlobostina Podszredye Mertoflazi Bratuljevci			Vucduak	Striježevica Mrkopolje Sažije Vranić Vučjak	Striježevica Mrkoplje Sažije Vranić Vučjak
			Slobostina	Sloboština Posreče Mrtovlasi Bratuljevci	Sloboština Podsreče Bratuljevci
			Pratulefzi Patreche ? Cerle()zi ? Vranietz Milivojefzi Peganisa ? Luchinzi		Milivojevci
Lucsinczi	Luschintzy Belanovatz			Lučinci pustara	Lučinci Milanovac
Olyazi Verhovczi Szmolyanovczi Kantarovczi Czerlyenczi Nyesci Dedina Kliza Sehovczi Mitrovacz Velika			Kantarofzi	Oljasi Verhovec Smoljanovci Kantarovci Crljenci Nježić Klisa Šeovci Mitrovica Velika	Oljasi Vrhovci Smoljanovci Kantrovci Crljenci Nježić Klisa Šeovci Trenkovo Velika
Radovanczi Patacs Draga Schomnik Bankovczi Polyanka	Velika Lupoglav ?		Mitrovitz Velika		
			Radovanzi Potocani Draga Skomnik Bankofzi Poliancka Ostakofzi Mertoflart Ohkat ?	Radovanci Potočani Draga Škovnić Bankovci Poljanska	Radovanci Potočani Draga Bankovci Poljanska Ozdakovci
Biskupovczi Toran Straseman	Straseman		Biscupsi Toran Straseman Dolanzi	Biskupci Toran Stražeman	Biškupci Toranj Stražeman Doljanci

1698 Census (Sršan 2000) /	Müller's Map (Müller 1709) /	Homann's Map (Homann 1714) /	Gadea's Map (Gadea 1718) /	Map of Hungary created between 1869 and 1887 (Arcanum maps) /	Present-day Toponym (DGU, Geoportal) /
Popis naselja iz 1698. god. (Sršan 2000)	Müllerova karta (Müller 1709)	Homannova karta (Homann 1714)	Gadeina karta (Gadea 1718)	Karta Ugarske nastala između 1869. i 1887. god. (Arcanum maps)	Današnji toponimi (DGU, Geoportal)
Szovinyak			Soviniak		Sovinjak jezero kod Marindvora i Štitnjaka)
Posega Pofguavar ?!	Pofsega Bacega	Pošega Požega	Požega Orlievatz Lasse Komuchina Derkofzi Verofzi Opersinatz Krabutnick Novarecko Alaginzi		Laze Komušina
Vidovczi Arzlanovczi				Vidovci	Škrabutnik Alaginci Vidovci Arslanovci dio Grada Požege Mihaljevci
Mihalyevczi			Mialefzi	Mihaljevci nemački, Mihaljevci ilirski	
Eminovczi			Eminofzzi	Eminovci dolnji, Eminovci gornji	Eminovci
Turnich Sehovczi Tekich Bertheovovczi Trescsinovacz Stoicsinovac Granicze Duboka	Schoftzi Duboka		Turnich Tekictz Pertulevatz Trestenovatz Dubocka Toichinovatz?	Turnić Šeovci Tekić Bertelovci Treštanovci Stojcinovac Granice Duboka	Turnić Šeovci Tekić Bertelovci Treštanovci Stojčinovac Granice (nisu u PSŽ) Duboka
Bilach Russeva Szolskidol Gradische	Gradischtze		Russevo Gradataz Lurkofzi ? Latinofzi Poritoce ?	Bilač mali, Bilač veliki Ruševo Sovshidol Gradištje	Bilač Ruševo Sovski Dol Gradište
Latinczi	Latinof			Latinovac	Latinovac
Szibokovczi Szapna Dedina Reka Dobrogozd Paka	Schibocovatz		Dedina recka Dobrogotze Packa Pielatz minor	Sibokovac Sapna Dedina reka Dobrogoštje Paka	Sibokovac Sapna Djedina Rijeka Dobrogošće Paka
Pielatz Major					
Migalovczi Imrebovczi Lizkovicza			Ivanofz Mialeuzi Imbreofzi Kamengrad Verofzi Detinakli... Sinolanevzi	Migalovci Imrievci Ljeskovica	Migalovci Imbrijevi Ljeskovica Kamengrad

military maps from the 19th century were used for the purposes of spatial reconstruction. The examination of the same area as shown on the map based on field surveys conducted between 1869 and 1887, i. e. before the aforementioned regulation, indicates the river Kutjevo flowed into the Černi stream, which then flowed into the river Orłjava, instead of emptying directly into the Orłjava (Müller 1709). The Habsburg surveyors in the 19th century confirmed Müller's placement does not correspond to reality, because the Londža rises deep on the Mount Dilj, flows east from the Latinovac village, and continues towards its mouth into the Orłjava near Pleternica (Arcanum maps). Müller also recorded a fourth (western) tributary of the Orłjava, but it is unclear which watercourse this refers to. No stream rises east of Cernik, flows along the northern slopes of Mount Požega, south of Požega, towards its mouth into the Orłjava, near Blacko (DGU, Geoportal). Perhaps this represents the Bzenički stream, which descends from Mount Požega and flows into the Orłjava near Pleternica. However, there is insufficient evidence to support such a conclusion. According to the discussion above, none of the three mentioned map excerpts of the Požega Basin from the early 18th century documents watercourses with adequate reliability, likely because they remained outside of areas of military and administrative interest, therefore thorough surveys were neither required nor of any geo-strategic or military importance. Even the economic significance of these rivers was local, lacking the capacity for the distribution of goods toward the border to justify any interest (and the cost of survey) of the Habsburg authorities.

6.2 Settlements

Besides less obvious environmental elements, important for spatial and military planning, such as the hydrography and orography of the Požega region, civilian and military settlements stood more clearly as elements of the social and cultural inventory of the map, that can be used for this purpose. Some of the settlements of the Požega Basin have already been mentioned in our analysis of the watercourses. The comparison of toponyms was not conducted for every individual example. Rather, the analysis aimed to identify certain general patterns in their location and naming on Müller's map, as well as to compare them to their counterparts on Gadea's and Homann's maps. It is not possible to establish clear criteria for the representation of settlements on the maps, as the recorded settlements were included regardless of their function (military, civil, or religious).

As clearly seen in Table 1, all three cartographers struggled with recording Slavic settlement names, particularly Homann. The language of the recorded toponyms was mostly unintelligible to these cartographers, who were unable to verify their meanings themselves. Obviously, the Croatian language proved an obstacle to the understanding and authentic documenting of the original toponyms, so they were, consequently, recorded according to the German orthography, and frequently distorted to the point of being unrecognisable. Also, before Ljudevit Gaj's codification of the Croatian language and script in the 19th century, which first introduced specific letters for palatal consonants, the cartographers would have been unable to record toponyms in a uniform (standardised) manner, even if they had known the language, which, in any event, was not the case. Müller's map, thus, records toponyms *Luschintzy* (Lučinci) or *Straseman* (Stražeman), as well as some that do not contain Slavic phonemes, with the latter being written identically as pronounced today (e.g. *Novoselo*, *Velika* or *Ivandol*). In some cases toponyms were distorted not only because of the language barrier between the local population and the surveyors, but rather because of Müller's own mistakes in transcribing the names from the documents he used when he drew the map. One example is the oikonym *Radunoftzi*, which, judging from its location south of Pleternica, in the narrow Orłjava canyon, probably refers to Kadanovci (Müller 1709). Some of the toponyms are impossible to identify, such as *Lupoglav* and *Ratzmarftze*, particularly since they do not appear in the 1698 census (Sršan 2000, 257–304, 335–354). Homann's work also features settlement names that are difficult to identify. Some settlements are difficult to identify because, even when their names can be deduced, the way they are placed on the map lacks precision. Even more cannot be matched to any present-day settlement, while a third group appears in multiple locations. For example, Požega is recorded as *Poßega* in its correct location, but also as *Pofguavar* to the northwest of the former, on the southern slopes of Papuk (Homann 1714, Fig. 3). Gadea was somewhat more precise, although in his work we also find settlements that cannot be identified (*Toichinovatz*, *Lurkofzi*, *Poritoce*). He provides the most topographical data for towns, villages and hamlets. In the case of the Prepoštija estate, the medieval Chapter of Canons of St. Peter, he recorded all the settlements, except Ramanovci, including Đurak (*Iurakovatz*) and Galešić (*Galissich*), which are settlements that no longer exist. Although some of them were inaccurately located on the map, his effort to document them as part of the *Praposit* estate is clear (Gadea 1718, Fig. 4). Požega, as the main administrative centre of the

Gubljenje funkcije Kaptola s dolaskom habsburške vlasti, bilo kao crkvenog središta iz srednjega vijeka ili vojnoga središta iz osmanskog vremena argumentira njegovo znatno gospodarsko slabljenje. Homann Veliku nije niti zabilježio, a *Captolum* je smješten neprecizno, sa sjeverne strane Papuka, bliže Virovitici (*Virovitza*) nego Požezi (*Poßega*) (Homann 1714). I konačno, Gadea Veliku još uvijek izdvađa po značaju i označava simbolom crkvenog središta, dok je Kaptol izjednačio sa svim ostalim naseljima (slika 4). Usporedbom Müllerove karte s habsburškom kartom iz 19. stoljeća proizlazi da pomak (izmještaj) u dokumentiranju položaja naselja kod Müllera nije bio iznimka. Posebno se ističe Kutjevo (*Cutjeva*), smješteno znatno južnije od stvarne pozicije, ali i nešto zapadnije u odnosu na *Mitrovatz*, *Imanofzte* (Ramanovce) i ostala okolna mjesta. Od 26 naselja Požeške kotline koja su zabilježena na Müllerovoj karti samo dva nisu identificirana, od čega je tek njih osam (Pleternica, Čaglin, Mitrovac, Kaptol, Velika, Stražeman, Imanofci i Požega) smješteno relativno ispravno u prostoru. Kako niti reljef Požeške kotline ne upućuje da se radi o zaravni, orijentacija je dodatno otežana jer niti tokovi tekućica ne pridonose sekundarnom snalaženju u prostoru. Osim proizvoljnosti u smještanju osnovne topografije još više arbitrarnosti Müller demonstrira u prikazu manje važnih naselja. Naime dok je odabir većih i gospodarski jače razvijenih naselja poput Požege, Velike, Kutjeva ili Kaptola samorazumljiv, nisu jasni kriteriji po kojima je napravljena selekcija slabije razvijenih naselja. Primjerice, *Imanofce* (Ramanovci) karta bilježi dok Alilovce izostavlja, premda su oba približno istog gospodarskog razvoja i značaja (Müller 1709, slika 2). Sve navedeno upućuje na to da je karta požeške okolice temeljena na posredno prikupljenim informacijama, bez terenskoga rada ili osobnih empirijskih saznanja dobrih topografa o naseljima, ali i o geomorfologiji, okolišu ili arhitekturi toga kraja. Uspoređujući sve tri promatrane karte može se zaključiti da niti jedna od njih ne demonstrira sve analizirane elemente iste kvalitete te da svaka odstupa od novijih podataka u određenoj mjeri i na drugom dijelu. U tom odstupanju prednjači Homannova karta (slika 3). S druge strane Gadeov kartografski prikaz najtočnije dokumentira reljef, donekle i hidrografiju prostora, a čak su i naselja grupirana po posjedima prilično vjerodostojno (slika 4). Takav pomak u kvaliteti tri analizirane karte ne može biti samo posljedica novih saznanja do kojih se došlo u nekoliko godina razlike koja te karte dijeli nego vjerojatno i boljih alternativnih izvora podataka odnosno predložaka kojima se Gadea služio.

7. Poznavanje kartografskog sadržaja u široj okolini Broda na Savi

S obzirom na pronađeni arhivski materijal Osmanlije nisu bili zainteresirani za kartiranje svojih bosanskih posjeda,

stoga prostori oko Save, a posebno njena južna obala povremeno postaju meta topografskih izvida srednjoeuropskih kartografa i prije 18. stoljeća, premda znatno manje u odnosu na sjevernu savsku obalu (Mlinarić i Blaženović 2024, 68; Slukan 1999, 29–30). No rad Komisije unosi pravi terenski rad u kartografiju pa su i rezultati više kakvoće.

7.1. Orografija i hidrografija

Osim južnih padina Požeške i Dilj gore, šire područje grada i utvrde Brod je reljefno ravničarsko područje. Te su uzvisine, jednako kao i kod reljefa Požeške kotline, prikazane na Müllerovoj karti (slika 2) zelenom bojom te sjenčane s drvećem na južnim obroncima da bi se dočarala njihova trodimenzionalnost. I odabir boje i naglašavanje raslinja koristilo se u svrhu naglaska reljefne dinamike (Müller 1709). Slično načelo kartiranja šumovite ravnice primijenjeno je i u Gadeae i Homanna. Dok je drugospomenuti cijeli prikaz Brodske Posavine u odnosu na Požešku kotlinu pomaknuo znatno istočnije (1714, slika 3), Gadea bitno preciznije kartira taj kraj pa čak navodi i sve postojeće prijelaze Save na njenu desnu, osmansku obalu (1718, slika 4). Od hidroloških sadržaja, širom okolicom Broda dominira rijeka Sava koja svoj osnovni tok od početka 18. stoljeća do danas nije znatno mijenjala, izuzev prirodnog jaružanja i taloženja nanosa, odnosno regulacije meandara. Usporedba Müllerove karte s kartom treće vojne izmjere iz 19. stoljeća potvrđuje odluke Karlovačkog mira da je Sava državna granica prema Osmanskom Carstvu (Arcanum maps, DGU, Geoportal). Zapadno od Kobaša u nju se ulijeva rijeka Orljava, koja dotječe iz Požeške kotline sa sjeveroistoka. Njihovo ušće se račva u dva rukavca na Müllerovoj karti, čineći svojevrsnu deltu. Karta iz 19. stoljeća bilježi ušće Orljave u Savu, a sjeverno od njega je močvarno područje s nekoliko rukavaca koji se ponovno spajaju u jedan i otječu u Savu (Arcanum maps). Zanimljivo je da ni na Gadeovoj karti, koja je hidrografski znatno preciznija, nema ucrtane delte, jednako kao ni na suvremenoj na kojoj se vidi i gust šumski pokrov (1718, DGU, Geoportal). Može se pretpostaviti da je Müller, bilježeći „deltu“ Orljave zapravo nastojao prikazati močvarni prostor niske prometne i komercijalne vrijednosti. Vjerojatno je taj kraj bio nepristupačan i stručnoj skupini koja je obilazila teren i obavljala mjerenja, pojačavajući dojam o više rukavaca koji utječu u Savu. Nadalje, Gadeov zemljovid bilježi neimenovanu pritoku Orljave sjevernije od Slavenskog Kobaša (1718). I Müller kartira pritoku Orljave s istočne strane kod naselja *Radunofdzi*, gdje Orljava iz smjera Požeške kotline izlazi iz svojevrsnog „kanjona“ (Müller 1709, slika 2). Na karti nastaloj prilikom treće habsburške vojne izmjere te pritoke nema, kao niti na suvremenoj karti. Danas je na cije-lom tom močvarnom području oko Slavenskog Kobaša

Požega region, dominates Müller's map excerpt, although it is not entirely precisely situated on the slopes of Mount Požega, but in the valley to the north. Besides the fort on the hill, its suburb is also visible. The river Orłjava flows in the immediate vicinity, with a bridge east of the fort. The settlements that developed west of the city (Novo Selo, Brestovac, Daranovci, Ivandol), are documented along the road that connects Požega and Cernik, i. e. Nova Gradiška. All the settlements are situated just south of the city, with Ivandol standing out, placed even to the west of Cernik (Müller 1709, Fig. 2). This section of the map clearly demonstrates that no field surveys were conducted, while the data on the settlements were acquired from secondary sources. One can even assume that the selection of documented settlements was based on the censuses from 1698 and 1702, composed by the officials of the Court Chamber (Sršan 2000). However, in that case, they were used selectively. Gadea's location of Požega within the *Communitas* estate, near the river Orłjava, northeast of Mount Požega, is fairly accurate (Gadea 1718, Fig. 4). Homann's map, however, is much more imprecise than the works of other two cartographers. Out of the two toponyms, *Pofguavar* and *Poßega* the latter, we can assume, refers to the city of Požega, which regained the status of the seat of the county in 1790 Homann placed it west of the Orłjava and depicted it as a walled settlement (Homann 1714, Fig. 3). On Müller's map, Velika is also marked with fortifications, but its function is indicated by military and religious symbols, probably because its Franciscan friary of St. Augustine was the centre of a popular rebellion against the Ottomans, lead by fra Luka Ibrišimović (Sršan 2000, 335). The former Chapter of Canons (lat. *Capitulum*) of St. Peter, later an Ottoman town, is marked as a fort on Müller's map (Müller 1709). On the other hand, the 1698 census recorded the collective memory of what used to be a free royal city, with a city charter and a fair held on St. Peter's Day (Sršan 2000, 277–278). Kaptol lost its ecclesiastical and military functions with the arrival of the Habsburg authorities, which explains its economic decline. Homann did not even document Velika on his map, while *Capitulum* is imprecisely located on Papuk's north side, closer to Virovitica (*Virovitza*) than Požega (*Poßega*) (Homann 1714). Finally, on Gadea's map Velika is distinguished as a significant place and marked as an ecclesiastical centre, while Kaptol is treated just like any other settlement (Fig. 4). By comparing Müller's map with the 19th century Habsburg map, it is evident that displacement of the settlements on the former map was no exception. Especially in the case of Kutjevo (Cuttjeva), located further south than its actual position, also more to the west with respect to Mitrovatz, *Imanoftze*

(Ramanovci) and other surrounding places. Out of 26 settlements in the Požega Basin, documented on the Müller's map, only two remain unidentified. Eight settlements (Pleternica, Čaglin, Mitrovac, Kaptol, Velika, Stražeman, Imanofci and Požega) are positioned fairly accurately. Since the visualisation of the Požega Basin relief does give no indication of a plateau, this complicates the orientation, even more because the locations of watercourses contribute little to the secondary reading of the landscape. Besides the arbitrariness of the basic topography, even more arbitrary was Müller's visualisation of lesser settlements. While the choice of larger and economically more developed settlements, such as Požega, Velika, Kutjevo or Kaptol is self-evident, the criteria according to which the less developed settlements were included on the map remains unclear. For example, *Imanoftze* (Ramanovci) were included, whereas Alilovci were omitted, even though both were similarly developed and important (Müller 1709, Fig. 2). It all indicates that the map of the Požega area was based on indirectly collected information, without field work or empirical knowledge of skilled topographers regarding the local settlements, or their geomorphology, environment and architecture. When comparing all three analysed maps, one can conclude that none of them demonstrates all the considered elements on the same level of quality, so the content on each map, to different extents and for different areas, deviates from more recent data. Such deviations are most evident on the Homann map (Fig. 3). On the other hand, Gadea's cartographic visualisation is the most accurate record of the landscape and, to a degree, the hydrography of the region. Even the grouping of settlements is rather reliable (Fig. 4). Such an increase in quality among these three maps can only be explained by newly acquired knowledge during a several-year period, which separates the time of their creation and Gadea's access to better alternative sources of data and map templates.

7 The Knowledge of Cartographic Content in the Broader Area of Brod na Savi

According to the reviewed archival sources, Ottoman authorities were not interested in mapping their possessions in Bosnia. The area around the Sava, especially its southern bank, was occasionally topographically surveyed by the Central European cartographers even before the 18th century, although significantly less so than the area along the northern bank of the Sava (Mlinarić and Blaženović 2024, 68; Slukan 1999, 29–30). The Commission's work, however, introduced actual field surveys, leading to higher-quality results.

aktivan zapadni lateralni kanal nazvan Jelas Polje te sabire vode više malih tekućica koje plave okolni prostor.¹⁸ Na području između Dilj-gore, Save, Orljave i rijeke Glogovice, koje ujedno odgovara području regulacije Jelas Polja, danas teče i rijeka Mersunja, ali se ona ulijeva u Savu kod Slavonskog Broda, a ne u Orljavu. No kako je i njen vodotok reguliran, teško je identificirati tekućicu koju bilježe i Gadeova i Müllerova karta.

7.2. Naselja

Müllerova karta dokumentira utvrdu Broda na Savi tlocrtno, a oko novoizgrađenog zvjezdasto podignutog fortificiranog dijela ucrtan je kanal s vodom. Usporedbom Müllerova zemljovida s onim habsburške treće vojne izmjere potvrđeno je da nije riječ o umjetnom iskoku oko utvrde već vodotocima Stara Glogovica (*Alte Glogovica*) i Glogovica (*Glogovica*) u njihovom prirodnom koritu uokolo Broda (Arcanum maps, slika 2). I ostala važna naselja i utvrde označeni su primjerenim simbolima navedenim u kartuši, na isti način kao i na požeškom isječku (Müller 1709). Kod Gadeae utvrda Brod kartirana je tlocrtno kao višestruko utvrđena zvijezda, a zapadno od nje je Varosa koja vjerojatno označava ili je bar smještena na lokalitetu stare utvrde Vukovac na Mersunji. S obzirom na to da je autor ime „posudio“ od istočnijeg stambenog naselja, vjerojatno se radi o zabuni odnosno zamjeni imena i lokaliteta, što potvrđuje i činjenica da Brodsku Varoš na njenom ispravnom mjestu, istočno od utvrde, a čije ime je upisao na zapadu kod Mersunje, Gadea nije uopće zabilježio. Kako je odvojenim prikazima vojne i civilne fortifikacije Broda Müller naglasio obje njegove dominantne funkcije, samo je potvrdio svoju poziciju najboljeg poznavatelja i najpreciznijeg dokumentarista (Müller 1709, Gadea 1718). S treće strane Homann *Brodt* prikazuje točkasto, bez posebnog naglašavanja vojnog značaja jakih fortifikacija i to jednakom veličinom toponima i simbola kao i za utvrdu donje brodske varoši (*Nowigrad*), vjerojatno zato jer uopće nije spoznao nemjerljivo veći značaj vojne utvrde (Homann 1714; Slukan 2003). Potvrda je to široke lepeze odstupanja kakvoće informacija od onih najtočnijih koje su pribavljene terenskim radom¹⁹. I u ovom slučaju sve tri karte demonstriraju problem s bilježenjem slavenskih toponima nje-mačkom grafijom, što otežava njihovu identifikaciju. I dok toponimom Spek Müller vjerojatno bilježi naselje Zbjeg, za naselja *Zeltscha* i *Botrontz* identifikaciju nije bilo moguće

provesti. Uz pomoć karte treće vojne izmjere toponim *Sc-hiviko* s Müllerove karte prepoznat je kao *Zivike*, a vjerojatno se radilo o današnjem lokalitetu *Živičko polje* (Müller 1709, Arcanum maps, DGU, Geoportal). Poseban izazov je dio naselja odnosno toponima koji su u post-osmanskom razdoblju nestali. Tako Gadea sjeveroistočno od Broda bilježi toponime *Tomitza* i *Tomicute*. Usporedba sa suvremenom kartom otkriva da se na području kojem prostorno odgovara toponim i danas nalazi naselje *Tomica*. U procesu identifikacije naselja i toponima *Tomicute* poslužila je ponovno karta treće habsburške vojne izmjere, na kojoj je južnije od naselja *Vrba donja* zabilježen predio *Tomičanac* (Arcanum maps). Imaju li ta dva toponima veze za sada nije moguće precizno tvrditi jer je moguće riječ i o naselju koje je s vremenom prestalo postojati kao što je bio slučaj s naseljima *Galissich* i *Iurakovatz* na posjedu Prepoštija (kap-tolski posjed) u Požeškoj kotlini.

Kao što je vidljivo iz tablice 2 na području šire okolice Broda na Savi Müllerova karta bilježi 15 toponima, od kojih dva niti uporabom komparativnih izvora nije bilo moguće povezati s nekim danas postojećim naseljem, što je ipak znatno manje nepoznanica nego na isječku karte Požeštine. Osim toga niti jedan toponim na karti ne odudara vidnom udaljenosti od svoga stvarnog položaja niti je zabilježen na pogrešnome mjestu, kao što je to bio slučaj s dijelom toponima na području Požeške kotline. Za razliku od Müllerove, Homannova karta je i u ovom slučaju izrazito složena za prostornu orijentaciju jer osim toga sadrži izrazito malo sveukupno zabilježenih toponima za oba prostora (Homann 1714). Gadeov kartografski prikaz s druge strane obiluje prilično precizno ucrtanim toponimima broskog kraja, koji su jednostavno provjerljivi usporedbom s kasnijim kartama. Po pitanju prikazivanja reljefa, tekućica i naselja Brodske Posavine, usporedbom sve tri izabrane karte, valja istaknuti da je Gadeaina i u ovom slučaju najdetaljnija i najpreciznija u bilježenju smještaja toponima.²⁰ Razlika između Gadeaa i Müllera je uglavnom u količini podataka, a razlog je i u mjerilu kao mjeri selekcije/generalizacije podataka koje je na karti moguće prikazati unatoč tomu koliko autor dobro poznaje prostor (vidjeti bilješku 15). Pri

¹⁸ Riječ je o tekućicama Žiganj, Mliski, Gorski i Vrućac. Vidjeti u: Provedbeni plan obrane od poplava branjenog područja, sektor D – srednja i donja Sava, branjeno područje malog sliva Brodska Posavina, Hrvatske vode: lipanj, 2024., 6.

¹⁹ Dio razlika u broju prikazanih informacija svakako je posljedica izabranog mjerila karte, pri čemu je Homann na karti naj-sitnijeg mjerila (vidjeti bilješku 15) opravdano ispustio najsitnije toponime, ali nepoznavanje vojnostrateške važnosti graničnih utvrda poput Broda ne pridonosi vojnoj-strateškom potencijalu karte. S druge strane njena dekorativnost i fokus na osmanska pograničja, čak i usprkos nižoj kvaliteti informacija, odražavaju namjeru Homanna kao carskog geografa Karla VI. da podigne njenu komercijalno-tržišnu vrijednost kod znatiželjne europske kartografske publike i intelektualaca kojima je Homannova nakladnička kuća bila usmjerena (Lapaine i Kljajić 2009).

Table 2 List of Toponyms in the Brod na Savi Area.**Tablica 2.** Popis toponima u okolici Broda na Savi.

Müller's Map (Müller 1709) / Müllerova karta (Müller 1709)	Homann's Map (Homann 1714) / Homannova karta (Homann 1714)	Gadea's Map (Gadea 1718) / Gadeina karta (Gadea 1718)	Map of Hungary created between 1869 and 1887 (Arcanum maps) / Karta Ugarske nastala između 1869. i 1887. god. (Arcanum maps)	Present-day Toponym (DGU, Geoportal) / Današnji toponimi (DGU, Geoportal)
Brod	Brodt Nowigrad	Brod Varosa	Brod Varoš	Slavonski Brod Brodski varoš
		Verba Verba dolna Podviny Slobotnitza Gremasnik Rasturthie Glogovitz Grabarie Tomitza Sltik gorni Slatnik Oriovatz Sdenzi Dobovik Zernipotok Gindniovo Iesavick Ververina Vergurofzi Schunetschi Banofzi Bebrina Slatnik Szagradie Butschie mala?	Gornja Vrba Vrba dolnja Podvinj Slobodnica Gromačnik Rastušie Glogovica Grabarje Tomica h. Slatnik Unter Slatnik Oriovac Zdence Dubovih Crnipotok Kindrvo Ježevik Vrhovina Šušnjevc Banovci Bebrina Satnik Zagradje	Gornja Vrba Donja Vrba Podvinje Slobodnica Gromačnik Rastušje Glogovica Grabarje Tomica Gornji Slatnik Donji Slatnik Oriovčić Brodski Zdenci Dubovik Crni Potok Kindrovo Ježevik Vrhovina ? Šušnjevc Banovci Bebrina Stari Slatnik Zagrade
Bebinar		Butschie mala?		
Bucie		Butschie Drinoftzi Oriovaz Stupnik Liglenik Cunik Malino Cutti Polianze Cute Glavitze? Vranofze Szadubravie Bukovic Tomicute Bidscosello Oprisatzi	Bučje Drenovac Oriovac Stupnik Ciglenik Kujnik Malino Kuti Poljanci Kuti Vranovci Zadubravje Bukovje Bickoselo Oprisavce	Bučje Brodski Drenovac Oriovac Brodski Stupnik Ciglenik Kujnik Malino Stupnički kuti Poljanci Trnjanski Kuti Vranovci Zadubravlje Bukovlje Bicko Selo Oprisavci
Opresatz		Oprisatzi	Oprisavce	Oprisavci

Müller's Map (Müller 1709) / Müllerova karta (Müller 1709)	Homann's Map (Homann 1714) / Homannova karta (Homann 1714)	Gadea's Map (Gadea 1718) / Gadeina karta (Gadea 1718)	Map of Hungary created between 1869 and 1887 (Arcanum maps) / Karta Ugarske nastala između 1869. i 1887. god. (Arcanum maps)	Present-day Toponym (DGU, Geoportal) / Današnji toponimi (DGU, Geoportal)
Geszintz?		Gartedun Terniane Schaunefzi Verovina Clacaschevik Sibin Selna ustitza	Garčin Trniani Šušnjievci Vrhovina Klokočevik Sibinj Ruščica ?	Garčin Trnjani Šušnjievci Vrhovina Klokočevik Sibinj Selna Ruščica ?
Sibin Zeltscha? Rafsitza Botrantz Korina Bebrina Klacar Bebrina Dobotsatz Bebinar Spek Kobatz Andrieffze Lusan Schiviko		Bebrina Clacoric Bebrina Dobroschiatz Bebrina dolna Sbig Cobasch Andriefzi Luschani Schivike	Bebrina gornja Klakar Bebrina donja Dubočac Bebrina Zbieg Kobaš Andrievci Lužane Zivike	Gornja Bebrina Klakar Donja Bebrina Dubočac Donja Bebrina Zbjeg Slavonski Kobaš Gornji Andrijevc Lužani Živičko polje

tome je dobro istaknuti Gadeaevo nastojanje da označi svaki prijelaz na Savi što je svakako imalo izuzetno vojno, ali i gospodarsko značenje za tadašnju komunikaciju s osmanjskim dijelom teritorija, ali i plovidbu rijekom općenito. S druge strane Homannova karta, premda je nastala svega pet godina nakon Müllerove, vrlo oskudno, nejasno i šablonski prikazuje brodski kraj, ukazujući na drukčije izvore podataka, ali i različitu motivaciju autora i svrhu nastanka karte.

8. Rezultati usporedbe kao zaključak

Aktivnosti Komisije za razgraničenje koja je radila na kartiranju granice između Habsburgovaca i Osmanlija,

dogovorene odlukama Mira u Srijemskim Karlovcima 1699. godine, uključivale su rad na terenu. Radna je skupina obavljala izmjeru u širini dva sata hoda odnosno deset kilometara od crte razgraničenja i ucrtavala granicu između donedavno zaraćenih strana na detaljne karte te je izradila do tada najpreciznije topografske karte, služeći se modernim tehnološkim dostignućima. Terenski rad, potpomognut ljudskim i financijskim kapacitetima vodio je nastanku prvih detaljnih karata hrvatske kopnene unutrašnjosti, a provedena geodetska izmjera omogućila je da se granična crta označi markerima na terenu. Premda karte generalno mogu pomoći u rekonstrukciji naselja, praćenjem promjena morfologije, ali i funkcija prostora (primjer naselja Velika) te shvaćanju promjena u okolišu, za ovu analizu izabrane karte središnjeg dijela savsko-dravskog međurječja ukazuju da taj put nije uvijek pravocrtan. Radi usporedbe različitih načina i kvalitete kartografskog bilježenja uspoređeni su Požeški kraj, periferno smješten vojno neutralni dio Civilne Slavonije, koji je ostao izvan direktnog interesa Komisije, i okolica Broda na Savi, kao dio samog vojnokrajiskog pograničja koje je potpuno zaokupilo pažnju topografa pa i samog Müllera. Cilj je bio usporediti kartografsku vizualizaciju i provjeriti

²⁰ Dijelom je to posljedica činjenice da je kao suradnik na Gadeaevoj karti angažiran časnik u službi Eugena Savojskog, princ Ludwig Andreas von Khevenhüller-Frankenburg. On je i osobno zapovijedao u upravo završenim bitkama kod Petrovaradina i Beograda, a kao najviši vojni časnik je sigurno imao pristup najtočnijim i najnovijim topografskim podacima u tom trenutku (Gadea 1718).

7.1 Orography and Hydrography

Apart from the southern slopes of Mount Požega and Mount Dilj, the broader area of the town and fortress of Brod is flat. The aforementioned elevations are marked green on the Müller map (Fig. 2), with shadings and trees on the southern slopes, to achieve three-dimensionality, as was the case with the Požega Basin. The selection of colour and emphasis of vegetation also served to highlight the relief dynamics (Müller 1709). A similar approach to visualising forested plains is found in Gadea and Homann's maps. While the latter recorded the entire Brodska Posavina region significantly further to the east in relation to the Požega Basin (1714, Fig 3), Gadea charted this area more accurately, documenting even river crossings along the right, i. e. the Ottoman, bank of the Sava (1718, Fig. 4). Among the recorded hydrological elements, the river Sava dominates the surroundings of Brod, whose course did not change much from the early 18th century to the present, apart from natural erosion and sedimentation, as well as the regulation of meanders. The comparison of Müller's map with the maps of the Third Military Survey in the 19th century confirms the terms of the Treaty of Karlowitz, according to which the Sava became the state border with the Ottoman Empire (Arcanum maps, DGU, Geoportal). West of Kobaš, the Orłjava flows into the Sava, flowing from the Požega Basin from the northeast. According to Müller's map, its mouth splits into two arms, forming a kind of delta. The 19th century map documents the mouth of the Orłjava into the Sava, depicting the swamp area with several arms north of the mouth, which later converge into a single stream before flowing into the Sava (Arcanum maps). Interestingly, Gadea's map, with significantly more accurately presented hydrography, does not feature a delta either, and neither does present-day map, which shows a densely forested area (1718, DGU, Geoportal). It can be assumed that Müller, by depicting the mouth of Orłjava as a "delta", intended to indicate a swamp area of little value for transport and commerce. Moreover, the area was probably inaccessible to the group of experts that surveyed the terrain, which added to the impression of the existence of more arms flowing into the Sava. Furthermore, Gadea's map documented an unnamed tributary of the Orłjava north of Slavonski Kobaš (1718). Müller also charted one tributary of the Orłjava east of *Radunoftzi*, where the Orłjava, flowing from the direction of the Požega Basin, emerges from a kind of "canyon" (Müller 1709, Fig. 2). Neither the Third Military Survey map nor the present-day map, contain any record of that tributary. Today, in the swamp area around Slavonski Kobaš,

there is an active western lateral canal called Jelas Polje, which collects water from several lesser streams that flood the surroundings.¹⁸ Today, in the area between Mount Dilj, the Sava, the Orłjava and the river Glogovica, which matches the area of the Jelas Polje regulation, there is also the river Mrsunja, but it flows into the Sava at Slavonski Brod, not in the Orłjava. However, as its course has also been regulated, it is difficult to match it to the watercourses documented on the maps by Gadea and Müller.

7.2 Settlements

Müller's map features a plan of the fortress of Brod na Savi, with a water-filled canal around the newly constructed star-shaped fortification structure. If we compare the Müller map to the map of the Habsburg Third Military Survey, we may confirm that the canal was not a man-made ditch around the fortress, but rather the natural streams Stara Glogovica (*Alte Glogovica*) and Glogovica (*Glogovica*) that flowed around Brod (Arcanum maps, Fig 2). Other important settlements were also indicated by appropriate symbols listed in the cartouche, in the same manner as in the Požega section (Müller 1709). On Gadea's map the Brod fortress is charted as a plan view of a multi-layered star-shaped structure, with *Varosa* situated to the west, probably marking the old fort Vukovac on the Mrsunja, or at least its location. The author seems to have "borrowed" the name from the settlement to the east, as he probably confused it with Brodska Varoš. This is confirmed by the fact that Gadea correctly situated this settlement east of the fortress, but without stating its name, which he used to mark the locality on the Mrsunja. By depicting military and civilian fortifications of Brod separately, Müller emphasised both of its dominant functions, confirming his position as the foremost expert and most accurate documenter of the region (Müller 1709, Gadea 1718). On the third, Homann's, *Brod* is marked with a dot, without any emphasis of the fortress' military significance, with identical letters of the toponymy and symbol used for the Brod's lower town fortification (*Nowigrad*), probably because he was unaware of the greater importance of the military fortress (Homann 1714, Slukan 2003). This confirms a wide range of deviations in the quality of information from

¹⁸ These are the streams Žiganj, Mliski, Gorski and Vručac. See: Provedbeni plan obrane od poplava branjenog područja, sektor D – srednja i donja Sava, branjeno područje 2: područje malog sliva Brodska Posavina, Hrvatske vode: lipanj, 2024., 6.

postoje li očekivane razlike u preciznosti i detaljnosti prostornoga prikaza ova dva područja, od kojih je samo drugo obuhvaćeno inženjerskim kartografskim terenskim radom. Uspoređujući kvalitativnom komparativnom analizom požeški i brodski kraj, uočavaju se znatne razlike i u kvaliteti prostornog predočavanja i u broju novih informacija, u pravilu u korist broskog prostora. S obzirom da je priličan broj naselja u Požeškoj kotlini izostavljen, odnosno nije zabilježen ili je neprecizno ucrtan može se pretpostaviti da su kartografi informacije preuzimali iz drugih (nekartografskih) izvora, npr. komorskih popisa, ili da jednostavno nisu pronašli informacije u izvorima koje su koristili. Isto vrijedi i za orografiju i hidrografiju Požeštine, s obzirom da je većina tekućica neprecizno ubicirana, a njihova gospodarska vrijednost nije korespondirala s odlukom hoće li ih se ili ne bilježiti na karti. I ta arbitrarnost potvrđuje pretpostavku da habsburški kartografi nisu poznavali požeški prostor do detalja koje bi imali da je prethodno izmjera bila provedena, barem ne na razini poznavanja okolice Broda. Premda postoje mnoga odstupanja u prikazu Požeške kotline na Müllerovoj u odnosu na suvremenu kartu, ona je unatoč tome najprecizniji kartografski prikaz Požeštine nastao do 18. stoljeća, s priličnim brojem potpuno novih toponima. S druge je strane Müllerov prikaz pograničja oko Broda na Savi znatno vjerodostojniji po pitanju bilježenja orografije i hidrografije, ali i ojkonima odnosno simbola naselja. Koristeći suvremene karte razmjerno je lako identificirati na njoj zabilježena naselja. Poznavanje toga kraja je vidljivo profitiralo od sustavno provedenih terenskih mjerenja Komisije, čiji su rezultati bile brojne detaljne prostorne i toponimijske informacije te precizniji smještaj topografije i toponimije. Time je prikaz brodske okolice, uključujući objekte, fortifikacije i prometne koridore dostigao višu kvalitetu vojno-strateške utilitarnosti. Bilo da su se karte potom koristile za planiranje vojnih operacija ili obnovu starih i gradnju novih fortifikacija. Izabrana Müllerova, kao i druge uspoređene karte na primjeru dva izabrana isječka središnjeg dijela dravsko-savskog međurječja jasno pokazuju je li to da je prostor s karte obišla Komisija ili nije, utjecalo na kvalitetu novih kartografskih proizvoda. No očito su se kartografi uz predloške i terenski rad oslanjali i na raznoliki dopunski niz dokumenata koji su ponajprije služili u neke druge svrhe. I dok je s jedne strane karta Ugarske s Hrvatskom i Slavonijom iz 1709. godine voditelj Komisije za razgraničenje Johanna Christopha Müllera analizom potvrđena kao najtočniji i najdetaljniji prikaz hrvatskog pograničnog prostora do tada, njoj su suprotstavljene druge dvije karte koje su njihovi autori, Gadea i Homann, kao Müllerovi kronološki pa i kulturni slijednici, uvjetno mogli temeljiti na njegovoj karti kao predlošku. No postojao je problem da su zbog detaljnosti strateških informacija i političke konspirativnosti takve vojne karte bile ograničeno dostupne. Posebno

se ta ograničenost pristupa odnosila na civilne kartografe, usmjerene na komercijalne rezultate na europskom tržištu, što se jasno prepoznaje na primjeru Homannova rada. Zato tri analizirane karte i variraju u stupnju preciznosti prikaza i broju podataka, jer činjenica da su nastale u istom kartografskom i kulturnom krugu nakon provedenih izmjera ne doprinosi automatizmom porastu njihove točnosti i kvalitete. Ujedno je izborom karata činjenici da je za točniju kartografsku vizualizaciju nužno raspolaganje kvalitetnijim prostornim podatcima, što potvrđuje primjer Gadeae koji je za suradnika na svojoj karti izabrao najvišeg krajiškog časnika L. von Khevenhüllera, suprotstavljena druga samo naizgled kontradiktorna činjenica. Prema njoj je karta zbog svoje kulturne dimenzije puno više od ukupnog kompendija geografskih i sličnih znanja nekog vremena, čemu u ovom slučaju svjedoči Homannov primjer. No za stjecanje još šire slike valjalo bi limitirani doseg izabranog metodološkog okvira kvalitativne analize dopuniti kvantitativnom usporedbom istoga materijala uz pomoć nekoga od relevantnih kartografskih softvera, ne bi li se kartometrijski usporedila odstupanja geografske mreže, a time i razmještaja naselja i ostaloga sadržaja na izabranim kartama. No to je već zadaća za neko novo istraživanje.

Konačno, provedena analiza je na temelju dokazane više kvalitete kartografskog prikaza okolice Broda potvrdila da su ratna djelovanja na pograničju, a potom i odluke Mira u Srijemskim Karlovcima i osnivanje Komisije za razgraničenje utrli put za znatni iskorak u kartografskom poznavanju pograničja uz rijeku Savu. Zbog obilja novih okolišnih podataka vojne i civilne provenijencije rad Komisije ostavio je značajan pečat na razvoj kartografije i ukupno pridonio postupnom unaprjeđenju spoznaja o slavonskom prostoru na kojem je izmjera napravljena, povećavajući vjerodostojnost, a time i uporabnu vrijednost novih kartografskih podataka. Tada nastale topografske karte korištene su u vojne, a njihove kasnije inačice u administrativno-fiskalne i gospodarske svrhe. Bolje poznavanje hrvatskog pograničnog prostora prepoznavano je i u europskim kulturnim krugovima u svrhu jačanja vojnostrateškog zanimanja za kopnenu unutrašnjost i ustroja protuosmanske obrane. Premda je retorika karata ukazivala na nestalnost granica, ipak je nastojala naglasiti i kontinuitet teritorijalnosti. Pritom se posebno topomastička građa nametnula kao bitna odrednica jezične i kulturne baštine pa time i argument prostornoga kontinuiteta i potvrda identiteta hrvatskog naroda.

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the ones acquired during filed surveys.¹⁹ In this case as well, the three maps reveal the difficulty of recording Slavic names using German orthography, which makes identification difficult. While Müller likely recorded the settlement Zbjeg as *Spek*, it is impossible to determine which settlements are referred to as *Zeltscha* and *Botron-tz*. With the help of the map of the Third Military Survey, the toponym *Schiviko* on the Müller map is identified as *Zivike*, likely the present-day locality of *Živičko polje* (Müller 1709, Arcanum maps, DGU, Geoportal). The identification of settlements, or toponyms that disappeared in the post-Ottoman period present a particular challenge. For example, Gadea documented toponyms *Tomiza* and *Tomicute* northeast of Brod. On the contemporary map, this location matches the present-day *Tomica* village. To identify *Tomicute*, we used the Habsburg Third Military Survey map again, and determined that it features a locality called *Tomičanac* south of *Vrba donja* (Arcanum maps). Whether these two toponyms are related, it is not possible to determine yet, because the name may even refer to a settlement that has ceased to exist, as is the case with *Galissich* and *Iurakovatz* belonging to the Prepoštija (Kaptol) estate in the Požega Basin.

As shown in Table 2, Müller's map documents 15 toponyms in the broader Brod na Savi area, two of which could not be linked to any existing contemporary settlement by using comparative sources, which is significantly less when it comes unidentified places than on the section related to the Požega Basin. Furthermore, none of the toponyms deviates much from its actual position nor was placed incorrectly, as in the case of some toponyms of the Požega Basin. Unlike the Müller one, Homann's map is, again, highly complex in terms of spatial orientation, because it contains, in total, a very small number of toponyms for both areas (Homann 1714). In contrast, Gadea's map is abundant in precisely recorded toponyms of the Brod area that can be easily verified by using later maps. When it comes to depicting the landscapes, watercourses, and settlements in Brodska

Posavina, a comparison of the three discussed maps shows that Gadea's is the most detailed and accurate in positioning toponyms.²⁰ The difference between Gadea's and Müller's work mainly lies in the volume of documented data, which is also influenced by the scale of the map as a factor of data selection and generalisation of data that can be realistically displayed, regardless of the author's familiarity with the area (see footnote 15). It is worth noting that Gadea's effort to mark every river crossing along the Sava certainly had considerable military and economic significance in communication with the territory of the Ottoman Empire and the river navigation in general. On the other hand, the Homann's map, although created only five years after the Müllers map, depicts the Brod area in a vague and "patterned" manner, indicating not only the use of different sources, but also different motivation of the author and purpose of the map.

8 Concluding Results of the Comparison

The Boundary Commission, tasked with demarcating the frontier between the Habsburg and Ottoman polities as stipulated by the Peace of Karlowitz in 1699, conducted extensive field operations. Its members surveyed a corridor extending two-hours'-walking-distance, approximately ten kilometres, from the line of demarcation and recorded the boundary between the formerly warring powers on detailed maps. By applying contemporary technical methods, the Commission produced the most accurate topographical representations of the region available at the time. Fieldwork, supported by substantial human and financial resources, resulted in the first detailed maps of the Croatian inland. The geodetic surveys enabled the marking of the boundary line in the landscape with physical markers. Although maps can generally aid the reconstruction of settlements by tracing morphological changes and shifts in spatial functions (as in the case of the settlement of Velika), as well as enhancing understanding of environmental change, the maps selected for this analysis of the central section of the Sava - Drava interfluvium show that such processes are not always linear. To compare different approaches, and levels of quality in cartographic recording, two areas

¹⁹ Some of the differences in the amount of information can, with certainty, be attributed to the chosen map scale, which justifies Homann's decision to omit the smallest toponyms (see footnote 15) on the smallest-scale map. However, his insufficient knowledge of the military and strategic importance of fortresses on the frontier, such as the one in Brod, reduces the map's potential in this regard. On the other hand, its decorative elements and focus on Ottoman borderlands, despite the lower quality of information, reflect Homann's intent, as Imperial Geographer of Charles VI, to increase its commercial value for the curious European cartographic public and intellectuals targeted by his publishing workshop (Lapaine and Kljajić 2009).

²⁰ This is partly because prince Ludwig Andreas von Khevenhüller-Frankenburg, an officer in the service of Eugene of Savoy, took part in the making of Gadea's map. He personally commanded the final battles at Petrovaradin and Belgrade, and, as a military officer of the highest rank, had the access to the most accurate and up-to-date contemporary topographic data (Gadea 1718).

were examined: the Požega region, a peripheral and militarily neutral part of Civil Slavonia outside the Commission's immediate sphere of interest, and the environs of Brod on the Sava, which formed part of the Military Frontier and therefore commanded the full attention of the topographers, including Müller. The aim was to compare cartographic visualisations and determine whether the expected differences in precision and spatial detail between these two regions exist, given that only the latter underwent systematic engineering-based cartographic fieldwork. A qualitative comparative analysis of the Požega and Brod regions reveals significant differences in both the quality of spatial representation and the quantity of newly recorded information, generally favouring the Brod area. As a considerable number of settlements in the Požega Basin were omitted, either not recorded or depicted imprecisely, it may be assumed that the cartographers relied on information from other, non-cartographic sources, such as Chamber censuses, or that the relevant data were simply unavailable in the sources they consulted. The same applies to the orography and hydrography of the Požega region, as most watercourses were imprecisely located, and their economic significance did not follow any consistent criteria for inclusion on the maps. Such arbitrariness further supports the assumption that Habsburg cartographers lacked detailed knowledge of the Požega area that would have resulted from prior systematic surveying, at least not to the extent evident in their understanding of the environs of Brod.

Although numerous discrepancies can be observed between Müller's depiction of the Požega Basin and modern cartographic representations, it remains the most accurate map of the Požega region produced before the eighteenth century, incorporating many entirely new toponyms. By contrast, Müller's representation of the frontier zone around Brod on the Sava is significantly more reliable in its rendering of orography, hydrography, oikonyms, and settlement symbols. When compared with modern maps, the settlements recorded there can be identified with relative ease. The Commission's systematically executed field surveys demonstrably enhanced knowledge of the region, yielding extensive and detailed spatial and toponymic data, as well as more accurate positioning of topographical features and place names. Consequently, the representation of the Brod area - including buildings, fortifications, and transportation corridors - achieved a higher degree of military-strategic and utilitarian precision, regardless of whether the maps were later used for planning military operations or for restoring existing fortifications and constructing new ones. The selected Müller map, along with other

comparative maps examined through two chosen sections of the central Drava-Sava interfluvium, clearly demonstrates how the presence or absence of a Commission survey in a given area affected the quality of the resulting cartographic products. Nevertheless, it is evident that, in addition to existing cartographic prototypes and systematic field surveys, the cartographers also relied on a heterogeneous corpus of ancillary documentation originally generated for purposes other than cartographic production. While analysis has confirmed the 1709 map of Hungary with Croatia and Slavonia by Johann Christoph Müller, head of the Boundary Commission, as the most accurate and detailed depiction of the Croatian borderlands produced up to that point, it is juxtaposed with two other maps whose authors, Gadea and Homann, as Müller's chronological and, to some extent, cultural successors, could only conditionally have relied on his map as a template. A significant constraint, however, lay in the fact that military maps of this kind - owing to the level of strategic detail they contained and their political sensitivity - were subject to restricted circulation and limited accessibility. Such limitations of access applied particularly to civilian cartographers oriented toward commercial outcomes on the European market, a circumstance clearly evident in the case of Homann's work. Consequently, the three analysed maps vary in both the degree of representational precision and the quantity of information they contain, as the mere fact that they were produced within the same cartographic and cultural milieu following the completion of surveys does not, in itself, automatically entail an increase in their accuracy or overall quality. At the same time, through the selection of maps, one fact - that more accurate cartographic visualization necessarily depends on access to higher-quality spatial data, as illustrated by the example of Gadea, who selected the senior Military Frontier officer L. von Khevenhüller as a collaborator on his map - was set against another, only seemingly contradictory, proposition. According to this view, a map, by virtue of its cultural dimension, constitutes far more than a mere compendium of geographical and related knowledge of a given period, a perspective that is, in this case, exemplified by Homann's work. However, a more comprehensive perspective would require supplementing the present qualitative methodological framework with a quantitative analysis of the same material. By employing appropriate cartographic software tools, such an approach would enable a cartometric assessment of deviations in the geographical grid and, consequently, of variations in the spatial distribution of settlements and other mapped features across the selected maps. This line of inquiry, however, lies beyond the scope of the present study and

remains a task for future research. Finally, based on the demonstrated higher quality of the cartographic representation of the Brod area, the analysis has confirmed that military operations in the borderlands, followed by the provisions of the Peace of Karlowitz and the establishment of the Boundary Commission, facilitated a significant advance in cartographic knowledge of the border region along the Sava River. Due to the accumulation of newly acquired environmental data of both military and civilian provenance, the Commission's activities had a lasting impact on the development of cartography and contributed significantly to the gradual refinement of knowledge about the surveyed Slavonian territory. This process enhanced the accuracy and, consequently, the practical utility of newly produced cartographic materials. The topographic maps produced during this period were initially intended for military use, while subsequent iterations served administrative, fiscal, and economic

purposes. Improved knowledge of the Croatian borderlands also resonated within European cultural and intellectual circles, reinforcing military and strategic interest in the continental interior and in the organisation of anti-Ottoman defence. Although contemporary cartographic rhetoric acknowledged the instability of borders, it nevertheless sought to emphasize territorial continuity. In this context, toponymic evidence emerged as a particularly significant indicator of linguistic and cultural heritage and, consequently, as an argument for spatial continuity and confirmation of Croatian collective identity.

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