

Karla Papeš

What is the Circulation Centre of Early Modern Fortification Knowledge?

Introduction

As a peripheral territory and a border between several powerful early modern states, Croatian historical territories in the eastern Adriatic became the site of extensive fortification building. Each government had a particular approach to former obsolete structures, ordering either their modernization or demolition¹. However, from the late fifteenth century, there was a marked trend of building entirely new fortifications. The questions are: was there a specific construction system for border defense? If most of the resources were invested in border areas, did that make them the centres of fortification knowledge?

According to Ljubo Karaman's theory, the centre heavily influences the development of peripheral art². However, in military strategy, borders are crucial for construction, often fortified and developed to enhance security and support operations. These infrastructure investments establish a strong presence, facilitate logistics, troop movement and surveillance, and thus influence the power dynamics of warfare. This paper will attempt to deconstruct the centre and periphery dualism within the discourse on fortification architecture of the eastern Adriatic between the fifteenth and eighteenth centuries, while also taking into consideration the periphery/province/border area system proposed by Karaman.

1 Milan Kruhek, *Krajiške utvrde i obrana Hrvatskog Kraljevstva tijekom 16. stoljeća* (Zagreb: Institut za suvremenu povijest, 1995), 14–15; Ana Deanović, "Utvrdre," in *Utvrdre i perivoji, Studije i monografije Instituta za povijest umjetnosti, knj. 21: Izabrana djela Ane Deanović II*, Andrej Žmegač, ed. (Zagreb: Institut za povijest umjetnosti, 2001 [1980]), 19.

2 Ljubo Karaman, *Problemi periferijske umjetnosti. O djelovanju domaće sredine u umjetnosti hrvatskih krajeva*, Radovan Ivančević, ed. (Zagreb: Društvo povjesničara umjetnosti Hrvatske, 2001 [1963]), 9–17.

Research Context

The development of modern military principles in Europe began after the fifteenth century, supported by the spread of technical knowledge³. The introduction of gunpowder to Europe in the thirteenth century and the subsequent advancement and sixteenth-century modernization of firearms⁴ produced a radical change in military theory⁵. In the eastern Adriatic, the Ottomans brought advanced firearms as a staple of their well-equipped and siege-ready army⁶. The interminable battles and wars caused frequent border shifts, making the territory an ideal case study of changes in fortification architecture.

Moreover, after the discovery of the movable-type printing press, the interest in fortification architecture became apparent in a vast number of printed books, reaching a wider audience. These books were used as construction manuals, and some were theoretical works in which authors reviewed both traditional and existing models, as well as fundamental moral principles to justify their new constructive solutions and proposals⁷. The latter launched the creation of polygons aimed at an extensive modernization of fortifications, triggering several questions about the circulation of knowledge within this particularly vital architectural typology⁸.

Centre and Periphery and Karaman's Tripartite Milieus

The question of how border areas react to external artistic and stylistic influences was one of the main research topics of Ljubo Karaman. In his book *O djelovanju domaće sredine u umjetnosti hrvatskih krajeva (On the Impact of the Native Environment in Croatian Art)*, by observing differences and similarities

- 3 See more in: Christopher Mallagh, *Science, warfare and society in the Renaissance, with particular reference to fortification theory* (PhD diss., University of Leeds, 1981).
- 4 For more on the advancement of firearms see in: Kelly DeVries, "Gunpowder Weaponry and the Rise of the Early Modern State," *War in History* 5, 2 (1998): 127–145.
- 5 Michael Howard, *Rat u europskoj povijesti*, translated by Magdalena Najbar-Agičić (Zagreb: Srednja Europa, 2002 [1976]), 38–42; Josip Kljajić, "Pregled razvoja vojnoga graditeljstva u Europi od 15. do 19. stoljeća," in *Zbornik Mire Kolar-Dimitrijević. Zbornik radova povodom 70. rođendana*, Damir Agičić, ed., (Zagreb: FF press, 2003), 65; Kruhek, *Krajiške utvrde*, 14.
- 6 Kruhek, *Krajiške utvrde*, 16; Karla Papeš, *Terminologija hrvatske fortifikacijske arhitekture* (Master's Thesis, University of Zagreb, Faculty of Humanities and Social Sciences, 2019, <https://urn.nsk.hr/urn:nbn:hr:131:786576>), 11.
- 7 Horst De la Croix, "The Literature on Fortification in Renaissance Italy," *Technology and Culture* 4 (1963): 34, 30–50; John Rigby Hale, *Renaissance fortification. Art of engineering* (London: Thames and Hudson, 1977), 33–34; John Rigby Hale, "Industria del libro e cultura militare a Venezia nel Rinascimento," *Storia della cultura veneta* 3 (1980): 245–288; Jeremy Black, *European Warfare, 1494–1660* (London, New York: Routledge, 2002), 50–51. Jasenka Gudelj and Dubravka Botica, *Arte et Mart: knjige o arhitekturi u Zriniani* (Zagreb: Nacionalna i sveučilišna knjižnica, 2012), 17. Francesco Paolo Fiore, "Architettura e arte militare. I trattati alla meta del Cinquecento," in *Architettura e arte militare. Mura e bastioni nella cultura del Rinascimento*, ed. Francesco Paolo Fiore (Rome: Campisano Editore, 2017), 69–77.
- 8 For more on the development of modern military principles and fortifications see: Kljajić, "Pregled razvoja vojnoga graditeljstva," 63–77; Geoffrey Parker, "The Military Revolution, 1560–1660 – a Myth?," *The Journal of Modern History* 48, 2 (1976): 195–214; Clifford J. Rogers, ed., *The Military Revolution Debate: Readings on the Military Transformation of Early Modern Europe* (Boulder: Westview Press, 1995).

in cultural circulation from one area to another, he demonstrates how particular areas reacted to external influences, thus producing artistic phenomena⁹. Art was determined both by changing socio-economic circumstances and by unchanging factors, such as the geographical location affecting the selection of construction material. However, the question arises if such an approach can apply to each architectural typology.

Karaman's Usage of Terms

Applying the abovementioned tripartite categorization to fortification architecture presents challenges. To address this issue, it is necessary to examine the definition of *centre* and how fortification architecture is represented in Karaman's work. However, before any consideration of these aspects, it is important to understand the focus of Karaman's research. In his book, the author explicitly states that his main interest lies in the historical exchange of artistic styles¹⁰, with style serving as the primary focus¹¹. Each of his three categories or milieus – provincial, borderland, and peripheral – is characterized by its relationship to what he calls an "artistic centre". The introduction distinguishes between these three milieus: the provincial milieu is defined as "the shadow of a cultural midpoint", "leading midpoint" or "artistic midpoint"¹². As for the borderland milieu, it is defined by the coexistence of two different artistic circles, while the peripheral milieu implies the coexistence of several leading cultural areas¹³.

Mention of Centres

Certain centres, notably Venice, are mentioned explicitly, while the Ottoman Empire appears implicitly "with its Islamic art".¹⁴ A comparison suggests that, in the case of Venice, Karaman is specifically referring to a single city and its influence, rather than to the entire Republic, while the Ottomans are referred to as occupiers who led to a limited spread of Islamic art.¹⁵ References to Venice have been differentiated according to Karaman's typology. To avoid a mere listing, the following table allows for a more structured and comprehensive understanding. Furthermore, the quantity of references by milieu corresponds to Karaman's theorization of his dual paradigm. This approach is suitable because the focus is on the very idea of the theoretical construction of a centre, always in relation to the corresponding milieu.

9 Karaman, *Problemi periferijske umjetnosti*, 11.

10 Karaman, *Problemi periferijske umjetnosti*, 16.

11 Constantly used from the "Introduction," especially when referring to the Peripheral milieu.

12 Karaman, *Problemi periferijske umjetnosti*, 11–13.

13 Karaman, *Problemi periferijske umjetnosti*, 13.

14 Karaman, *Problemi periferijske umjetnosti*, 76, 77, 85, 89.

15 Karaman, *Problemi periferijske umjetnosti*, 89.

Introduction	Provincial milieu	Borderland milieu	Peripheral milieu
“Dalmatia’s political leader” ¹⁶	“Rich and sumptuous”	“The dominant influence of the close Venetians”	“Trade and cultural Adriatic metropolis of Venice”
	“A dominant Venetian impact”	“The shiny art of the political master, the Venetians”	“Venice the political master”
	“The impression of Venice”	“Venetian character”	“Venice determines urban development, the general appearance and arrangement of palaces of Dalmatian towns” ¹⁷
	“A pocket format of Venice”	“Venetian forms”	
	“Venice as a centre”	“Typical Venetian façade”	
	“Venetian power” ¹⁸	“Impoverished Dalmatia in the Baroque period receives incentives and follows the art of Venice...” ¹⁹	
		“The Venetian influence was felt earlier” ²⁰ (when referring to Zadar)	

Representation of Fortification Architecture

Before deconstructing the dual paradigm, one must differentiate the references to fortifications to contextualize this research. Fortification architecture is scarcely discussed in Karaman’s book and the only five cases are not consistent examples of representative construction practices in any one of the three categorized milieus:

1. While describing the borderline milieu and Venetian influence, especially in Istria, Karaman refers to city forts among the Venetian forms dating from “the gothic to the baroque period”²¹.
2. In Dalmatia, the hinterland is described as follows: “... the commune erected buildings of public importance, walls and gates of the city, public loggias, fountains and wells, warehouses for food and arsenals for

16 Karaman, *Problemi periferijske umjetnosti*, 15.

17 Karaman, *Problemi periferijske umjetnosti*, 126, 135–136.

18 Karaman, *Problemi periferijske umjetnosti*, 21, 25, 32, 36.

19 Karaman, *Problemi periferijske umjetnosti*, 71, 73, 84.

20 Karaman, *Problemi periferijske umjetnosti*, 85.

21 Karaman, *Problemi periferijske umjetnosti*, 73.

ships”, while monuments “are much scarcer at the time. Characteristic, however, are the remains of strong burgs, which needed to defend their feudal lords”²².

3. The hinterland of the Istrian peninsula has “burgs in prominent strategic places; in the heart of the peninsula is the town of Pazin (Mittelburg) and a series of burgs in the Raša valley”. In the Venetian part of the peninsula, “Venetian-type palaces” and “Renaissance castles” were built, such as the one in Svetvinčenat²³.

4. The chapter on the borderline milieu ends with mentions of Italian travelling masters, such as those who constructed the fortress of Sisak in the sixteenth century (Pietro da Milano, Domenico da Brescia)²⁴.

5. Finally, in the description of the peripheral milieu, the Venetians are said to be “primarily concerned with protecting the cities from the Ottomans, building fortifications, city walls and towers, and arsenals in which the city’s galleys are kept and built, and *fontichi* in which food (grain) and goods are stored”²⁵.

Karaman spends only a few words on the Venetian art of Sansovino, Palladio, and the Lombardo and Sanmicheli families.²⁶ Considering that Michele and Giangirolamo Sanmicheli were military engineers²⁷ of the Venetian Republic, in charge of designing the first modern fortifications in the cities of Zadar and Šibenik (Fig. 1, 2), one may wonder why Karaman does not elaborate more on their work. Not to mention the significance of Michelozzo Michelozzi, who was appointed to modernize the city walls of Dubrovnik as early as in the 1460s, and whose name is not mentioned in Karaman’s 1963 edition (although Lukša Beritić has given a detailed account of this artist in his monograph on the city walls of Dubrovnik, published in 1955²⁸).

One may also ask why fortification architecture was not more extensively discussed and whether it had any artistic value to Karaman. Only the fortress of Sisak is introduced as an explicit example, although the book specifically focuses on the art of Dalmatia, where modern principles of fortification construction were arguably applied for the first time. Was fortification architecture not mentioned because it did not fit Karaman’s approach? Fortifications would undoubtedly be repositioned as centres of construction practice, regardless of their border position. The answer to

22 Karaman, *Problemi periferijske umjetnosti*, 76.

23 Karaman, *Problemi periferijske umjetnosti*, 77–78.

24 Karaman, *Problemi periferijske umjetnosti*, 91.

25 Karaman, *Problemi periferijske umjetnosti*, 136.

26 Karaman, *Problemi periferijske umjetnosti*, 137. However, it is not certain if Karaman referred to the Lombardo and Sanmicheli families or the individual artists.

27 Compare Karla Papeš, “Military Architecture between Theory and Practice in the Early Modern Eastern Adriatic” (PhD diss., Ca’ Foscari University of Venice – University of Zagreb, 2024), 79, 271, 272, 289–292.

28 Lukša Beritić, *Utvrdjena grada Dubrovnik* (Zagreb: JAZU, 1955). Compare Harriet McNeal Caplow, “Michelozzo at Ragusa: New Documents and Revaluations,” *Journal of the Society of Architectural Historians* 31, 2 (1972): 108–119; Harriet McNeal Caplow, *Michelozzo* (New York: Garland, 1977).



Fig. 1

St Nicholas Fortress in Šibenik
(photo: K. Papeš, 2021)



Fig. 2

Portal of St Nicholas Fortress in
Šibenik (photo: K. Papeš, 2021)

this question may lie in the fact that the perception of fortification architecture as a form of artistic heritage has evolved in contemporary times, reflecting a broader understanding of cultural heritage²⁹. This perspective contrasts significantly with that of Karaman's era (1886–1971) and the period just before it. During that time, fortifications were mainly viewed as functional defensive structures, still capable of serving their purpose in the event of armed conflict. As a result, these structures remained under military control until nearly the end of the Austro-Hungarian period, with few exceptions for those that had been demilitarized³⁰. When fortifications were demilitarized, existing evidence suggests that local authorities and private individuals often salvaged materials from these structures for use in new building projects, such as in Ston from the 1850s³¹. Local authorities often turned a blind eye to these practices³², not only in southern Croatia³³ but also in the capital³⁴.

Problematic Points

The non-standardized terminology, the distinction between theory and practice (especially in architectural treatises), and the vast diversity of archival material are some of the problems faced when researching fortification architecture in the early modern eastern Adriatic. In addition, both Croatian³⁵ and foreign (especially Italian³⁶) scholarship is influenced by the dual approach to the centre and periphery.³⁷ In this case, the periphery

- 29 For more information consult "ICOMOS Guidelines on Fortifications and Military Heritage. Final draft for distribution to the ICOMOS membership in view of submission for adoption to the 2021 Annual General Assembly. GA 2021 6-1. Ver. 04/30/2020", accessed November 21, 2024, https://www.icofort.org/_files/ugd/57e5c5_ac4934abb83c47229061509712f8cc1c.pdf.
- 30 The issues of intervention in fortifications by Austrian authorities have been studied by Pavašu Vežić, "Rezultati istraživanja na prostoru Citadele u Zadru," *Godišnjak zaštite spomenika kulture Hrvatske* 16 (1990): 7–43; Ivan Braut, Krasanka Majer Jurišić and Ana Škevin. "Tvrđava sv. Nikole u Šibeniku – povijest i konzervatorska istraživanja građevnih struktura," *Portal* 12 (2021): 65, 66, 61–82.
- 31 For more information, consult Lukša Beritić, "Stonske utvrde (II. dio)," *Anali Zavoda za povijesne znanosti Hrvatske akademije znanosti i umjetnosti u Dubrovniku* 4–5 (1956): 137–141, 71–152. Compare Lukša Beritić, "Stonske utvrde," *Anali Zavoda za povijesne znanosti Hrvatske akademije znanosti i umjetnosti u Dubrovniku* 3 (1954): 297–354; Lukša Beritić, "Ston i njegove zidine," *Naše more* 2–3 (1955): 184–187.
- 32 I would like to express my gratitude to Associate Professor Franko Ćorić for bringing this information to my attention.
- 33 Marko Špikić, "Restoration in Zadar, Split and Pula between the Rapallo and Paris Treaties," *Portal* 13 (2022): 137–151.
- 34 Compare Anđela Horvat, "Sjećanja i razmatranja na temu Bollé-Szabo," *Život umjetnosti* 26–27 (1978): 78–93; Zlatko Jurić, Martina Strugar and Franko Ćorić. "Rasprave o Bakačevoj kuli u Zagrebu 1901. godine: "Taj nesgrapni, ružni toranj..." ili karakterističan primjer sredovječnog utvrđenog braništa," *Portal* 2 (2011): 69–101.
- 35 Anđela Horvat, "O djelatnosti Ljube Karamana u Zagrebu," *Peristil* 14–15 (1971): 19–23; Radovan Ivančević, "Ljubo Karaman (Split 1886 – Zagreb 1971)," *Peristil* 14–15 (1971): 7–18; Jagoda Marković, *Bio-bibliografska studija Ljube Karamana* (Master's Thesis, University of Zagreb, Faculty of Humanities and Social Sciences, 1979); Kruno Prijatelj, "Ljubo Karaman i njegovo djelo," *Mogućnosti* 4–5 (1986): 260–288; Željko Rapanić, "Pedeset godina poslije Karamana," *Starohrvatska prosvjeta* 16 (1987): 9–24, and many others.
- 36 Enrico Castelnuovo, Carlo Ginzburg, *Centro e periferia nella storia dell'arte italiana* (Milan: Officina libraria, 2019).
- 37 Jasenka Gudelj, "Ljubo Karaman e i problemi dell'arte periferica," in *Arte e Architettura: Le cornici della storia*, Flaminia Bardati and Anna Rosellini, eds. (Milan: Mondadori, 2007), 261–272.

is defined as a category or milieu opposite to the centre, which, although highly influenced by the latter, also serves as an area of experimental practice. Croatian scholars³⁸ observed single fortifications and compared them to emphasize their specificities, whereas Italian authors³⁹ mainly observed the *Serenissima's* fortifications as a whole.

The location factor is crucial for understanding this particular typology. If Venice cannot be considered as a construction hub, it can be seen as a centre of theoretical discussion, ideas, power, and economy. It was a place where decisions on border protection were made. Projects were carried out on the construction sites, where changes were often made due to the constant war danger, a better understanding of the territory, etc.

The style category studied by Ljubo Karaman does not quite fit⁴⁰ for this architectural typology because new stylistic forms could often only be executed on the gates or windows of fortresses. New theoretical architectural forms of construction were spread through treatises on fortification architecture⁴¹. One may also wonder if construction sites were the only centres for experiments and discoveries or if books could also serve this function.

38 Ana Deanović was one of the leading Croatian experts on the fortifications of the eastern Adriatic. Her most important works include: “Bernardin iz Parme u Dubrovniku” (1979), “Juraj Matejev Dalmatinac – graditelj utvrda” (1978–1980), “Prilog Michelozza Michelozzija utvrđivanju Dubrovnika” (1980), “Prilog Sanmichelijā utvrđivanju Dalmacije” (1968), and “Utvrđena Dalmacija: shvaćanje Michelea i Giana Girolama Sanmichelijā” (1991) that were republished in 2001 in *Utvrdi i perivoji. Studije i monografije Instituta za povijest umjetnosti, knj. 21: Izabrana djela Ane Deanović II*, Andrej Žmegač, ed. (Zagreb: Institut za povijest umjetnosti, 2001), 49–51, 69–77, 53–67, 23–37, 39–47.

For a structured and unified approach to military architecture, see: Andrej Žmegač, *Bastioni jadranske Hrvatske* (Zagreb: Školska knjiga, Institut za povijest umjetnosti, 2009); Andrej Žmegač, “Još jedan stari prikaz šibenske Utrve sv. Nikole,” *Radovi Instituta za povijest umjetnosti* 33 (2009): 77–82; Andrej Žmegač, “Sforza Pallavicino i Zadar,” *Ars Adriatica* 12 (2022): 59–70; and Andrej Žmegač, “Zadarske utvrde 16. Stoljeća,” *Radovi Instituta za povijest umjetnosti* 27 (2003): 107–118.

These publications are enriched by Darka Bilić, *Inženjeri u službi Mletačke Republike Inženjeri i civilna arhitektura u 18. stoljeću u mletačkoj Dalmaciji i Albaniji* (Split: Književni krug, 2013); Laris Borić, “Dujam Rudičić, Sanmichelijevi i Girolamo Cataneo u procesu prihvaćanja klasičnog jezika arhitekture od Zadra do Dubrovnika tijekom druge četvrtine 16. Stoljeća,” *Radovi Instituta za povijest umjetnosti* 39 (2015): 41–54; Josip Čuzela, *Šibenski fortifikacijski sustav* (Šibenik: Gradska knjižnica Juraj Šižgorić, 2005); Ivo Glavaš, “Tvrđava sv. Nikole – nova istraživanja, plan obnove i UNESCO,” *Kvartal* 14, 3–4 (2017): 70–74; Josip Pavić, “Early development of the St. John’s Fortress in Šibenik,” in *Defensive Architecture of the Mediterranean. XV to XVIII centuries*, Vol. V: Proceedings of the International Conference on Modern Age Fortifications of the Mediterranean Coast, FORTMED 2017, Víctor Echarri Iribarren, ed. (Alacant: Publicacions Universitat d’Alacant, 2017) 305–310.; the works by Lukša Beritić stand out among the studies on the Ragusan territory.

39 Among Italian researchers, see in particular: Amelio Fara, *Il sistema e la città. Architettura fortificata dell’Europa moderna dai trattati alle realizzazioni 1464–1794* (Genoa: Sagep Editrice, 1989) and Angelo De Benvenuti, *Fortificazioni venete di Dalmazia* (Venice: Scuola Dalmata dei SS. Giorgio e Trifone, 2006). Ennio Concina, Elisabetta Molteni, “*La fabbrica della Fortezza*,” *L’architettura militare di Venezia* (Verona: Banca Popolare di Verona - Banco S. Geminiano e S. Prospero, 2001) outlines the strategic functioning of the defense system of the Republic of Venice.

40 Milan Prelog, “Problem valorizacije u historiji umjetnosti naše zemlje,” *Život umjetnosti* 1 (1966): 269–276.

41 For more information on the importance of treatises, see: Sara D’Amico, *La rappresentazione dell’architettura militare nei trattati cinquecenteschi* (PhD diss., Florence: Università degli Studi di Firenze, 2013); Fara, *Il sistema e la città*; Cristiano Guarnieri, “Trattati e trattatisti di architettura militare a Brescia nel Cinquecento,” *Libri d’architettura a Brescia. Editoria, circolazione e impiego di fonti e modelli a stampa per il progetto tra XV e XIX secolo. Testo, immagine, luogo*, Irene Giustina, ed. (Palermo: Caracol, 2015), 31–40; Jasenka Gudelj, “Architectural treatises and the East Adriatic Coast: cultural transfers and the circulation of knowledge in the Renaissance,” in *Artistic Practices and Cultural Transfer in Early Modern Italy. Essays in Honour of Deborah Howard*, Nebahat Avcioglu and Allison Sherman, eds. (Farnham: Ashgate, 2015), 107–127; and Jasenka Gudelj, Anita Ruso, “Tiskani renesansni traktati o arhitekturi u Dubrovniku,” *Peristil* 56 (2013): 101–112.

The term *centre* could be suitable, though not as a geographic term representing a single location subjected exclusively to artistic influence, but rather as an abstract category which can be manifested in many forms – commercial, political, artistic, and constructive. These centres of power needed to be connected to a wide network in order to enable the circulation of knowledge. The eastern Adriatic contained many centres that coordinated its defensive network.

The case of Venice is a specific one because, as the capital of the Republic, it was strongly defined by its surroundings. Thus, its defences could not serve as a model for construction sites with completely different surroundings. The nearest fortifications were placed on the urban fringes – the islands of San Andrea and Lido. One may study it as an example of how cities, as well as states, are defined also on the micro level by a centre of power and its border.

Such examples are particularly present in Dalmatia, where they additionally represent the strategy of political presence. As mentioned in scholarship and archival documents, *castelli*,⁴² in opposition to the city walls of Zadar, Trogir (Fig. 3), and Split, had the function of citadels: they were enclosed fortifications accommodating a larger crew, basically a type of fortress connected to the city walls on the best strategic position in the city. Their importance peaked in the fifteenth century; when they were constructed as a defence against the citizens in case of rebellion⁴³. Each *castello* was surrounded by a ditch and located close to the harbour, thus providing better natural defence and refuge to the soldiers. They are a case of a single building recurring with similar features in several cities, thereby suggesting a typology of sorts. Furthermore, the author of this paper argues that this kind of fortified construction created a defence dualism between the cities that were closer to the centre of power and those that were further away.

Considering all of the above, a dual centre-periphery paradigm can be used to examine Zadar's role in the Adriatic routes and its territorial dominance over Dalmatia (Fig. 4). In the context of fortifications, scholars have recently argued that the peripheries are the focus of architectural innovation, serving as the first line of defence⁴⁴, while the eastern Adriatic coast seems to be the place where architectural ingenuity and innovation,

42 The Croatian term *kaštel* corresponds to the Italian *castello* used in archival documents and scholarship.

43 Duško Kečkemet, *Utvrde Splita* (Split: Naklada Bošković, Muzej grada Splita, 2020).; Vanja Kovačić, "Trogirske fortifikacije u 15. stoljeću," *Prilozi povijesti umjetnosti u Dalmaciji* 37 (1998): 109–134.

44 Ana Šverko, "Peripheral or Central? The Fortification Architecture of the Sanmichelis in Dalmatia," in *The Land between Two Seas*, ed. Alina Alexandra Payne (Leiden: Brill, 2022), 40.



Fig. 3

Castello Kamerlengo in Trogir
(photo: K. Papeš, 2021)

Fig. 4

Zadar, view of Porta Terraferma
(photo: K. Papeš, 2021)

particularly of the Sanmicheli family workshop⁴⁵, are most evident. This notion is reinforced by the necessary secrecy of military architecture, and also by the fact that the Sanmicheli did not produce treatises or writings⁴⁶. However, the question of fortifying the centre and the borders was not only of interest to contemporary scholars. Francesco Tensini addressed the question of centre and periphery in the second subchapter of his treatise⁴⁷. He presented the arguments of those in favor of fortifying the borders and those in favor of fortifying the centre, using examples from antiquity. Tensini also offered his perspective and used the Venetian case of 1509 to support his view⁴⁸. According to him, the decision to fortify depended on the power and size of the territory of the governing authority. For a large and powerful state with neighboring states of equal or greater strength, it is advisable to fortify not only the borders but also a central city within the territory, especially one that serves as an administrative or residential centre. By securing the borders, it is not necessary to maintain garrisons in cities in peacetime. However, these cities should still be well stocked with ammunition and provisions to support other fortifications in case of emergency. Thus, while the fortification of borders often depends on the size and strength of a state, ensuring the stability of the central seat of power is usually a priority. This strategic focus of the period may explain why Zadar, an important Venetian outpost, was fortified primarily in times of war or imminent threat. For the Republic of Venice, securing the most vulnerable border areas was often necessary to maintain overall authority, even at the risk of temporary losses elsewhere. This approach underscores the centrality of power in the broader defensive strategy: maintaining strength in key cities enabled the *Serenissima* to project military power and

45 About Sanmicheli workshop see Filippo Toso, "Porta San Martino a Legnago e Porta Nuova a Verona. Nuovi documenti sul Sanmicheli Architecto nella fabbrica militare," *Annali di Architettura: rivista del Centro Internazionale di Studi di Architettura Andrea Palladio* 12 (2000): 59–68; Žmegač, "Zadarske utvrde," 107–118; Paul Davies and David Hemsoll, *Michele Sanmicheli* (Milan: Electa, 2004); Pavuša Vežić, "Vrata Michelea Sanmichelija u Zadru," *Radovi Instituta za povijest umjetnosti* 29 (2005), 93–106; Giuliana Mazzi, "Michele Sanmicheli, la cosiddetta scuola sanmicheliana e le difese della Repubblica," in *L'Architettura militare di Venezia in terraferma e in Adriatico, fra XVI e XVII secolo*, ed. Francesco Paolo Fiore (Florence: Leo S. Olschki Editore, 2014), 119–142; Borić, "Dujam Rudičić," 41–54; Šverko, "Peripheral or Central," 40–58; Pavuša Vežić, "Srednjovjekovni Varoš Sv. Martina i renesansne Ravnice u Zadru – treba li njihovo područje biti resurs za nove urbane programe," *Ars Adriatica* 12 (2022): 149–158; Žmegač, "Sforza," 59–70; Laris Borić, "I collaboratori dalmati dei Sanmicheli: la trasmissione dei modelli e il linguaggio classico del primo Cinquecento est-adriatico," in *Norme e modelli: Il rinascimento e l'Adriatico orientale*, ed. Jasenka Gudelj (Rome: Aracne editrice, 2023), 65–93.

46 Šverko, "Peripheral or Central," 40. Compare Papeš, "Military Architecture," 89.

47 Francesco Tensini, *La fortificazione guardia difesa et espugnazione delle fortezze sperimentata in diverse guerre, Libro Primo* (Venice, 1624) 10–12.

48 "Per risolvere questo particolare, si deve considerare prima la qualità, e lo stato del Principe, che vuole fortificare: perché, se il Principe è potente, & con uno stato grande, & ne habbia vicino un maggiore, ovvero uguale, à questo non solo sta bene di fortificare alle frontiere, ma ancora una città in mezzo dello stato; la quale può con ragione essere quella dove esso faccia la residenza. Vero è, che il Principe, havendo fortificato le frontiere, non haverà bisogno di mantener guarnigioni nelle Città in tempo di pace: deve ben conservare in essa ogni sorte di munizioni sì di guerra, come di vivere, per poterne souvenir alle occasioni tutte l'altre fortezze dello stato suo (...). Ciò provò molto bene la Serenissima Signoria di Venetia, l'anno 1559 quando l'Alviano senza ordine di lei attaccò il fatto d'arme con i Francesi in Ghiara d'Adda, nel qual fu rotto, e preso." Tensini, *La fortificazione*, 10–12.

reclaim or defend border regions when necessary. Tensini's perspective resonates with the challenges faced by Venice in balancing central and border fortifications, where the core of power had to be preserved to ensure control over peripheral territories. In this particular context, the question of *style* was not a significant factor in the discourse on fortification architecture within the centre-periphery paradigm.

Conclusion

Ljubo Karaman's contribution to Croatian art history remains indisputable, especially his practical methodology and systematic analysis of artworks and monuments. These have provided a better understanding of the power relations within different Croatian historical territories over the centuries. However, his approach may not apply to every architectural typology, particularly to fortification architecture. This paper has critically re-examined his most influential text, highlighted key problematic points and proposed alternative arguments to develop a more nuanced framework for fortification research.

The study has re-examined the dominant centre-periphery paradigm, central to Karaman's theory, which emphasizes stylistic hierarchies. While this model has been productive in other areas of art history, it proves inadequate for fortification architecture, as Karaman himself scarcely addressed this typology. The case of Venice, as a predictable yet crucial centre, underlines the challenges of applying stylistic analysis to fortifications. This research argues for moving beyond a rigid centre-periphery model to a networked perspective that recognises multiple centres of power and influence. Such an approach may better capture the complexity of fortification architecture and its diverse socio-political contexts.

This paper is part of a project that has received funding from the European Union's Horizon 2020 Research and Innovation Programme (GA n. 865863 ERC-Adri Arch Cult).

Karla Papeš, PhD Student

(Dual doctorate with the University of Zagreb,
Faculty of Humanities and Social Sciences,
Croatian Language and Literature Department)
Ca' Foscari University of Venice,
Department of Philosophy and Cultural Heritage
(DFBC)

karla.papes1@gmail.com
Orcid ID 0009-0003-4843-7383